City of Rialto

Regular Meeting - Final

Wednesday, September 14, 2022

6:00 p.m.

City Council Chambers, 150 S. Palm Ave., Rialto, CA 92376

Planning Commission

Public Participation Procedures

THE PUBLIC WILL HAVE OPPORTUNITY TO SPEAK ON ANY ITEM USING THE PODIUM INSIDE THE COUNCIL CHAMBERS.

IF YOU ARE UNABLE TO ATTEND THE MEETING, YOU MAY PROVIDE COMMENTS ON ANY AGENDA ITEM USING ANY OF THE FOLLOWING METHODS:

• REMOTE ORAL COMMENTS VIA ZOOM WEBINAR (THREE (3) MINUTE LIMIT). PLEASE EMAIL PLANNING@RIALTOCA.GOV ATLEAST TWO (2) HOURS BEFORE THE MEETING WITH A REQUEST FOR THE ZOOM WEBINAR LOGIN INSTRUCTIONS.

JOIN THE MEETING:
https://us02web.zoom.us/j/9238163473
MEETING ID: 923 816 3473
DIAL IN: 1-669-900-6833

• IN WRITING VIA MAIL TO: CITY OF RIALTO "ATTN: PLANNING COMMISSION C/O COMMUNITY DEVELOPMENT," 150 S PALM AVE, RIALTO, CA 92376

• IN WRITING VIA EMAIL TO PLANNING@RIALTOCA.GOV AT LEAST TWO (2) HOURS BEFORE THE MEETING.

YOU MAY CALL THE COMMUNITY DEVELOPMENT DEPARTMENT AT (909) 820-2505 DURING REGULAR BUSINESS HOURS OR SEND AN EMAIL TO PLANNING@RIALTOCA.GOV TO FIND OUT WHAT DECISIONS THE PLANNING COMMISSION MADE ON THE AGENDA ITEMS.

Call To Order

Pledge of Allegiance

Roll Call

Chair Jerry Gutierrez, Artist Gilbert, Dale Estvander, Frank Gonzalez, John Peukert

Election of Planning Commission Vice Chair

Oral Communications from the Audience on items not on the Agenda

Planning Commission Minutes

PC-22-836 Minutes from the July 27, 2022 Planning Commission meeting

Attachments: PC MTG MINS 7.27.2022.docx

Public Hearings

PC-22-824

Conditional Development Permit No. 2022-0029: A request for the use and development of an 83,272 square foot commerce center on a total of approximately 3.96 gross acres of land on a portion of two (2) parcels (APNs:0132-161-13 and 0132-202-06). The project site is located on the east side of Willow Avenue south of the existing Walmart Center, east of the Fire Station 205 and Cactus-Rialto Channel within the Industrial Park (I-P) land use district of the Gateway Specific Plan. The Planning Commission of the City of Rialto certified an Addendum to the Environmental Impact Report for the Gateway Specific Plan on January 7, 2022 (Resolution No. 2022-01).

Precise Plan of Design No. 2022-0052: A request for site and architectural review and development of an 83,272 square foot commerce center on 3.96 gross acres of land on a portion of APN 0132-161-13 and 0132-202-06.

Attachments:
Exhibit A - Location-Map.pdf
Exhibit B - Site Plan.pdf
Exhibit C - Elevations.pdf
Exhibit D - Landscape Plan.pdf
Exhibit E - TIA.pdf
Exhibit F - CDP 2022-0029 - Draft Resolution.docx
Exhibit G - PPD No. 2022-0052- Draft Resolution.docx

PC-22-835

Conditional Development Permit No. 2021-0040: A request to allow the redevelopment and reuse of an existing industrial site comprised of 5.02 gross acres (4.78 net acres) of land (APN: 0239-192-12) located at the northwest corner of Locust Avenue and Lowell Street within the General Manufacturing (I-GM) land use district of the Rialto Airport Specific Plan for a 100,880 square foot industrial commerce building. An Addendum to the Environmental Impact Report for the Rialto Airport Specific Plan (Environmental Assessment Review No. 2021-0051) has been prepared for consideration in conjunction with the project.

Precise Plan of Design No. 2021-0055: A request to allow the redevelopment of an existing industrial site comprised of 5.02 gross acres (4.78 net acres) of land (APN: 0239-192-12) located at the northwest corner of Locust Avenue and Lowell Street within the General Manufacturing (I-GM) land use district of the Rialto Airport Specific Plan with a 100,880 square foot industrial commerce building and associated paving, landscaping, fencing, lighting, and drainage improvements. An Addendum to the Environmental Impact Report for the Rialto Airport Specific Plan (Environmental Assessment Review No. 2021-0051) has been prepared for consideration in conjunction with the project.

Attachments:
Exhibit A - Location Map
Exhibit B - Site Plan
Exhibit C - Floor Plan
Exhibit D - Exterior Elevations
Exhibit E - Preliminary Landscape Plan
Exhibit F - Traffic Impact Analysis Scoping Agreement
Exhibit G - Addendum to the EIR for the RASP
Exhibit H - Draft Resolution for EAR No. 2021-0051
Exhibit I - Draft Resolution for CDP No. 2021-0040
Exhibit J - Draft Resolution for PPD No. 2021-0055

Action Items

PC-22-844

Request that the Planning Commission receive a presentation in regard to the Foothill Central Specific Plan and provide comments.

Community Development Manager Comments

Commissioner Reports

Adjournment

City of Rialto

Legislation Text

File #: PC-22-836, **Version:** 1, **Agenda #:**

Minutes from the July 27, 2022 Planning Commission meeting

CITY OF RIALTO

THE REGULAR MEETING MINUTES OF PLANNING COMMISSION

July 27, 2022 - 6:00 p.m.

The Regular meeting of the Planning Commission of the City of Rialto was held in the City of Rialto City Council Chambers located at 150 South Palm Avenue, Rialto, California 92376, on July 27, 2022.

o0o

This meeting was called by the presiding officer of the City of Rialto Planning Commission in accordance with the provisions of **Government Code §54956** of the State of California.

o0o

CALL TO ORDER

Chair Jerry Gutierrez called the meeting to order at 6:00 p.m.

o0o

PLEDGE OF ALLEGIANCE

Chair Jerry Gutierrez led the pledge of allegiance.

o0o

ROLL CALL

Roll Call was taken by Administrative Analyst, Kim Dame.

Present:
Chair Jerry Gutierrez
Vice-Chair BarBara L.Chavez
Commissioner Dale Estvander
Commissioner Artist Gilbert
Commissioner Frank Gonzalez
Commissioner John Peukert

Absent: All present.

Staff Present:
Community Development Manager, Paul Gonzales
City Attorney, Robert Messinger
Senior Planner, Daniel Casey
Senior Planner, Siri Champion
Administrative Analyst, Kim Dame

ORAL COMMUNICATION

Chair Gutierrez asked if there were any oral communications from the public not on the agenda. Ms. Dame stated there were none.

o0o

PLANNING COMMISSION MEETING MINUTES

Chair Gutierrez announced that the next item on the agenda is Planning Commission Meeting Minutes.

There were no minutes to approve.

o0o

PUBLIC HEARINGS

Chair Gutierrez stated the next item on the agenda is General Plan Amendment No. 2020-0001, Specific Plan Amendment No. 2020-0001, Variance No. 2020-0001, Conditional Development Permit No. 2020-0006, Precise Plan of Design No. 2020-0012, and Environmental Assessment Review No. 2020-0007.

Senior Planner Daniel Casey made the presentation.

General Plan Amendment No. 2020-0001: A request to amend the general plan land use designation on approximately 8.46 gross acres of land (APN: 0132-181-01) located at the northwest corner of Valley Boulevard and Willow Avenue from General Commercial (GC) to a Specific Plan Overlay of Business Park (BP) with a Specific Plan Overlay.

Specific Plan Amendment No. 2020-0001: A request to amend the specific plan zoning designation on approximately 8.46 gross acres of land (APN: 0132-181-01) located at the northwest corner of Valley Boulevard and Willow Avenue from Freeway Commercial (F-C) within the Gateway Specific Plan to Industrial Park (I-P) within the Gateway Specific Plan.

Variance No. 2020-0001: A request for a variance per Section 18.35.030A of the Rialto Municipal Code to increase the maximum allowable building height from 35 feet to 49 feet, as it relates to a proposal to develop a 492,410 square foot industrial warehouse building on approximately 22.49 gross acres (20.99 net acres) of land (APN's: 0132-181-01, 0132-201-03, 0254-261-14, & 0254-261-17) located at the northwest corner of Valley Boulevard and Willow Avenue.

Conditional Development Permit No. 2020-0006: A request to allow the development and operation of a 492,410 square foot industrial warehouse building on approximately 22.49 gross acres (20.99 net acres) of land (APN's: 0132-181-01, 0132-201-03, 0254-261-14, & 0254-261-17) located at the northwest corner of Valley Boulevard and

Willow Avenue.

Precise Plan of Design No. 2020-0012: A request to approve the development of a 492,410 square foot industrial warehouse building and associated paving, landscaping, fencing, lighting, and drainage improvements on approximately 22.49 gross acres (20.99 net acres) of land (APN's: 0132-181-01, 0132-201-03, 0254-261-14, & 0254-261-17) located at the northwest corner of Valley Boulevard and Willow Avenue.

Environmental Assessment Review No. 2020-0007: An Environmental Impact Report has been prepared for consideration in conjunction with General Plan Amendment No. 2020-0001, Specific Plan Amendment No. 2020-0001, Variance No. 2020-0001, Conditional Development Permit No. 2020-0006, and Precise Plan of Design No. 2020-0012, in accordance with the California Environmental Quality Act (CEQA).

o0o

Chair Gutierrez opened the Public Hearing.

Brooke Birtcher-Gustafson and Scott Mulkay spoke on behalf of the applicant, Birtcher Development.

David Ornelas of T&B Planning, the preparer of the Environmental Impact Report, spoke to rebut letters received by Planning staff, which object to the project.

There were 4 public speakers:

Amparo Munoz, 6643 Blanchard Ave., Fontana, CA
Represents the Center for Community Action and Environmental Justice speaking in objection of the project. Pollutants too close to schools.

Ana Gonzalez, 509 W. 2nd St., Rialto, CA
Represents the Center for Community Action and Environmental Justice and speaking in objection to the project based upon pollution concerns.

Joaquin Castillejos, 18285 11th St., Bloomington, CA
Represents the Center for Community Action and Environmental Justice Spoke in objection of the project and asks that the Planning Commission to oppose the project.

Brenda Parker, 1459 N. Birch Ave., Rialto, CA
Spoke in objection to the project based upon pollution and health concerns.

Mr. Casey asked if anyone attending the meeting via online would like to speak. There were none.

Commissioner Estvander made a motion to close the public hearing. Seconded by Commissioner Gonzalez.

All were in favor; *motion carried,* 6-0-0.

Chair Gutierrez closed the Public Hearing.

o0o

Motion by Commissioner Estvander to approve General Plan Amendment No. 2020-0001, Specific Plan Amendment No. 2020-0001, Variance No. 2020-0001, Conditional Development Permit No. 2020-0006, Precise Plan of Design No. 2020-0012, and Environmental Assessment Review No. 2020-0007, no second was given.

Motion by Chair Gutierrez to recommend denial of General Plan Amendment No. 2020-0001, Specific Plan Amendment No. 2020-0001, Variance No. 2020-0001, Conditional Development Permit No. 2020-0006, Precise Plan of Design No. 2020-0012, and Environmental Assessment Review No. 2020-0007, due to over proliferation of warehouses in the area, truck traffic, and pollution. Seconded by Commissioner Chavez.

All were in favor, *motion carried,* 6-0-0.

o0o

Chair Gutierrez stated the next item on the agenda is Zoning Code Amendment No. 2022-03.

Senior Planner Siri Champion gave the presentation.

Request the Planning Commission adopt a resolution recommending the City Council approve an ordinance regulating special events.

o0o

Motion by Chair Gutierrez to approve Zoning Code Amendment No. 2022-03, second by Commissioner Estvander.

All were in favor; *motion carried,* 6-0-0.

o0o

Chair Gutierrez stated the next item on the agenda is a request for the Planning Commission to adopt a resolution recommending to the City

Council approval of an ordinance providing for voluntary merger of parcels.

Community Development Manager Paul Gonzales gave the presentation.

Request the Planning Commission adopt a resolution recommending the City Council approve an ordinance providing for the voluntary merger of parcels.

o0o

Motion by Commissioner Peukert to approve Zoning Code Amendment No. 2022-03, second by Commissioner Gonzalez.
All were in favor; *motion carried*, 6-0-0.

o0o

COMMUNITY DEVELOPMENT MANAGER COMMENTS

Chair Gutierrez stated that the next item on the agenda is Community Development Manager comments.

Community Development Manager Paul Gonzales stated that the Planning Commission will be attending a conference on August 26th in Rancho Cucamonga.

He addressed the Commission's request to be updated on projects, stating that this would be done at the next Planning Commission regular meeting.

o0o

PLANNING COMMISSION COMMENTS

Chair Gutierrez stated that the next item on the agenda is Commissioner comments.

Commissioner Peukert had some concerns and comments over the proportion of the Fair Share Fees paid by the developers on warehouse projects.

Commissioner Estvander echoed those concerns and commented on the current state of Valley Blvd. at Willow and how additional truck traffic would be harmful to an area already in a state of disrepair.

Commissioner Gonzalez asked for an update on the status of meeting with the City Manager. Chair Gutierrez stated he would be meeting with the City Manager and would be bringing up the concerns of the Commission.

o0o

ADJOURNMENT

Motion by Commissioner Peukert to adjourn the meeting, second by Commissioner Estvander.

All were in favor; *motion carried, 6-0-0.*

The Regular Planning Commission meeting on Wednesday, July 27, 2022, adjourned at 7:31 p.m.

o0o

_____

Minutes prepared by Kim Dame
Administrative Analyst

_____

Jerry Gutierrez
Chair Planning Commission

File #: PC-22-824, **Version:** 1, **Agenda #:**

For the Planning Commission Meeting on September 14, 2022

TO: Honorable Chairman and Planning Commissioners

APPROVAL: Paul Gonzales, Community Development Manager

FROM: Dionne Harris, Senior Planner

Conditional Development Permit No. 2022-0029: A request for the use and development of an 83,272 square foot commerce center on a total of approximately 3.96 gross acres of land on a portion of two (2) parcels (APNs:0132-161-13 and 0132-202-06). The project site is located on the east side of Willow Avenue south of the existing Walmart Center, east of the Fire Station 205 and Cactus-Rialto Channel within the Industrial Park (I-P) land use district of the Gateway Specific Plan. The Planning Commission of the City of Rialto certified an Addendum to the Environmental Impact Report for the Gateway Specific Plan on January 7, 2022 (Resolution No. 2022-01).

Precise Plan of Design No. 2022-0052: A request for site and architectural review and development of an 83,272 square foot commerce center on 3.96 gross acres of land on a portion of APN 0132-161-13 and 0132-202-06.

APPLICANT:

Jacob Glaze c/o Kimley-Horn & Associates, 1100 W Town and Country Road, STE700, Orange, CA 92868.

LOCATION:

The project site consists of two (2) parcels (APN: 0132-161-13 and 0132-202-06) located on the east side of Willow Avenue south of the existing Walmart Center, west of the Fire Station 205 property, and east of the Cactus-Rialto Channel within the Industrial Park (I-P) land use district of the Gateway Specific Plan. (Refer to the attached Location Map (**Exhibit A**)).

BACKGROUND:

Surrounding General Plan Land Use Designations

Location	***General Plan Designation***
Site	Specific Plan with a Specific Plan Overlay (Gateway SP)
North	Specific Plan with a Specific Plan Overlay (Gateway SP)

East	Specific Plan with a Specific Plan Overlay (Gateway SP)
South	Specific Plan with a Specific Plan Overlay (Gateway SP)
West	Specific Plan with a Specific Plan Overlay (Gateway SP)

Surrounding Zoning Designations

Location	***Zoning***
Site	Industrial Park (I-P)
North	Office Park (O-P)
East	Retail Commercial (R-C)
South	Retail Commercial (R-C)
West	Industrial Park (I-P)

Site Characteristic
The project site is a relatively flat, square-shaped parcel of land comprised of two (2) parcel that is 3.96 gross acres in size. The project site is bound on the south by the Gateway Shopping Center, on the east side by the Rialto Village Shopping Center, on the west by the City of Rialto Fire Station No. 205, and on the north side of the project by the Rialto Marketplace Shopping Center. The property is entirely vacant at this time.

Furthermore, the project site is located within the Industrial Park (I-P) of the Gateway Specific Plan. The I-P land use designation is intended to accommodate a mixture of professional office, light industrial, research, and development, business park, light manufacturing, assembly, and related storage and support services uses.

BACKGROUND:

The Successor Agency's Long-Range Property Management Plan identifies several parcels within the Gateway commercial and industrial areas that are intended for future economic development, including a 15.5-acre residual site remaining after the development of Fire Station 205, located to the west of Riverside Avenue and north of Valley Boulevard.

On December 8, 2020, the City Council approved the Exclusive Right to Negotiate Agreement (ENA) consistent with the direction provided by the Economic Development Committee (EDC). On April 28, 2021, NewMark Merrill presented the EDC an update on their leasing commitments on the commercial center along with the incorporation of a draft industrial component into the site plan for approximately four (4) acres of land located on the westernmost portion of the site.

This project is a joint partnership with the City and developer NewMark Merrill. The project was intended to be a phased development with the commercial center (Rialto Village Shopping Center) being reviewed and approved as the First Phase and the commerce center now being reviewed as the Second Phase. The location of the proposed commerce center would not be suitable for commercial uses due to contamination of land on the rear of the project site. The location of the project is also deficient of street frontage as it is located approximately 320 feet from Willow Avenue and a much larger distance from Riverside Avenue. This greatly limits any visibility for commercial

uses therefor limiting the success of commercial uses at this location. The project before you is consistent with the I-P Zone, and the General Plan, and has been reviewed and deemed appropriate by the Economic Development Committee.

ANALYSIS/DISCUSSION:

Project Proposal
The applicant, Kimley-Horn & Associates, Inc., proposes to construct an 83,272-square-foot commerce center on the project site. There is no proposed tenant for the new building at this time, but the design of the building will accommodate various commerce center uses.

Entitlement Requirements
The following entitlements are required for the applicant's proposal:

- Conditional Development Permit: The development and operation of an industrial warehouse use within the I-P land use district require the approval of a Conditional Development Permit.

- Precise Plan of Design: The design of the development and the related site improvements (e.g. building exterior, landscaping, etc.) requires the approval of a Precise Plan of Design.

Site Design
As provided on the site plan (**Exhibit B**), the applicant requests to construct an 83,272 square-foot commerce center building east of Willow Avenue on the south side of Fire Station 205 and adjacent to the Cactus-Rialto Channel. The proposed layout includes an enclosed truck court on the east side of the building and passenger vehicle parking areas along the south and east sides of the building. The truck court will accommodate a maximum of twenty (20) trucks and trailers, while the passenger vehicle parking areas will provide for the parking of up to sixty-five (65) passenger vehicles.

A new forty (40) foot wide driveway connected directly to Willow Avenue at the west end of the project frontage will provide right-in/right-out access for both trucks and passenger vehicles, and a second twenty-six (26) foot wide driveway connected directly to Riverside Avenue near the north end of the project frontage will provide full access movements for passenger vehicles but will be limited to right-in/left-out access for trucks.

Other proposed on-site improvements include paving, lighting, landscape planters throughout the site, screen walls around the truck court, and an underground infiltration basin for runoff water quality treatment.

Floor Plan
The floor plan for the proposed building (**Exhibit C**) indicates that the building will consist of 5,990 square feet of office space and 83,272 square feet of commerce center. The office space will occupy the southeast corner of the building, with 2,500 square feet on the ground floor and another 2,990 square feet up above on a second-floor mezzanine. The east side of the building will have seventeen (17) dock high loading doors and one (1) grade level roll-up door. The main entrance to the building is proposed on the south side with office space shown on the southeast corner of the building, along with fifteen (15) secondary/emergency exits distributed amongst all four (4) sides of the building.

Architectural Design
The proposed building will feature significant vertical and horizontal wall plane articulation in the form of recessed wall panels and panel height variations on all four (4) sides of the building. As shown on the elevations (**Exhibit D**), the building height ranges from 35'-6" feet to 36'-6" feet from the finished floor level, with the highest points being the southeast and southwest corners of the building. The exterior of each building will be of concrete tilt-up wall construction painted with a palette of four (4) different colors - white, gold, and various gray tones. Other architectural features of the building include tower elements at the corners, roofline treatments, reveals, metal brow accents, glazing, and the use of wood tile on the exterior of the building.

Parking
The development will have 66 auto-parking spaces, including five (5) ADA-accessible parking spaces. This quantity equals the minimum parking requirement as shown in the parking calculation chart below and as required by Table 3-6 (Parking Standards) of the Gateway Specific Plan, which requires one (1) parking space for every 250 square feet of office space gross floor area, one (1) parking space for every 1,000 square feet of warehouse space gross floor area up to 10,000 square feet, and one (1) parking space for every 2,000 square feet of warehouse space gross floor area beyond 68,272 square feet:

Type of Use	***Floor Area (square feet)***	***Parking Ratio***	***Number of spaces required***
Office Warehouse	5,990	1 / 250	22
Floor area up to 10,000 square feet Floor area 10,001 square feet or more	10,000 67,282	1 / 1,000 1 / 2,000	10 34
Total Required/Total Provided			**66/66**

Landscaping
The landscape coverage for the project is 10.3 percent, which exceeds the minimum required amount of 10.0 percent. This includes the ten (10) foot landscape planters around the perimeter of the building and the project site. All the landscape planters will feature a variety of trees spaced every thirty (30) linear feet and an abundant number of shrubs and ground cover (**Exhibit D**).

Traffic
Kimley-Horn and Associates, Inc. prepared a Transportation Impact Analysis (TIA), dated December 2021, to assess the project's potential impacts on local streets and intersections (**Exhibit E**). The TIA estimates that the project will generate approximately 163 actual daily vehicle trips (274 PCE daily vehicle trips) with 14 trips in the AM peak hour and 15 trips in the PM peak hour. Trucks will constitute 65 of the 163 actual daily vehicle trips.

The TIA analyzed the following three (3) intersections in the project vicinity:

- Two full-movement signalized driveways on Riverside Avenue;

- One right-in, right-out (RIRO) only unsignalized driveway on Riverside Avenue;
- One full-movement unsignalized driveway on Willow Avenue.

The Transportation Commission reviewed and approved the traffic study on December 20, 2021. A total of 6,396 daily Passenger Car Equivalent (PCE) trips are anticipated, with 290 AM peak hour trips and 628 PM peak hour trips. The traffic study determined that the project is responsible for "fair-share" payments towards improvements at the intersections along Riverside Avenue, south of San Bernardino Avenue. Trip generation estimates for the project are based on daily and peak hourly trip generation rates obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition). ITE trip generation estimates for the project are based on the trip generation rates for the following ITE Land Uses ITE Land Use 110 - General Light Industrial; and ITE Land Use 821 - Shopping Plaza (40K-150K). It is assumed that trips generated by the shopping plaza are all passenger vehicle trips. According to the ITE 10th Edition Supplement, the trips generated by light industrial use would be 92% passenger vehicles and 8% trucks. The City of Rialto TIA Report Guidelines specify a truck split of 70% of trucks being 4+-axle, 28% of trucks being 3-axle, 2and % of trucks being 2- axle. These truck classification splits were applied to the daily and peak hour trip generation to develop an estimate of truck volumes by the number of axles that would be associated with the proposed project.

The project is not expected to generate additional significant transportation impacts not disclosed in previous environmental documents. However, the project should meet the conditions of previous environmental studies as well as pay applicable Development Impact Fees.

Land Use Compatibility
The project is consistent with the I-P land use district, the Gateway Specific Plan, the regulations contained within Chapter 18.112 (Indoor Storage Uses) of the Rialto Municipal Code. There are no single-family residences located within 1,000 feet of the project site so the development and operation of the proposed commerce center will not impact residents within this radius. Additionally, the installation of solid screen walls and landscape buffering will reduce both noise and visual impacts. The Draft Resolutions of Approval contain conditions of approval requiring that the project not exceed the traffic estimates contained within the TIA, thereby ensuring that the project will not significantly impact local streets and intersections. The project will be a benefit to the community and an improvement to the surrounding area.

GENERAL PLAN CONSISTENCY:

The project is consistent with the following goals of the Land Use Element of the Rialto General Plan:

Goal 2-16: Improve the architectural and design quality of development in Rialto.

Goal 2-22: Promote commercial and/or industrial development that is well designed, people-oriented, environmentally sustainable, sensitive to the needs of the visitor or resident, and functionally efficient for its purpose.

Goal 3-1: Strengthen and diversify the economic base and employment opportunities and maintain a positive business climate.

ENVIRONMENTAL IMPACT:

California Environmental Quality Act
The Planning Commission adopted an Addendum to the Gateway Specific Plan Environmental Impact Report ("Addendum") on January 7, 2022, in accordance with the California Environmental Quality Act (CEQA). The Addendum analyzed the development of an 83,272 square foot industrial building and the 93,773 square foot shopping center on the project within the Gateway Specific Plan area. No further review under CEQA is required for the project.

PUBLIC NOTICE:

The City published a public hearing notice for the proposed project in the *San Bernardino Sun* newspaper, posted copies of the public hearing notice outside the Council Chambers and the City Clerk's Office, and mailed public hearing notices to all property owners within 1,000 feet of the project site, as required by State law.

RECOMMENDATION:

The Planning Division recommends that the Planning Commission:

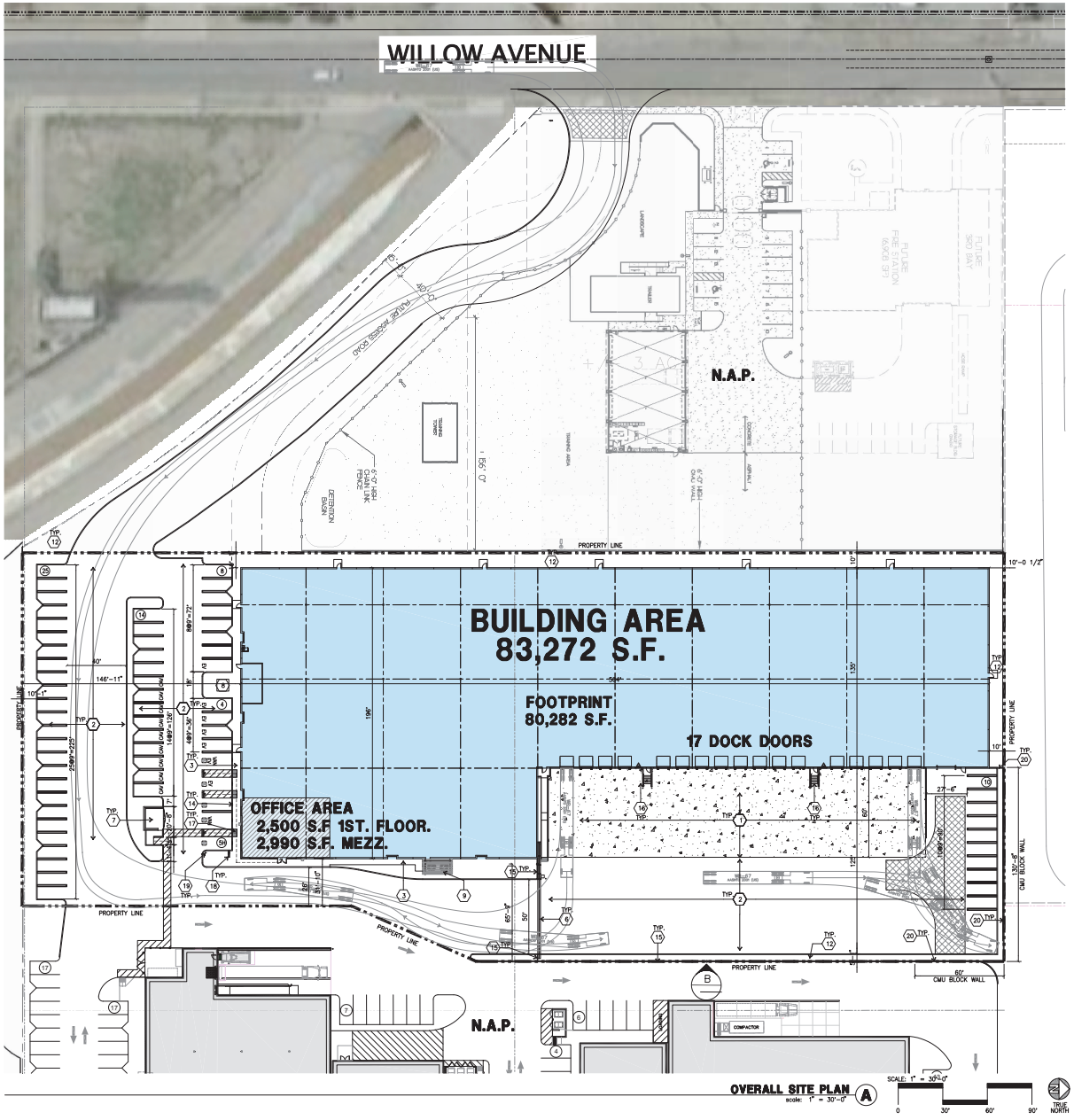
- Adopt the attached Resolution (**Exhibit F**) to approve Conditional Development Permit No. 2022-0029 to allow the development and operation of an 83,272 square foot commerce center on 3.96 gross acres of land on a portion of APN:0132-161-13 and 0132-202-06 located on the east side of Willow Avenue south of the existing Walmart Center, east of the Fire Station 205 and Cactus-Rialto Channel within the Industrial Park (I-P) land use district of the Gateway Specific Plan, subject to the findings and conditions therein; and

- Adopt the attached Resolution (**Exhibit G**) to approve Precise Plan of Design No. 2022-0052 to allow the development and operation of an 83,272 square foot commerce center on 3.96 gross acres of land on a portion of APN:0132-161-13 and 0132-202-06 located on the east side of Willow Avenue south of the existing Walmart Center, east of the Fire Station 205 and Cactus-Rialto Channel within the Industrial Park (I-P) land use district of the Gateway Specific Plan, subject to the findings and conditions therein.



Project Location Map

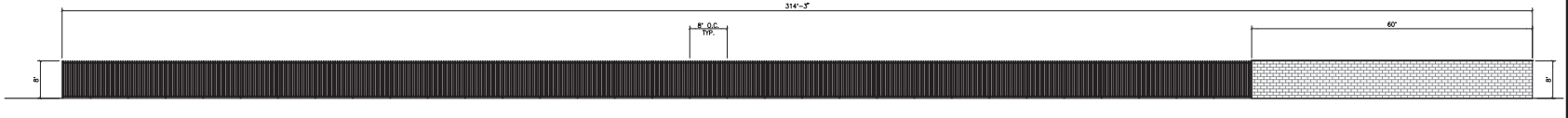
N



OVERALL SITE PLAN (A) scale: 1" = 30'-0"

SCALE: 1" = 30'-0"

0 30' 60' 90' TRUE NORTH



TUBULAR STEEL FENCE ELEVATION (B) scale: 1" = 10'-0"

SCALE: 1" = 10'-0"

0 10' 20' 30'

VICINITY MAP



SITE LEGEND

- CONCRETE PAVING SEE "C" DRWGS. FOR THICKNESS
- ASPHALT CONCRETE PAVING SEE "C" DRWGS. FOR THICKNESS
- STANDARD PARKING STALL (9' X 18')
- DISABLED PARKING STALL (9' X 18') + 5' W/ ACCESSIBLE AISLE
- DISABLED PARKING (VAN) STALL (12' X 18') + 5' W/ ACCESSIBLE AISLE
- LANDSCAPED AREA
- PATH OF TRAVEL
- 26' FIRE WIDE FIRELANE
- EXISTING PUBLIC FIRE HYDRANT

SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONCRETE PAVEMENT.
2. UNREINFORCED POROUS CONCRETE PAVING.
3. CONCRETE WALKWAY, MEDIUM BROOM FINISH.
4. NOT USED.
5. 5'-6"X5'-6"X4" THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH.
6. PROVIDE 8' HIGH METAL GATES W/ KNOX-BOX PER FIRE DEPARTMENT AND POLICE DEPARTMENT STANDARDS PER DRIVEWAY. PROVIDE PERFORATED PANELS ON BACK SIDE. PAINT ALL WITH BLACK PAINT.
7. TRASH ENCLOSURE PER CITY STANDARD.
8. APPROXIMATE LOCATION OF TRANSFORMER.
9. EMPLOYEE BREAK AREA.
10. CONCRETE FILLED GUARD POST "6 DIA. U.N.O. 42" H.
11. DESIGNATED SMOKING AREA.
12. LANDSCAPE.
13. ACCESSIBLE ENTRY SIGN.
14. ACCESSIBLE PARKING STALL SIGN.
15. 8' HIGH TUBULAR STEEL FENCE.
16. EXTERIOR CONCRETE STAIR.
17. TRUNCATED DOME.
18. EXTERIOR BIKE RACK.
19. SMOKING AREA.
20. 8' HIGH SPLIT FACE CMU BLOCK WALL WITH CSPLIT FACE CONCRETE CAP.

LEGEND

- POTENTIAL OFFICE
- WAREHOUSE
- DRIVE THRU DOOR

SITE PLAN GENERAL NOTES

1. THE SITE PLAN BASED ON THE SOILS REPORT PREPARED BY: TBD.
2. IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE.
3. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINE U.N.O.
4. SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES.
5. THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM.
6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
9. SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.
10. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4". FINISH TO BE A MEDIUM BROOM FINISH U.N.O.
11. PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.
12. CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND IRRIGATION OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
13. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
14. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
15. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB.

PROJECT DATA

SITE AREA	
In s.f.	168,485 s.f.
In acres	3.87 ac
BUILDING AREA	
Office - 1st Floor	2,500 s.f.
Mezzanine	2,990 s.f.
Warehouse	77,782 s.f.
TOTAL	83,272 s.f.
COVERAGE	49.4%
AUTO PARKING REQUIRED	
Office + Mezz: 1/250 s.f.	22 stalls
Whse: 1st 10K @ 1/1,000 s.f.	10 stalls
above 10K @ 1/2,000 s.f.	34 stalls
TOTAL	66 stalls
AUTO PARKING PROVIDED	
Standard (9' x 20')	47 stalls
ADA Van (9' x 20')	1 stalls
ADA Std. (9' x 20')	2 stalls
EV ADA (9' x 20')	1 stalls
EV ADA Std. (9' x 20')	1 stalls
EV ### (9' x 20')	4 stalls
CAV (9' x 20')	9 stalls
TOTAL	66 stalls
ZONING ORDINANCE FOR CITY	
Zoning Designation : Gateway Specific Plan	
MAXIMUM BUILDING HEIGHT ALLOWED	
Height - 35'	
MAXIMUM FLOOR AREA RATIO	
FAR - N/A	
LANDSCAPE PROVIDED	
Percentage	10%
Square Footage	17,471 s.f.
SETBACKS	
Building	Landscape
Front / street- 25'	10'
Side / rear- 5'	

PROPERTY OWNER

DONLON BUILDERS
2681 SATURN ST.
BREA, CA. 92821
CONTACT: DESMOND DONNELLAN
PHONE: (714) 528-0800

ADDRESS OF THE PROPERTY

WILLOW AVE.
RIALTO, CA.

ASSESSOR'S PARCEL NUMBER

0132-161-18
0132-202-11

LEGAL DESCRIPTION

SEE CIVIL

ZONING

ZONING DESIGNATION: GATEWAY S.P. – INDUSTRIAL PARK (I–P)

APPLICANT

DONLON BUILDERS
2681 SATURN ST.
BREA, CA. 92821
CONTACT: DESMOND DONNELLAN
PHONE: (714) 528-0800

APPLICANT'S REPRESENTATIVE

HPA, INC.
18831 BARDEEN AVE SUITE 100
IRVINE CA 92612
TEL: 949-862-2110
CONTACT: JAIME CRUZ

HPA architecture 42 Years
hpa, inc.
18831 bardeen avenue, - ste. #100
irvine, ca
92612
tel: 949-863-1770
fax: 949-863-0851
email: hpa@hparche.com

LICENSED ARCHITECT JAIME E. CRUZ C-28451 3-31-23 RENEWAL DATE STATE OF CALIFORNIA

Owner:

DONLON BUILDERS

DEDEAUX PROPERTIES

2681 Saturn Street
Brea, CA. 92821
(714) 528-0800

Project:

Rialto Village Industrial

Willow Avenue
Rialto, CA.

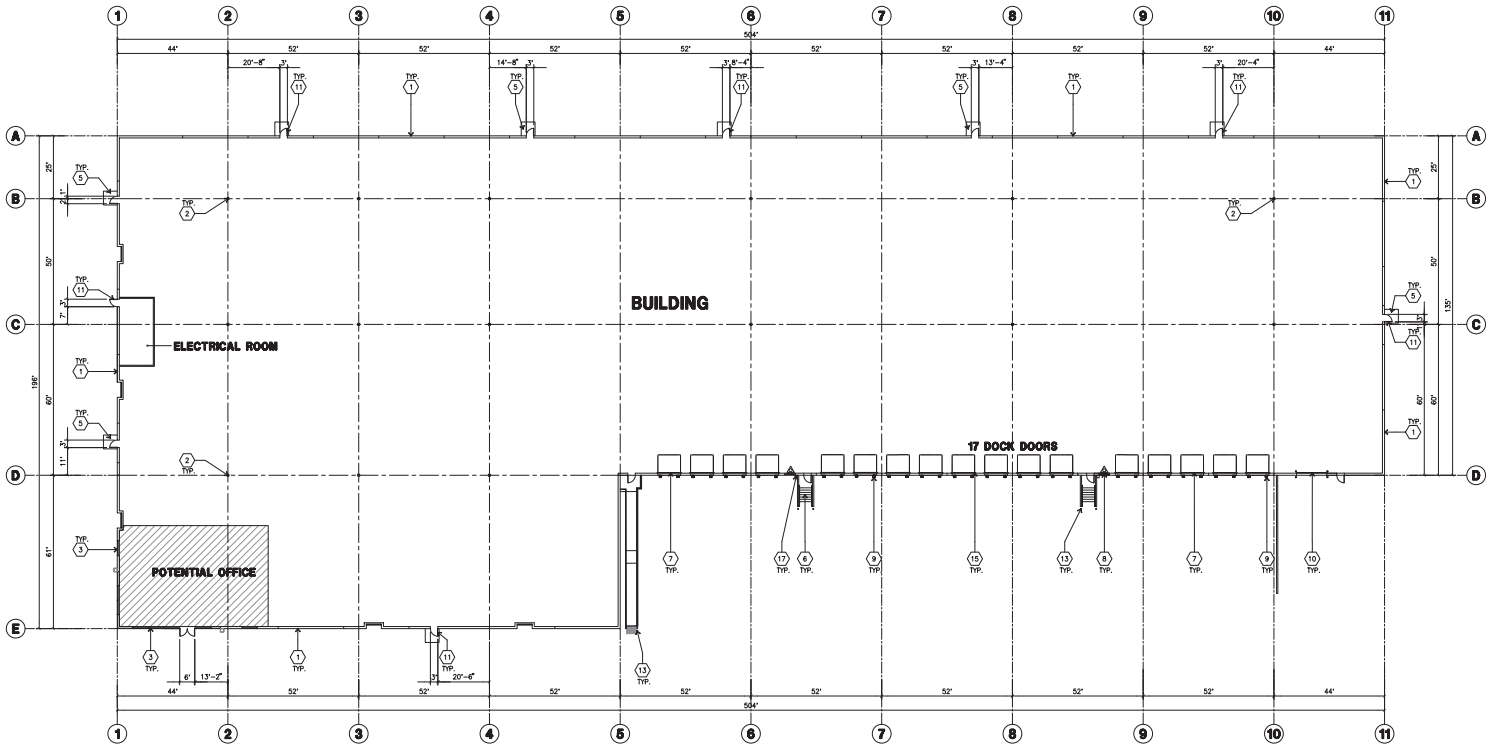
Consultants:

CIVIL	-
STRUCTURAL	-
MECHANICAL	-
PLUMBING	-
ELECTRICAL	-
LANDSCAPE	-
FIRE PROTECTION	-
SOILS ENGINEER	-

Title: **OVERALL SITE PLAN**

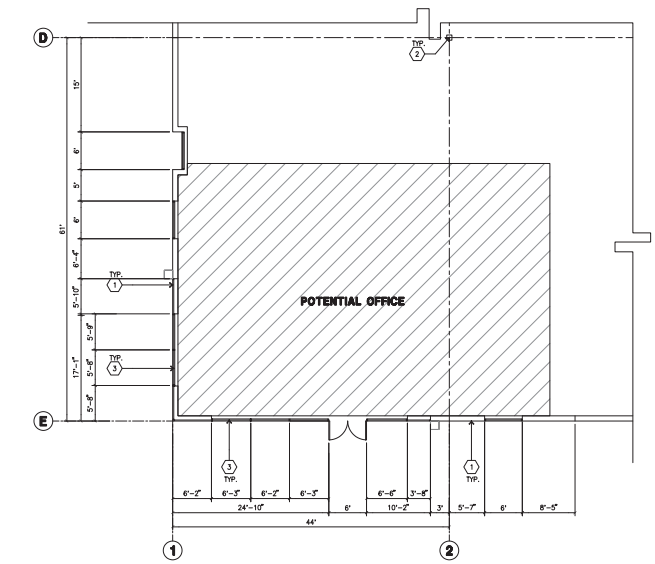
Project Number: 21735
Drawn by: JEC
Date: 05/20/22
Revision:

Sheet: **DAB-A1.1**



OVERALL FLOOR PLAN (A)
scale: 1" = 20'-0"

SCALE: 1/8" = 1'-0"
0 8' 16' 24'
TRUE NORTH



ENLARGED FLOOR PLAN (B)
scale: 1/8" = 1'-0"

SCALE: 1/8" = 1'-0"
0 8' 16' 24'
TRUE NORTH

FLOOR PLAN KEYNOTES

1. CONCRETE TILT-UP PANEL.
2. STRUCTURAL STEEL COLUMN.
3. TYPICAL STOREFRONT SYSTEM WITH GLAZING. SEE OFFICE BLOW-UP AND ELEVATIONS FOR SIZE, COLOR AND LOCATIONS.
4. CONCRETE RAMP W/ 42"HIGH CONC TILT-UP GUARD WALL OR BUILDING WALL ON BOTH SIDE OF RAMP.
5. 5'-6"X5'-6"X4" THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH.
6. EXTERIOR CONCRETE STAIR WITH GUARDRAIL AND HANDRAIL.
7. 9' X 10' TRUCK DOOR, SECTIONAL O.H., STANDARD GRADE.
8. LOUVERED OPENING FOR VENTILATION.
9. DOCK DOOR BUMPER TYPICAL.
10. 12' X 14' DRIVE THRU. SECTIONAL O.H., STANDARD GRADE.
11. 3' X 7' HOLLOW METAL EXTERIOR MAN DOOR.
12. KNOX BOX PER FIRE AND POLICE DEPARTMENT.
13. CONC. FILLED GUARD POST. 6" DIA. U.N.O.. 42"H.
14. EXTERIOR DOWN SPOUTS W/ 2 OVERFLOW SCUPPERS.
15. Z GUARD.
16. ROOF ACCESS LADDER.
17. LONG-TERM BIKE RACK. BIKE RACK TO BE PERMANENTLY ANCHORED.
18. TUBE STEEL CANOPY.

FLOOR PLAN GENERAL NOTES

1. THIS BUILDING IS DESIGNED FOR HIGH PILE STORAGE WITH FIRE ACCESS MAN DOORS AT APPROXIMATELY 125' O.C. A SEPARATE PERMIT WILL BE REQUIRED FOR ANY RACKING/CONVEYER SYSTEMS.
2. FIRE HOSE LOCATIONS SHALL BE APPROVED PER FIRE DEPARTMENT.
3. SEE "C" DRAWINGS FOR FINISH SURFACE ELEVATIONS.
4. WAREHOUSE INTERIOR CONCRETE WALLS ARE PAINTED WHITE. COLUMNS ARE TO RECEIVE PRIMER ONLY. ALL GYP. BD. WALLS IN WAREHOUSE TO RECEIVE 1 COAT OF WHITE TO COVER.
5. SLOPE POUR STRIP 1/2" TO EXTERIOR AT ALL MANDOOR EXITS. SEE "S" DRAWINGS FOR POUR STRIP LOCATION.
6. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE PANEL WALL, GRID LINE, OR FACE OF STUD U.N.O.
7. SEE CIVIL DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR TO VERIFY ACTUAL UTILITY LOCATIONS. PLUMBING/ELECTRICAL COORDINATION.
8. SEE BELOW FOR DOOR TYPES AND SIZES.
NOTE: ALL DOORS PER DOOR SCHEDULE ARE FINISH OPENINGS.
9. CONTRACTOR TO PROTECT AND KEEP THE FLOOR SLAB CLEAN. ALL EQUIPMENT TO BE DIAPERED INCLUDING CARS AND TRUCKS.
10. ALL EXIT MAN DOORS IN WAREHOUSE TO HAVE ILLUMINATED EXIT SIGN HARDWARE.
11. HIGHLY FLAMMABLE AND COMBUSTIBLE MATERIAL SHALL NOT BE USED OR STORED IN THIS BUILDING.
12. EACH EXTERIOR EXIT DOOR SHALL BE IDENTIFIED BY A TACTILE EXIT SIGN WITH THE WORDS "EXIT". THE MOUNTING HEIGHT FOR SUCH SIGNAGE SHALL BE 60" FROM FINISH FLOOR LEVEL TO THE CENTER OF THE SIGN.
13. NON-ACCESSIBLE DOOR. PROVIDE WARNING SIGN LOCATED IN THE INTERIOR SIDE PER CBC 11B-703.5
14. ALL ROOF MOUNTED MATERIALS SHALL BE FULLY SCREENED FROM PUBLIC VIEW.
15. PROVIDE FIRE RATED PANEL JOINTS AND CAULKING AT ALL OPENINGS ON 3HR FIRE RATED WALL. SEE A DRAWING FOR LOCATIONS.
16. PROVIDE FIRE EXTINGUISHERS PER FIRE MARSHALL

FLOOR SLAB & POUR STRIPS REQ.

THESE NOTES ARE VERY MIN. REQUIREMENT. SEE "S" DWGS FOR ADDITIONAL REQUIREMENTS

1. FLOOR COMPACTION – 95%
2. TRENCH COMPACTION – 90%
3. BUILDING FLOOR SLAB: SEE STRUCTURAL DRAWINGS.
4. CONTRACTOR TO BUILD FOR CLASS V FLOOR PER A.C.I. 302-1R-96
5. CONCRETE SLAB TO HAVE STEEL FLOAT HARD TROWEL BURNISHED FINISH.
6. CONTRACTOR TO CURE SLAB TO BE WET CURING USING BURLINE FOR 7 DAYS MIN.
7. ALL EQUIPMENT & MOVING VEHICLES SHALL BE DIAPERED.
8. NO CRANES, CONCRETE TRUCKS, OR ANYTHING HEAVIER WILL BE PLACED ON THE SLAB.
9. SLAB TO BE FF50 FL35 MEASURED WITHIN 24 HOURS.
10. NO FLY ASH IN THE CONCRETE
11. WHERE INDICATED, PROVIDE VAPOR BARRIER (15MIL STEGO OR EQUAL) UNDER THE CONCRETE SLAB. PROVIDE SAND PER SOILS ENGINEER OR MANUFACTURER'S RECOMMENDATION.

CONCRETE SLAB IN FUTURE OFFICE AREAS, WHERE SAND OVER VIQUEEN ARE REQUIRED, SHALL BE NATURALLY HYDRATED WITHOUT USE OF BURLENE, CURING COMPOUND, OR RELEASE AGENTS.
CONTROL/CONSTRUCTION JOINTS SHALL NOT BE FILLED WITH MM-80 JOINT FILLER IN FUTURE OFFICE AREAS.
12. SEAL CONCRETE SLAB W/ "LIPIDOLITH" SEALER
13. 10' POUR STRIP AT TRUCK DOOR 4FT. MAX. ELSEWHERE.
14. ALL FLOOR SLAB NAIL OR BRACE FRAME HOLES FILLED WITH APPROVED 2 PART EPOXY COMPOUND TO MATCH CONCRETE COLOR. PEGA BOND LV 2000,BURKE EPOXY INJECTION RESIN OR EQUAL.
15. PROVIDE FIRE EXTINGUISHERS PER FIRE DEPARTMENT REQUIREMENT.
16. MM-80 AT SPEED BAY ONLY

HPA architecture 42 Years
hpa, inc.
18831 bardeen avenue, - ste. #100
irvine, ca
92612
tel: 949-863-1770
fax: 949-863-0851
email: hpa@hparche.com

Owner:
DONLON BUILDERS
DEDEAUX PROPERTIES
2681 Saturn Street
Brea, CA. 92821
(714) 528-0800

Project:
Rialto Village Industrial
Willow Avenue
Rialto, CA.

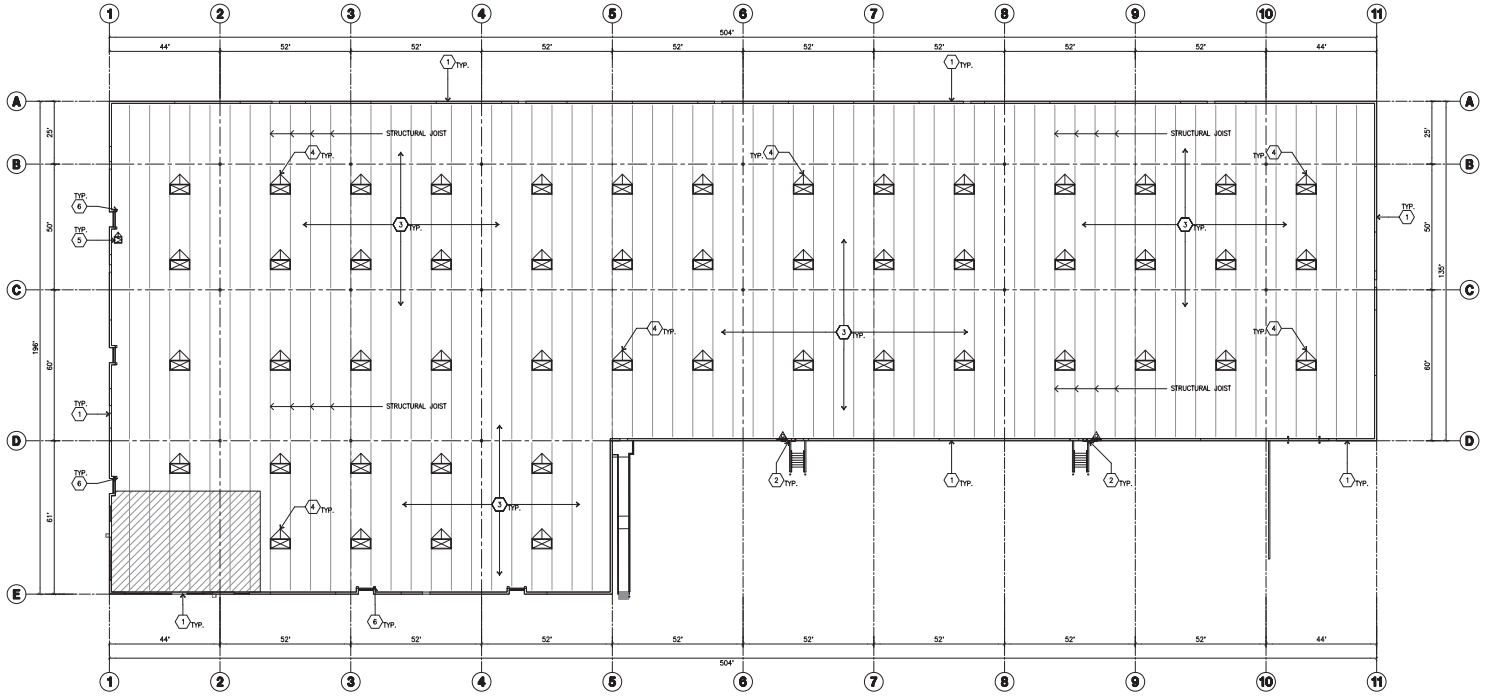
Consultants:

CIVIL	-
STRUCTURAL	-
MECHANICAL	-
PLUMBING	-
ELECTRICAL	-
LANDSCAPE	-
FIRE PROTECTION	-
SOILS ENGINEER	-

Title: OVERALL FLOOR PLAN

Project Number: 21735
Drawn by: JEC
Date: 05/20/22
Revision:

Sheet:
DAB-A2.1



OVERALL ROOF PLAN (A)
scale: 1" = 20'-0"

SCALE: 1" = 20'-0"
0 20' 40' 60'
TRUE NORTH

ROOF PLAN KEYNOTES

1. CONCRETE PARAPET.
2. EXTERIOR ROOF DRAIN WITH 2 OVERFLOW SCUPPERS.
3. 4-PLY BUILT-UP ROOFING.
4. 4' X 8' SKYLIGHT/SMOKE HATCH.
5. ROOF ACCESS HATCH, SEE DETAIL 13 & 20 /AD.2
6. PARAPET RETURN
7. ROOF ADDRESS PAINTED BLACK 4" HIGH W/ 1" WIDE STROKE PER LETTER.

ROOF LEGEND

- 4' X 8' CURB MOUNTED FIXED SKYLIGHTS WITH CRICKET.
- BUILDING PARAPET LINE.
- 30" X 36" ROOF HATCH.
- EXTERIOR METAL DOWNSPOUT W/ OVERFLOW SCUPPER.

HPA architecture 42 Years
hpa, inc.
16831 bardeen avenue, - ste. #100
irvine, ca
92612
tel: 949-863-1770
fax: 949-863-0851
email: hpa@hparche.com

Owner:

DONLON BUILDERS
DEDEAUX PROPERTIES

2681 Saturn Street
Brea, CA. 92821
(714) 528-0800

Project:

Rialto Village Industrial

Willow Avenue
Rialto, CA.

Consultants:

CIVIL	-
STRUCTURAL	-
MECHANICAL	-
PLUMBING	-
ELECTRICAL	-
LANDSCAPE	-
FIRE PROTECTION	-
SOILS ENGINEER	-

Title: OVERALL ROOF PLAN

Project Number: 21735
Drawn by: JEC
Date: 05/20/22
Revision:

Sheet:

DAB-A2.10

ELEVATION KEYNOTES

1. CONCRETE TILT-UP PANEL.
2. PANEL JOINT.
3. PANEL REVEAL. ALL REVEALS TO HAVE A MAX. OF 3/8" CHAMFER. REVEAL COLOR TO MATCH ADJACENT BUILDING FIELD COLOR, U.N.O.
4. 12' X 14' OVERHEAD DOOR @ DRIVE THRU. PROVIDE COMPLETE WEATHER-STRIPPING PROTECTION ALL AROUND.
5. 9' X 10' OVERHEAD DOOR @ DRIVE THRU. PROVIDE COMPLETE WEATHER-STRIPPING PROTECTION ALL AROUND.
6. CONCRETE STAIR, LANDING AND GUARDRAIL W/ METAL PIPE HANDRAIL. PROVIDE NON SKID NOSING TO MEET ADA REQUIREMENTS. PROVIDE CONTRASTING COLORED 3" WIDE WARNING STRIPE INTEGRAL TO CONCRETE AT TOP LANDING AND BOTTOM TREAD PER ADA REQUIREMENTS.
7. 4' X 8' METAL LOUVER OPENING FOR VENTILATION. PAINT TO MATCH BUILDING COLOR.
8. HOLLOW METAL DOORS. PROVIDE COMPLETE WEATHER STRIPING ALL AROUND DOOR.
9. EXTERIOR DOWN SPOUTS W/ 2 OVERFLOW SCUPPERS.
10. DOCK DOOR BUMPER TYPICAL.
11. ALUMINUM STOREFRONT FRAMING WITH TEMPERED GLAZING AT ALL DOORS, SIDELITES ADJACENT TO DOORS AND GLAZING WITH BOTTOMS LESS THAN 18" ABOVE FINISH FLOOR ELEVATION.
12. METAL CANOPY.
13. INTERIOR ROOF DRAIN W/ 2 OVERFLOW SCUPPERS.
14. CONC. FILLED GUARD POST. 6" DIA. U.N.O., 42"H.
15. METAL FINISH BUILD UP.

ELEVATION GENERAL NOTES

1. ALL PAINT COLOR CHANGES TO OCCUR AT INSIDE CORNERS UNLESS NOTED OTHERWISE.
2. ALL PAINT FINISHES ARE TO BE FLAT UNLESS NOTED OTHERWISE.
3. T.O.P. EL.= TOP OF PARAPET ELEVATION.
4. F.F. = FINISH FLOOR ELEVATION.
5. STOREFRONT CONSTRUCTION: GLASS, METAL ATTACHMENTS AND LINTELS SHALL BE DESIGNED TO RESIST — MPH, EXPOSURE "C" WINDS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO INSTALLATION.
6. CONTRACTOR SHALL FULLY PAINT ONE CONCRETE PANEL W/ SELECTED COLORS. ARCHITECT AND OWNER SHALL APPROVE PRIOR TO PAINTING REMAINDER OF BUILDING.
7. BACK SIDE OF PARAPETS TO HAVE SMOOTH FINISH AND BE PAINTED WITH ELASTOMERIC PAINT.
8. FOR SPANDREL GLAZING, ALLOW SPACE BEHIND SPANDREL TO BREATH. PROVIDE 1" DIAMETER HOLES AT CONCRETE WALL.
9. USE ADHESIVE BACK WOOD STRIPS FOR ALL REVEAL FORMS.
10. THE FIRST COAT OF PAINT TO BE ROLLED-ON AND THE SECOND COAT TO BE SPRAYED-ON
11. ALL ROLL-UP DOORS AND SERVICE DOORS TO BE PAINTED TO MATCH BUILDING COLOR.

ELEVATION COLOR LEGEND/SCHED.

1. PAINT. COLOR : SHERWIN WILLIAMS SW 7757 HIGH REFLECTIVE WHITE
2. PAINT. COLOR : SHERWIN WILLIAMS SW 7017 DORIAN GRAY
3. PAINT. COLOR : SHERWIN WILLIAMS SW 7018 DOVETAIL
4. PAINT. COLOR : SHERWIN WILLIAMS SW 7020 BLACK FOX
5. PAINT COLOR : SHERWIN WILLIAMS SW 7602 INDIGO BATIK
6. PAINT COLOR : ARIZONA TILE
   PRODUCT: PORCELAIN TILE
   STYLE: PORTA NUOVA
   COLOR: ROVERE
7. GLAZING COLOR : BLUE GLAZING
8. MULLION COLOR : MULLIONS CLEAR ANODIZED
9. METAL CANOPY: SHERWIN WILLIAMS PRO-INDUSTRIAL WATER-BASED B53-1150 SEMI-GLASS IN COLOR: SW 7757 HIGH REFLECTIVE WHITE

GLAZING LEGEND

NOTE: ALL EXTERIOR AND INTERIOR GLAZING SHALL BE TEMPERED.

INSULATED VISION GLASS

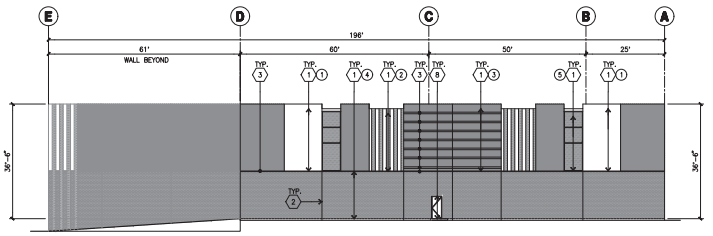
SPANDREL GLASS WITH CONCRETE BEHIND

IV : INSULATED VISION GLASS
1/4" VISTACOOL PACIFICA + 1/4" SOLARBAN 60 CLEAR
1" INSULATED GLASS UNIT WITH 1/2" AIRSPACE AND 1/4" LITES
U: 0.27 SHGC: 0.21 VLT: 28%
MINIMUM VT TO BE 0.42 PER 2016 CEC TABLE 140.3-B

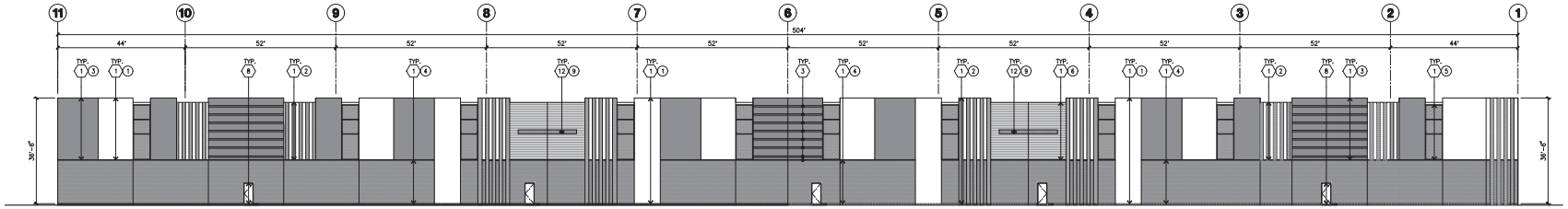
SG : SPANDREL WITH CONCRETE BEHIND
1/4" VISTACOOL PACIFICA WITH WARM GRAY OPACICOAT PAINTED ON REFLECTIVE INSTALLED ON CONCRETE.

V : VISION GLASS
1/4" VISTACOOL PACIFICA

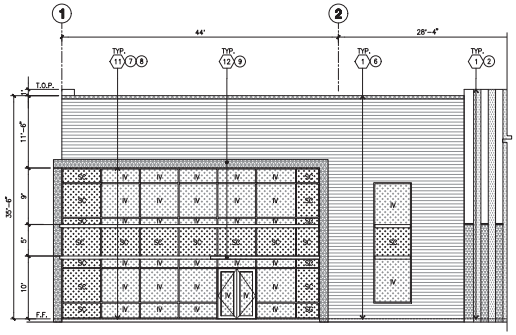
MULLIONS : ANODIZED CLEAR.



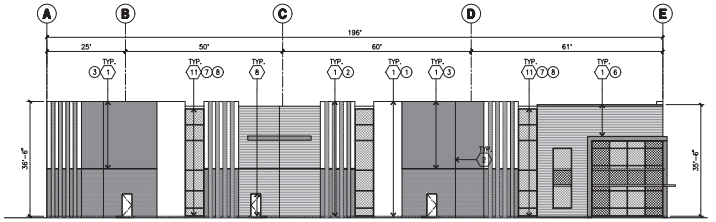
NORTH ELEVATION (A)
scale: 1/16" = 1'-0"



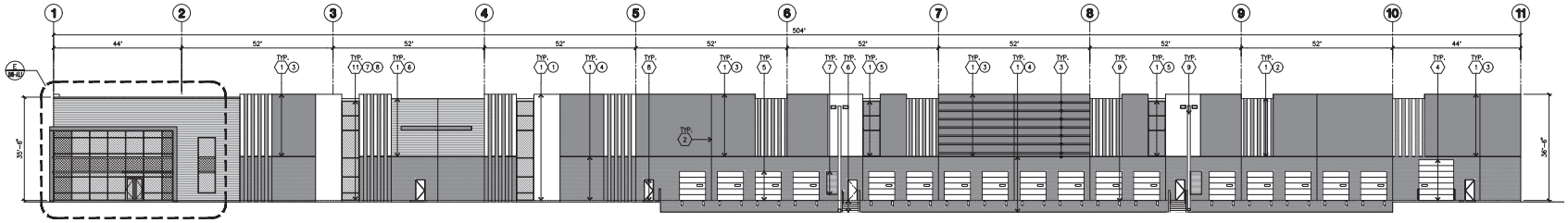
WEST ELEVATION (B)
scale: 1/16" = 1'-0"



ENLARGED SOUTH ELEVATION (E)
scale: 1/8" = 1'-0"



SOUTH ELEVATION (C)
scale: 1/16" = 1'-0"



EAST ELEVATION (D)
scale: 1/16" = 1'-0"

HPA architecture 42 Years
hpa, inc.
18831 bardeen avenue, - ste. #100
irvine, ca
92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:

DONLON BUILDERS

DEDEAUX PROPERTIES

2681 Saturn Street
Brea, CA, 92821
(714) 528-0800

Project:

Rialto Village Industrial

Willow Avenue
Rialto, CA.

Consultants:

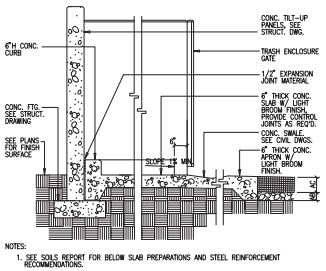
CIVIL -
STRUCTURAL -
MECHANICAL -
PLUMBING -
ELECTRICAL -
LANDSCAPE -
FIRE PROTECTION -
SOILS ENGINEER -

Title: ELEVATIONS

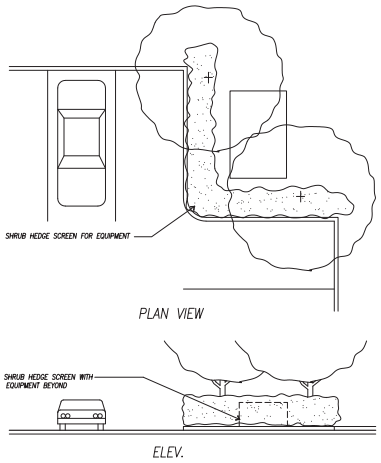
Project Number: 21735
Drawn by: JEC
Date: 05/20/22
Revision:

Sheet:

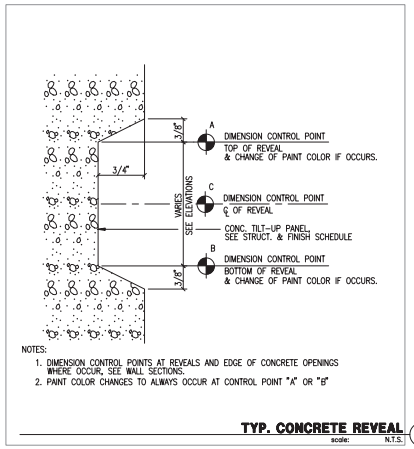
DAB-A3.1



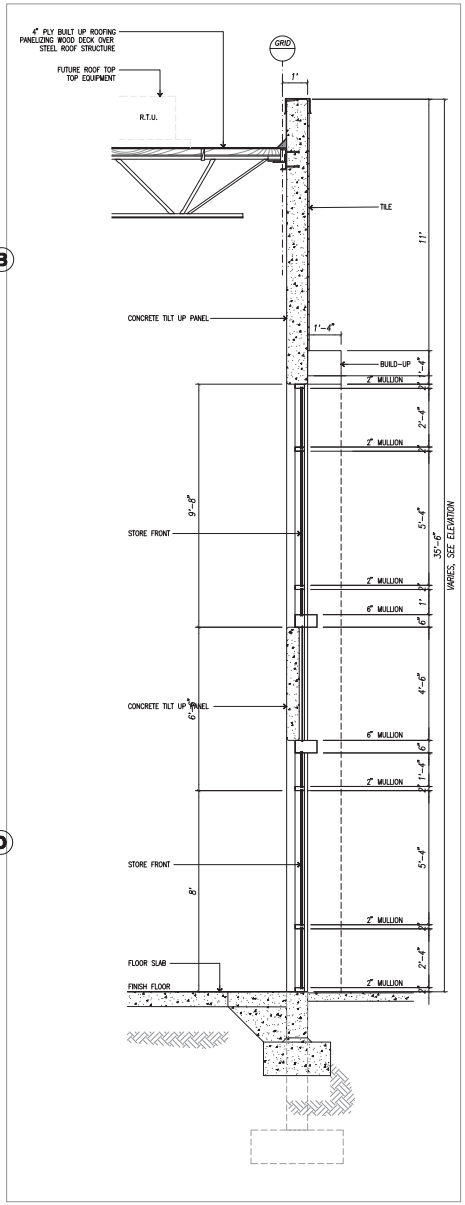
TRASH ENCLOSURE SECTION (G)
scale: 1/2" = 1'-0"



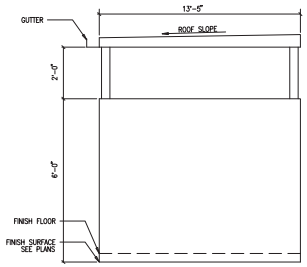
GROUND MOUNTED EQUIPMENT SCREENING, TYP. (C)
scale: N.T.S.



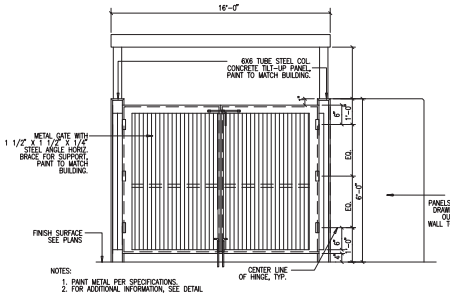
TYP. CONCRETE REVEAL (B)
scale: N.T.S.



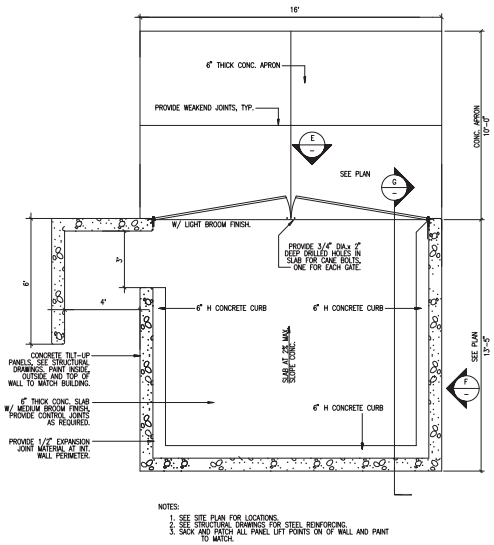
TYP. STOREFRONT ELEVATION (A)
scale: 1/2" = 1'-0"



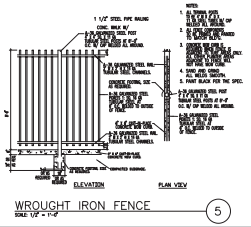
TRASH ENCLOSURE GATE ELEVATION (F)
scale: 1/2" = 1'-0"



TRASH ENCLOSURE GATE ELEVATION (E)
scale: 1/2" = 1'-0"



TRASH ENCLOSURE PLAN (D)
scale: 3/8" = 1'-0"



WROUGHT IRON FENCE (5)
SCALE: 1/2" = 1'-0"

METAL FENCE DETAIL (J)
scale: N.T.S.

hpa, inc.
18831 bardeen avenue, - ste. #100
irvine, ca
92612
tel: 949 863 1770
fax: 949 863 0851
email: hpa@hparche.com

Owner:

DONLON BUILDERS

DEDEAUX PROPERTIES

2681 Saturn Street
Brea, CA, 92821
(714) 528-0800

Project:

Rialto Village Industrial

Willow Avenue
Rialto, CA.

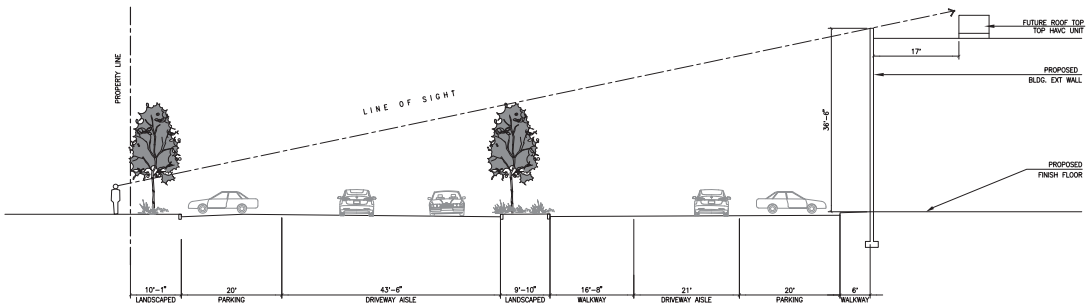
Consultants:

CIVIL -
STRUCTURAL -
MECHANICAL -
PLUMBING -
ELECTRICAL -
LANDSCAPE -
FIRE PROTECTION -
SOILS ENGINEER -

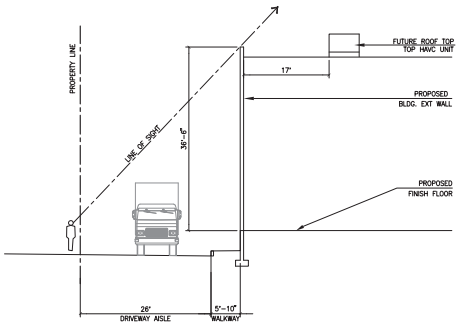
Title: SECTIONS

Project Number: 21735
Drawn by: JEC
Date: 05/20/22
Revision:

Sheet: DAB-A4.1

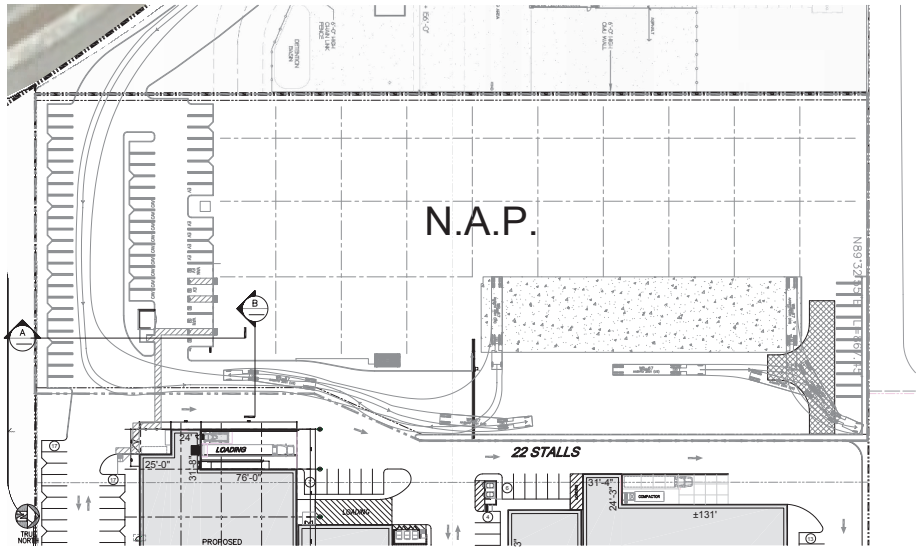


SITE SECTIONS (A)
scale: 1/10" = 1'-0"



SITE SECTIONS (B)
scale: 1/10" = 1'-0"

KEY MAP



hpa, inc.
18831 bardeen avenue, - ste. #100
irvine, ca
92612
tel: 949-863-1770
fax: 949-863-0851
email: hpa@hparchs.com

LICENSED ARCHITECT
YONG NAM
C-29451
3-31-23
RENEWAL DATE
STATE OF CALIFORNIA

Owner:

DONLON BUILDERS

DEDEAUX PROPERTIES

2661 Saturn Street
Brea, CA. 92821
(714) 528-0800

Project:

Rialto Village Industrial

Willow Avenue
Rialto, CA.

Consultants:

CIVIL	-
STRUCTURAL	-
MECHANICAL	-
PLUMBING	-
ELECTRICAL	-
LANDSCAPE	-
FIRE PROTECTION	-
SOILS ENGINEER	-

Title: SITE SECTIONS

Project Number: 21735
Drawn by: JEC
Date: 05/20/22
Revision:

Sheet:

DAB-A4.2



North Elevation



East Elevation



South Elevation



West Elevation

Job#21735.00

August 23, 2022

Conceptual Elevations - 32' clear

Rialto Village Industrial

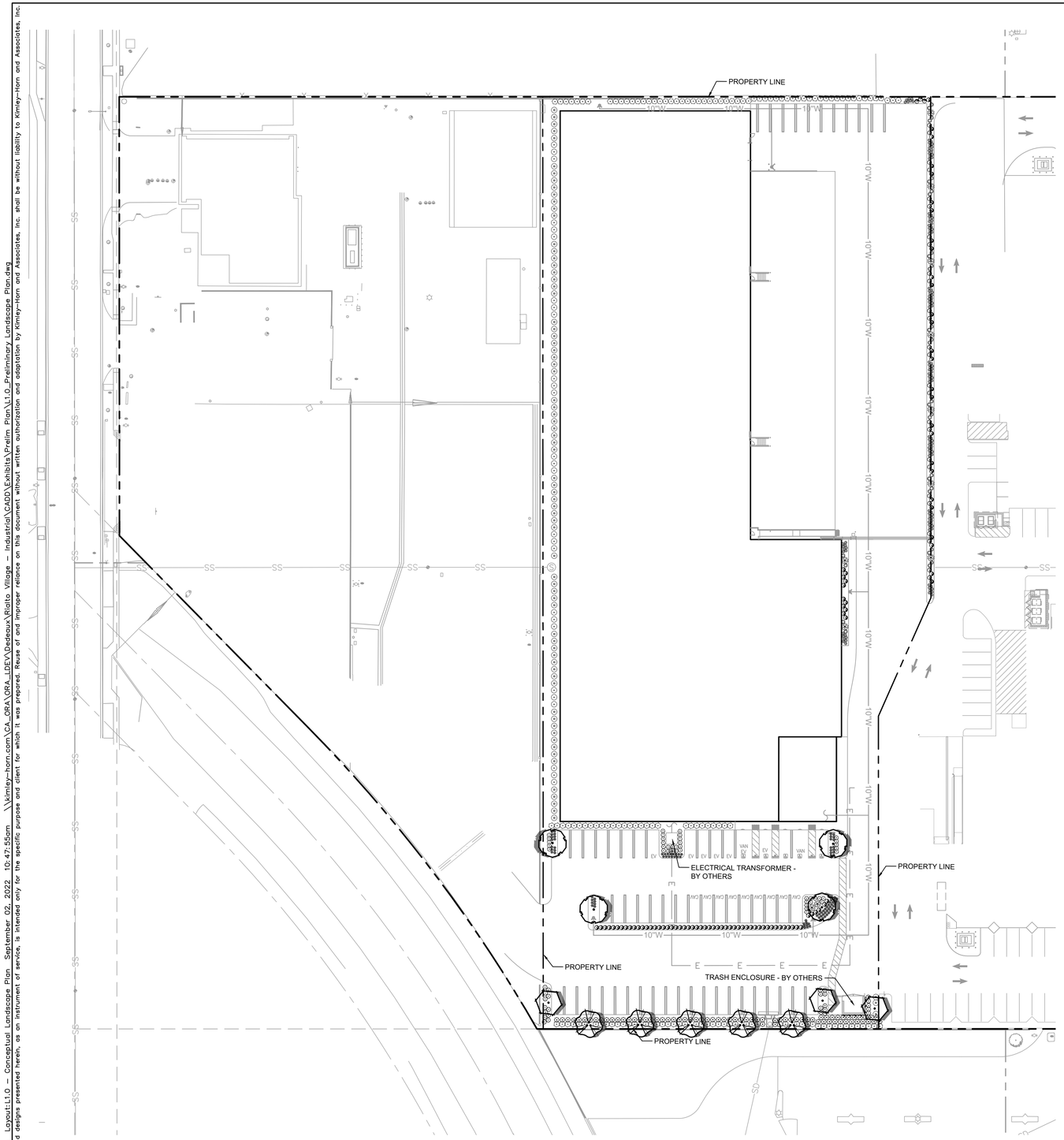
Rialto, California



Perspective View

RIALTO VILLAGE INDUSTRIAL

Rialto, CA | #21735 | 09. 06. 2022



PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME	CONT.	HEIGHT/SPREAD	WUCOLS	CAL.
	3	LAGERSTROEMIA INDICA `CATAWBA` / CATAWBA CRAPE MYRTLE	24" BOX	8`-9` HT. X 3`-4` SPR.	MODERATE	2" CAL.
	4	LOPHOSTEMON CONFERTUS / BRISBANE BOX	24" BOX	10-12` HT. X 4-5` SPR.	MODERATE	2" CAL.
	5	TIPUANA TIPU / TIPU TREE	24" BOX	9`-11` HT. X 4`-5` SPR.	MODERATE	2" CAL.

SHRUBS	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING	WUCOLS
	12	AGAVE ATTENUATA 'SUPER NOVA' / SUPER NOVA FOXTAIL AGAVE	5 GAL.	60" O.C.	LOW
	32	AGAVE X 'BLUE FLAME' / BLUE FLAME AGAVE	5 GAL.	36" O.C.	LOW
	123	ARTEMISIA X 'POWIS CASTLE' / POWIS CASTLE ARTEMISIA	5 GAL.	36" O.C.	LOW
	71	BUXUS MICROPHYLLA / LITTLELEAF BOXWOOD	5 GAL.	48" O.C.	MODERATE
	92	CAREX DIVULSA / EUROPEAN GREY SEDGE	1 GAL.	24" O.C.	LOW
	121	CAREX TUMULICOLA / FOOTHILL SEDGE	1 GAL.	24" O.C.	LOW
	7	FICUS PUMILA / CREEPING FIG	5 GAL.	AS SHOWN	MODERATE
	27	JUNIPERUS SCOPULORUM 'SKYROCKET' / SKYROCKET JUNIPER	15 GAL.	60" O.C.	LOW
	27	LAVANDULA ANGUSTIFOLIA / ENGLISH LAVENDER	5 GAL.	36" O.C.	LOW
	140	LEUCOPHYLLUM FRUTESCENS / TEXAS SAGE	15 GAL.	48" O.C.	LOW
	75	RHAPHIOLEPIS INDICA 'PINK LADY' / PINK LADY INDIAN HAWTHORN	5 GAL.	36" O.C.	LOW
	38	SALVIA LEUCANTHA 'SANTA BARBARA' / MEXICAN BUSH SAGE	5 GAL.	36" O.C.	LOW

LANDSCAPE NOTE:

THE SELECTION OF PLANT MATERIAL IS BASED ON CLIMATIC, AESTHETIC, AND MAINTENANCE CONSIDERATIONS. ALL PLANTING AREAS SHALL BE PREPARED WITH APPROPRIATE SOIL AMENDMENTS, FERTILIZERS AND APPROPRIATE SUPPLEMENTS BASED UPON A SOILS REPORT FROM AN AGRICULTURAL SUITABILITY SOIL SAMPLE TAKEN FROM THE SITE. DECOMPOSED GRANITE SHALL FILL IN BETWEEN SHRUBS TO SHIELD THE SOIL FROM THE SUN, EVAPOTRANSPIRATION, AND RUN-OFF. ALL SHRUB BEDS SHALL BE MULCHED TO A 3" DEPTH TO HELP CONSERVE WATER, LOWER SOIL TEMPERATURE, AND REDUCE WEED GROWTH. THE SHRUBS SHALL BE ALLOWED TO GROW IN THEIR NATURAL FORMS. ALL LANDSCAPE IMPROVEMENTS SHALL FOLLOW THE GUIDELINES SET FORTH BY THE CITY OF RIALTO MUNICIPAL CODE.

IRRIGATION NOTE:

AN AUTOMATIC IRRIGATION SYSTEM SHALL BE INSTALLED TO PROVIDE 100% COVERAGE FOR ALL PLANTING AREAS SHOWN ON THE PLAN. THE WATER SUPPLY FOR THIS SITE IS A POTABLE WATER CONNECTION AND A DEDICATED IRRIGATION METER WILL BE PROVIDED. LOW VOLUME EQUIPMENT SHALL PROVIDE SUFFICIENT WATER FOR PLANT GROWTH WITH NO WATER LOSS DUE TO WATER CONTROLLERS, AND OTHER NECESSARY IRRIGATION EQUIPMENT. ALL POINT SOURCE SYSTEM SHALL BE ADEQUATELY FILTERED AND REGULATED PER THE MANUFACTURER'S RECOMMENDED DESIGN PARAMETERS. ALL IRRIGATION IMPROVEMENTS SHALL FOLLOW THE GUIDELINES SET FORTH BY THE CITY OF RIALTO MUNICIPAL CODE.

I HAVE COMPLIED WITH THE CRITERIA OF THE WATER EFFICIENT LANDSCAPE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE AND IRRIGATION DESIGN PLAN.

MICHAEL P. MADSEN, LLA 5798

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

SCALE: 1" = 40'
WHEN PRINTED AT FULL SIZE 24"X36"

DEDEAUX PROPERTIES
DONLON BUILDERS

Kimley»Horn

© 2022 KIMLEY-HORN AND ASSOCIATES, INC.
1100 W TOWN AND COUNTRY ROAD, SUITE 700,
ORANGE, CA 92868
PHONE: 714-939-1030 FAX: 714-938-9488
WWW.KIMLEY-HORN.COM

LICENSED PROFESSIONAL

NOT FOR CONSTRUCTION

KHA PROJECT	194487001
DATE	2022/09/02
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	
CHECKED BY	

CONCEPTUAL LANDSCAPE PLAN

RIALTO INDUSTRIAL

PREPARED FOR
DEDEAUX PROPERTIES

CITY OF RIALTO CALIFORNIA

SHEET NUMBER
L1.0

Plotted By:Ovadia, Jacob Sheet Set:Kha Layout:L1.0 - Conceptual Landscape Plan September 02, 2022 10:47:55am \\kimley-horn.com\CA_ORA\ORA_LDEV\Dedeaux\Rialto Village - Industrial\CADD\Exhibits\Prelim Plan\L1.0_Preliminary Landscape Plan.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

811 Know what's below. Call 811 before you dig.

Traffic Impact Study

for the:

Retail and Industrial Development Project

In the City of Rialto

December 2021

Kimley»Horn

TRAFFIC IMPACT STUDY
FOR THE PROPOSED
RETAIL AND INDUSTRIAL DEVELOPMENT PROJECT
IN THE CITY OF RIALTO

Prepared by:

Kimley-Horn and Associates, Inc.
1100 Town and Country Road, Suite 700
Orange, California 92868

December 2021

TABLE OF CONTENTS

Page

I. INTRODUCTION 1
A. Purpose of the TIA and Study Objectives 1
B. Site Plan Location and Study Area 1
C. Development Project Identification 3
D. Development Project Description 3
E. Analysis Methodology 5
1. Intersection Analysis – HCM Methodology 5
2. Level of Service Standards and Measure of Significance 5
3. Roadway Segment Analysis 7
II. AREA CONDITIONS 8
A. Identify Study Area and Intersections 8
B. Description of Existing Roads, Traffic Controls and Intersection Geometrics 9
C. Existing Traffic Volumes 9
D. Existing Delay and Level of Service 12
E. Transit Service 12
III. PROJECTED FUTURE TRAFFIC 15
A. Opening Year 2022 Without Project (Existing Plus Ambient Growth Plus Cumulative Projects) 15
1. Ambient Growth Rate 15
2. Cumulative Projects 15
3. Opening Year 2022 Without Project Delay and Level of Service 20
B. Project Traffic 20
1. Project Trip Generation 20
2. Trip Distribution and Assignment 23
C. Opening Year 2022 With Project (Existing Plus Ambient Growth Plus Cumulative Projects Plus Project) 23
IV. STORAGE CAPACITY AT LEFT-TURN POCKETS 32
V. DELIVERY TRUCK DRIVEWAY ACCESS 32
VI. VEHICLE MILES TRAVELED 32
A. Vehicle Miles Traveled (VMT) Analysis 32
VII. FINDINGS AND CONCLUSIONS 38

LIST OF FIGURES

Page
Figure 1 – Vicinity Map 2
Figure 2 – Project Site Plan 4
Figure 3 – Existing Lane Configuration and Traffic Control 10
Figure 4 – Existing Traffic Volumes 11
Figure 5 – Cumulative Project Locations 17
Figure 6 – Cumulative Project Traffic Volumes 18
Figure 7 – Opening Year 2022 Without Project Traffic Volumes 19
Figure 8 – Project Trip Distribution Assumptions 25
Figure 9 – Project-Related Traffic Volumes 26
Figure 10 – Pass-By Project Traffic Volumes 27
Figure 11 – Total Project Traffic Volumes 28
Figure 12 – Opening Year 2022 With Project Traffic Volumes 29
Figure 13 – Delivery Truck Driveway Access 34

LIST OF TABLES

Page
Table 1 – Summary of Intersection Operation – Existing Conditions 13
Table 2 – Summary of Roadway Analysis – Existing Conditions 14
Table 3 – Summary of Cumulative Projects 16
Table 4 – Summary of Intersection Operation – Opening Year 2022 Without Project 21
Table 5 – Summary of Roadway Analysis – Opening Year 2022 Without Project 22
Table 6 – Summary of Project Trip Generation 24
Table 7 – Summary of Intersection Operation – Opening Year 2022 With Project 30
Table 8 – Summary of Roadway Analysis – Opening Year 2022 With Project 31
Table 9 – Summary of Left-Turn Pocket Storage Capacity 33

APPENDICES

APPENDIX A: APPROVED SCOPING AGREEMENT
APPENDIX B: TRAFFIC COUNT DATA SHEETS
APPENDIX C: INTERSECTION ANALYSIS WORKSHEETS
APPENDIX D: CUMULATIVE PROJECTS INFORMATION

TRAFFIC IMPACT STUDY
FOR THE PROPOSED
RETAIL AND INDUSTRIAL DEVELOPMENT
IN THE CITY OF RIALTO

I. INTRODUCTION

A. Purpose of the TIA and Study Objectives

This Traffic Impact Study has been prepared to address the traffic-related effects of the proposed retail and industrial development in the City of Rialto.

This study has been conducted in accordance with the traffic study requirements of the City of Rialto, based on the City's *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service (LOS) Assessment* (October 2021), and in accordance with San Bernardino Association of Governments (SANBAG) Congestion Management Program (CMP) requirements.

This study addresses existing and future traffic conditions, taking into account the project trips to be generated by the project and potential project-related effects on the surrounding circulation system.

This report includes a description of existing traffic conditions in the surrounding area, estimated project trip generation and distribution, future traffic growth, and an assessment of project-related effects on the roadway system. Where necessary, circulation system improvements have been identified to achieve acceptable intersection operation in the vicinity of the project.

The project will be evaluated for the following conditions:

- Existing Conditions
- Opening Year 2022 Without Project (Existing Plus Ambient Growth Plus Cumulative Projects)
- Opening Year 2022 With Project (Existing Plus Ambient Growth Plus Cumulative Projects Plus Project)

B. Site Plan Location and Study Area

The project is located on the southwest corner of the intersection of Riverside Avenue and Senior Way in the City of Rialto, north of the Interstate 10 (I-10) in the City of Rialto. The project site is shown in its regional setting on a vicinity map on Figure 1. The project site is bounded by shopping center retail to the north and south, Riverside Avenue to the East, and Willow Avenue to the West.

NOT TO SCALE



FIGURE 1
VICINITY MAP
SOURCE: NEARMAP

C. Development Project Identification

The Development Project Identification will be determined upon further discussion with City staff.

D. Development Project Description

The project will involve the construction of a shopping center with 79,676 square feet of retail use, 9,660 square feet of fast-food restaurant with drive-through use, 3,596 square feet of automated car wash use, and 83,272 square feet of general light industrial use on the currently vacant site. A copy of the project site plan is provided on Figure 2.

Vehicular access provisions for the project site would consist of the following:

- Two full-movement signalized driveways on Riverside Avenue;
- One right-in, right-out (RIRO) only unsignalized driveway on Riverside Avenue;
- One full-movement unsignalized driveway on Willow Avenue.

For purposes of this analysis, the proposed opening year for the project is Year 2022. The project will be developed in a single project phase. The project site is located approximately 1,400 feet west of the City of Colton border.

NOT TO SCALE

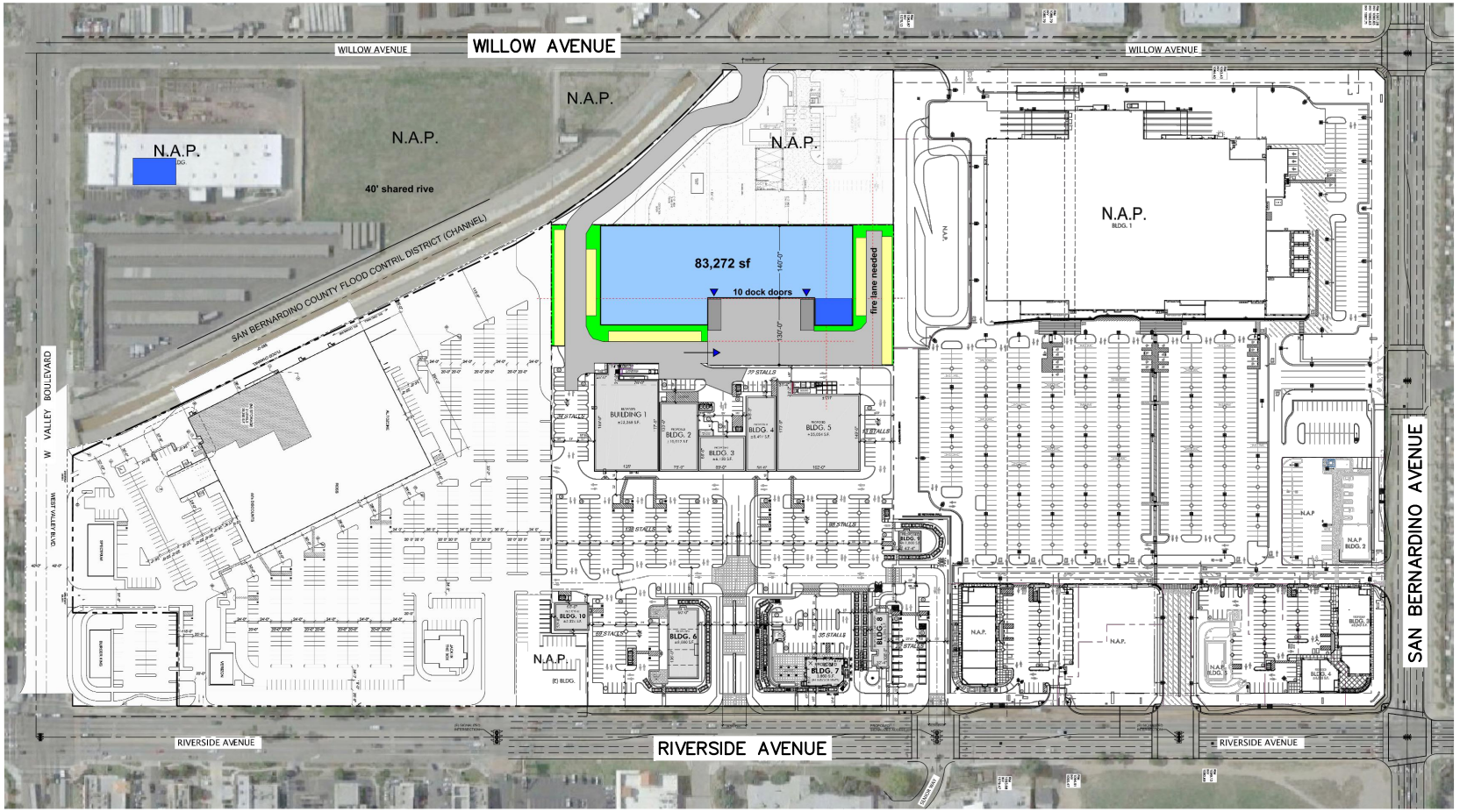


FIGURE 2
PROJECT SITE PLAN

E. Analysis Methodology

1. Intersection Analysis – HCM Methodology

Peak hour intersection operations at signalized and unsignalized intersections were evaluated using the methods prescribed in the Highway Capacity Manual (HCM) 6th Edition, consistent with the requirements of the City of Rialto and the San Bernardino County CMP.

The City of Rialto guidelines require analysis of traffic operations to be based on the vehicular delay methodologies of the HCM (Transportation Research Board Special Report 209). The intersection analysis for the proposed project has been accomplished using the Trafficware SYNCHRO program and using the specified input parameters outlined in the City's Traffic Impact Analysis Guidelines.

Per the HCM Methodology, Level of Service (LOS) for signalized intersections is defined in terms of average vehicle delay. Specifically, LOS criteria are stated in terms of the average control delay per vehicle for the peak 15-minute period within the hour analyzed. The charts on the following page provide a description of the operating characteristics of each Level of Service and define the LOS in terms of average seconds of delay for signalized and unsignalized intersections.

2. Level of Service Standards and Measure of Significance

The City of Rialto, per the City of Rialto 2010 General Plan Update, establishes minimum Level of Service standards. According to Policy 4-1.20 of the General Plan document, the City requires that signalized intersections operate at LOS D or better during the morning and evening peak hours. The City's Traffic Study Guidelines require new development to mitigate effects that cause the Level of Service to fall below LOS D, or cause the peak hour delay to increase as follows:

- LOS A/B – by 10.0 seconds
- LOS C – by 8.0 seconds
- LOS D – by 5.0 seconds
- LOS E – by 2.0 seconds
- LOS F – by 1.0 second

The City's traffic study guidelines require unsignalized intersections to operate with no vehicular movement having an average delay exceeding 120 seconds during the morning and evening peak hours.

LEVEL OF SERVICE DEFINITIONS	
Level of Service	Description
A	No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted but not objectionably so.
D	This level encompasses a zone of increasing restriction, approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand.
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS		
Level of Service	Signalized Intersection (Average delay per vehicle, in seconds) [1]	Unsignalized Intersections (Average delay per vehicle, in seconds) [2]
A	≤ 10	0 – 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 – 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50

[1] Source: Highway Capacity Manual (HCM 6th Edition), Exhibit 18-4.
[2] Source: Highway Capacity Manual (HCM 6th Edition), Exhibits 19-1 and 20-2.

3. Roadway Segment Analysis

The roadway segment analysis will address the project's effect on daily operating conditions on roadway segments within the project vicinity. Roadway segments are evaluated by comparing the daily traffic volume on a roadway segment to the daily capacity of that segment, to determine the volume-to-capacity (V/C) ratio. Daily capacity is based on the roadway classification, as shown in the following chart:

CITY OF RIALTO ROADWAY CAPACITY [1]				
Roadway Classification	No. of Lanes	Two-Way Traffic Volume (ADT)[2]		
		Service Level C	Service Level D	Service Level E
Local	2	2,500-2,799	2,800-3,099	3,100 +
Collector (60' or 64')	2	9,900-11,199	11,200-12,499	12,500 +
Industrial (45')	2	9,900-11,199	11,200-12,499	12,500 +
Arterial[3]	2	14,400-16,199	16,200-17,999	18,000 +
Secondary Highway	4	16,900-19,399	19,400-21,999	22,000 +
Modified Arterial (100')	4	26,200-29,599	29,600-32,999	33,000 +
Arterial (120')	6	38,700-44,099	44,100-49,499	49,500 +

Notes:
(1) All capacity figures are based on optimum conditions and are intended as guidelines for planning purposes only
(2) Maximum two-way ADT values are based on the 1999 Modified Highway Capacity Manual Level of Service Tables.
(3) Two-lane roads designated as future arterials that conform to arterial design standards for vertical and horizontal alignments are analyzed as arterials.

Source: City of Rialto *Traffic Impact Analysis Guidelines for VMT and LOS Assessment (2021)*

The minimum acceptable LOS for roadway segments in the City of Rialto is D, except for Riverside Avenue south for the Metrolink tracks all the way to the City's southern border, which can operate at LOS E.

According to the City's Traffic Study Guidelines, a roadway segment must mitigate their impact if the segment exceeds 1,500 feet and the V/C ratio exceeds 1.0, even if improved intersection at the ends of the segment do not exceed LOS D.

II. AREA CONDITIONS

A. Identify Study Area and Intersections

This traffic study includes documentation of existing conditions, analysis of cumulative traffic conditions, and identification of project-related effects at the following study intersections:

Existing Intersections:

1. San Bernardino Avenue at Lilac Avenue
2. San Bernardino Avenue at Willow Avenue
3. San Bernardino Avenue at Riverside Avenue
4. Riverside Avenue at Senior Way
6. Riverside Avenue at Gateway Plaza/Value Center
8. Valley Boulevard at Willow Avenue
9. Valley Boulevard at Gateway Plaza/Value Center
10. Valley Boulevard at Riverside Avenue
11. Riverside Avenue at I-10 WB Ramps
12. Riverside Avenue at I-10 EB Ramps

Future Driveway Intersections:

5. Riverside Avenue at Project Driveway
7. Willow Avenue at Project Driveway

In addition, the following roadway segments were analyzed:

- Riverside Avenue: Rialto Marketplace to Senior Way
- Riverside Avenue: Gateway Plaza/Value Center to Valley Boulevard
- Willow Avenue: Valley Boulevard to San Bernardino Avenue
- Valley Boulevard: Willow Avenue to Riverside Avenue

The study locations were established in conjunction with City staff through the Scoping Agreement process (Exhibit A of the City of Rialto *Traffic Impact Analysis Guidelines for VMT and LOS Assessment*). A copy of the Approved Scoping Agreement is provided in *Appendix A*.

B. Description of Existing Roads, Traffic Controls and Intersection Geometrics

Regional access to the site is provided primarily by the Interstate 10 (I-10) Freeway, to the south of the project site. Access to I-10 is available on the ramps along Riverside Avenue. In addition, the I-215 Freeway is located approximately 4.3 miles to the east of the site, and access to the SR-210 Freeway is approximately 4.3 miles to the west of the site.

Existing lane configurations and intersection controls at the study intersections are shown on Figure 3. The following provides a description of the roadways surrounding the project site.

San Bernardino Avenue – San Bernardino Avenue is designated as a Secondary Arterial in the City of Rialto General Plan, which would provide four travel lanes with two lanes in each direction within the project vicinity. San Bernardino Avenue traverses the City in an east-west direction, turning into Olive Street to the east. The posted speed limit on San Bernardino Avenue is 35 miles per hour (mph).

Riverside Avenue – Riverside Avenue is designated as a Modified Major Arterial II in the City of Rialto General Plan near the project vicinity, which would provide 6 travel lanes with three lanes in each direction and a raised median, east of the project. Riverside Avenue traverses the City in a north-south direction. The posted speed limit on Riverside Avenue is 40 mph.

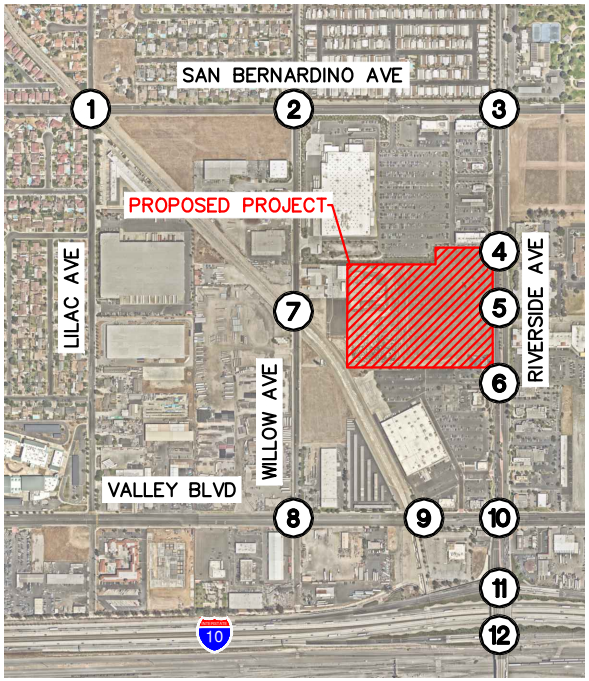
Valley Boulevard – Valley Boulevard is designated as a Major Arterial in the City of Rialto General Plan, which would provide 4 travel lanes with 2 lanes in each direction and a two-way left-turn lane (TWLTL). Valley Boulevard traverses the City in an east-west direction. The posted speed limit on Valley Boulevard is 40 mph.

Lilac Avenue – Lilac Avenue is designated as a Collector Street in the City of Rialto General Plan, which would provide 2 travel lanes with 1 lane in each direction. Lilac Avenue traverses the City in a north-south direction. The posted speed limit on Lilac Avenue is 45 mph, and 25 mph near Joe Baca Middle School when children are present.

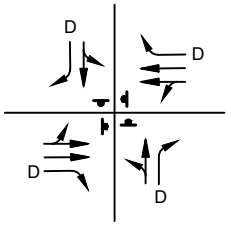
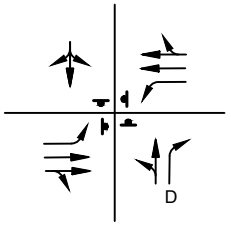
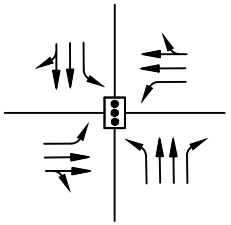
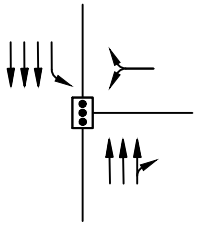
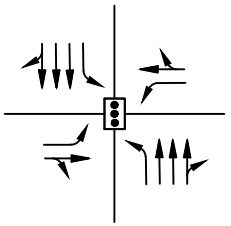
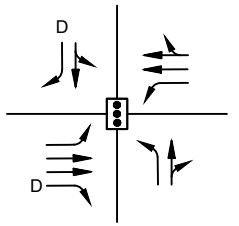
Willow Avenue – Willow Avenue is designated as a Collector Street in the City of Rialto General Plan, which would provide 2 travel lanes with 1 lane in each direction. Willow Avenue traverses the City in a north-south direction. The posted speed limit on Willow Avenue is 45 mph.

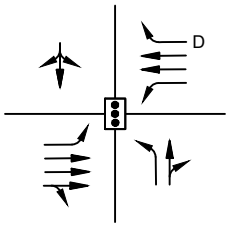
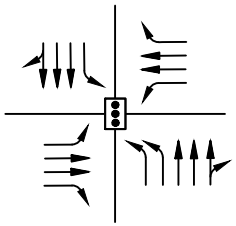
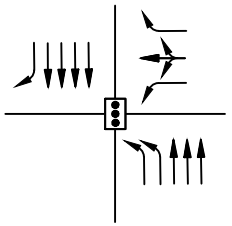
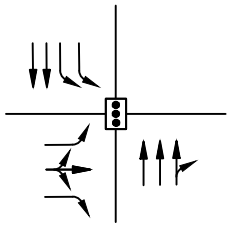
C. Existing Traffic Volumes

Existing morning peak period (7:00 to 9:00 AM) and evening peak period (4:00 to 6:00 PM) turning movement counts, as well as 24-hour roadway segment counts, were collected for the study intersections and study roadway segments. The counts were completed in September, 2021. Copies of the traffic count data worksheets are provided in *Appendix B*. Existing morning peak hour volumes, evening peak hour volumes, and daily roadway volumes are presented on Figure 4.



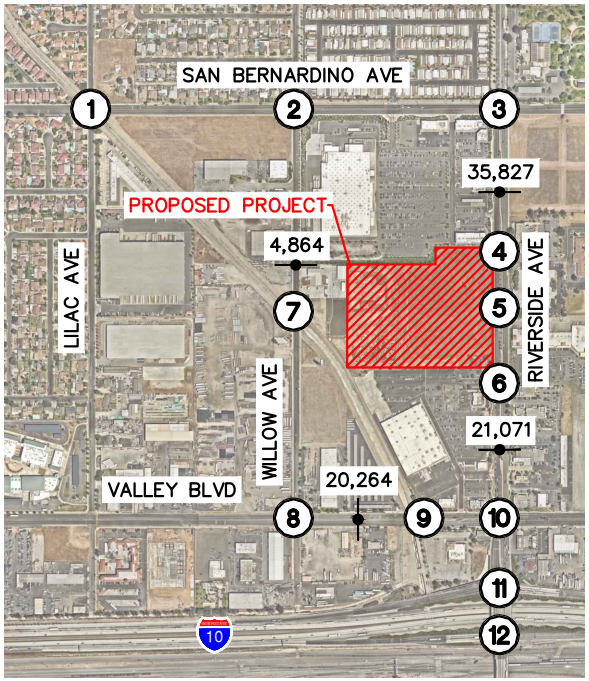
NOT TO SCALE

1. San Bernardino Avenue at Lilac Avenue	2. San Bernardino Avenue at Willow Avenue	3. San Bernardino Avenue at Riverside Avenue	4. Riverside Avenue at Senior Way
			
5. Riverside Avenue at Project Driveway	6. Riverside Avenue at Gateway Plaza/ Value Center	7. Willow Avenue at Project Driveway	8. Valley Boulevard at Willow Avenue
Future Intersection		Future Intersection	

9. Valley Boulevard at Gateway Plaza/ Value Center	10. Valley Boulevard at Riverside Avenue	11. Riverside Avenue at I-10 WB Ramps	12. Riverside Avenue at I-10 EB Ramps
			

LEGEND:
- = Study Intersection
- = Turn or Through Lane
- = Signal
- = Stop Sign
- D = Defacto Right Turn

FIGURE 3
EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL



NOT TO SCALE

1. San Bernardino Avenue at Lilac Avenue	2. San Bernardino Avenue at Willow Avenue	3. San Bernardino Avenue at Riverside Avenue	4. Riverside Avenue at Senior Way
62/10, 54/46, 105/23 ← ; 73/31, 195/329, 45/34 ← ; 28/17, 237/341, 127/26 → ; 82/26, 37/54, 32/21 →	23/21, 178/146, 83/85 ← ; 70/84, 272/343, 19/8 ← ; 14/17, 326/350, 32/24 → ; 19/22, 52/150, 11/29 →	84/49, 679/539, 88/71 ← ; 73/71, 231/223, 301/262 ← ; 77/131, 203/342, 107/100 → ; 55/165, 383/773, 135/440 →	1100/1007, 15/4 ← ; 4/12, 3/11 ← ; 620/1482, 8/2 →
5. Riverside Avenue at Project Driveway	**6. Riverside Avenue at Gateway Plaza/ Value Center**	**7. Willow Avenue at Project Driveway**	**8. Valley Boulevard at Willow Avenue**
Future Intersection	73/91, 922/756, 110/129 ← ; 31/117, 2/13, 25/52 ← ; 24/99, 3/6, 45/42 → ; 42/82, 591/1304, 29/54 →	Future Intersection	49/26, 0/1, 175/154 ← ; 56/130, 453/611, 6/6 ← ; 20/50, 580/729, 0/5 → ; 1/3, 0/1, 2/12 →

9. Valley Boulevard at Gateway Plaza/ Value Center	10. Valley Boulevard at Riverside Avenue	11. Riverside Avenue at I-10 WB Ramps	12. Riverside Avenue at I-10 EB Ramps
7/18, 3/7 ← ; 3/10, 504/726, 2/22 ← ; 10/42, 738/843 → ; 0/1 →	25/59, 954/734, 44/104 ← ; 34/120, 141/308, 147/152 ← ; 31/88, 196/366, 512/422 → ; 333/401, 570/1202, 108/178 →	517/393, 1094/870 ← ; 379/418, 1/4, 458/339 ← ; 142/283, 622/1305 →	1096/864, 456/345 ← ; 216/520, 243/305 → ; 548/1073, 348/438 →

LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Volumes

X,XXX = Average Daily Traffic Volume

FIGURE 4
EXISTING TRAFFIC VOLUMES

D. Existing Delay and Level of Service

Peak Hour Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours using the analysis procedures and assumptions described previously in this report. The results of the intersection analysis for Existing Conditions are shown on Table 1.

Review of this table indicates that all study intersections currently operate at an acceptable Level of Service. Copies of Existing Conditions intersection analysis worksheets are provided in *Appendix C*.

Daily Roadway Operating Conditions

Roadway Level of Service analysis was conducted based on the roadway capacities presented previously in this report. The results of the roadway analysis for Existing Conditions are shown on Table 2.

Review of this table indicates that the study roadway segments are currently operating within their current Level of Service D capacity.

E. Transit Service

Transit service to the project area is provided via the OmniTrans transit lines, which serve various San Bernardino cities in the area. Bus stops in the project vicinity are located along Riverside Avenue, San Bernardino Avenue, and Valley Boulevard. A description of the bus routes serving the project area is provided below.

OmniTrans Route 19 operates between the City of Fontana and the City of Yucaipa, traveling through Rialto along San Bernardino Avenue in the project vicinity. Route 19 operates on weekdays from 4:49 AM to 10:33 PM with approximately 30-minute to 60-minute headways (the time between bus arrivals), on Saturdays from 5:20 AM to 9:42 PM with approximately 1-hour headways, and on Sundays from 6:40 AM to 7:08 PM with approximately 1-hour headways.

OmniTrans Route 22 operates between the City of Rialto and the City of Colton along Riverside Avenue and Valley Bouelvard in the project vicinity. Route 22 operates on weekdays from 5:05 AM to 9:43 PM with approximately 1-hour headways, on Saturdays from 7:13 AM to 7:28 PM with approximately 1-hour headways, and on Sundays from 7:28 AM to 7:28 PM with approximately 1-hour headways.

TABLE 1
SUMMARY OF INTERSECTION OPERATION
EXISTING CONDITIONS

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	San Bernardino Ave at Lilac Ave	U	13.9	B	12.6	B
2	San Bernardino Ave at Willow Ave	U	23.1	C	27.3	D
3	San Bernardino Ave at Riverside Dr	S	30.1	C	34.6	C
4	Riverside Dr at Senior Wy	S	2.2	A	3.3	A
5	Riverside Dr at Project Dwy	Future				
6	Riverside Dr at Gateway Plaza/Value Ctr	S	4.6	A	7.8	A
7	Willow Ave at Project Dwy	Future				
8	Valley Blvd at Willow Ave	S	22.1	C	21.2	C
9	Valley Blvd at Gateway Plaza/Value Ctr	S	20.6	C	19.3	B
10	Valley Blvd at Riverside Dr	S	17.5	B	16.9	B
11	Riverside Dr at I-10 WB Ramps	S	12.0	B	11.9	B
12	Riverside Dr at I-10 EB Ramps	S	9.9	A	18.2	B

Notes:

- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

TABLE 2
SUMMARY OF ROADWAY ANALYSIS
EXISTING CONDITIONS

Roadway	Segment	Roadway Classification	LOS Capacity [1]	Existing ADT	V/C	LOS
Riverside Avenue	Senior Way to Rialto Marketplace	Modified Major Arterial II	49,499	35,827	0.724	C
	Gateway Plaza/Value Center to Valley Boulevard	Modified Major Arterial II	49,499	21,071	0.426	A
Willow Avenue	Valley Boulevard to San Bernardino Avenue	Collector Street	12,499	4,864	0.389	A
Valley Boulevard	Willow Avenue to Riverside Avenue	Major Arterial[2]	35,998	20,264	0.563	A

Notes: [1] Source: *City of Rialto Traffic Impact Analysis Guidelines for VMT and LOS Asssessment (2021).*

[2] Valley Boulevard currently provides 4 lanes in this segment of the roadway. The daily capacity for a 2-lane arterial has been factored proportionately to reflect 4 lanes.

LOS = Level of Service

ADT = Average Daily Traffic

V/C = Volume to Capacity

III. PROJECTED FUTURE TRAFFIC

A. Opening Year 2022 Without Project (Existing Plus Ambient Growth Plus Cumulative Projects)

1. Ambient Growth Rate

An ambient growth rate of 2.0% per year to Opening Year 2022 was applied to existing peak hour traffic volumes to develop the base Opening Year 2022 forecasts.

2. Cumulative Projects

In addition to ambient growth, traffic volumes for Cumulative Projects (approved and pending projects) were added to the base Opening Year 2022 traffic volumes. Cumulative Projects consist of any project that has been approved and is not yet occupied, and projects that are in various stages of the application and approval process, but have not yet been approved.

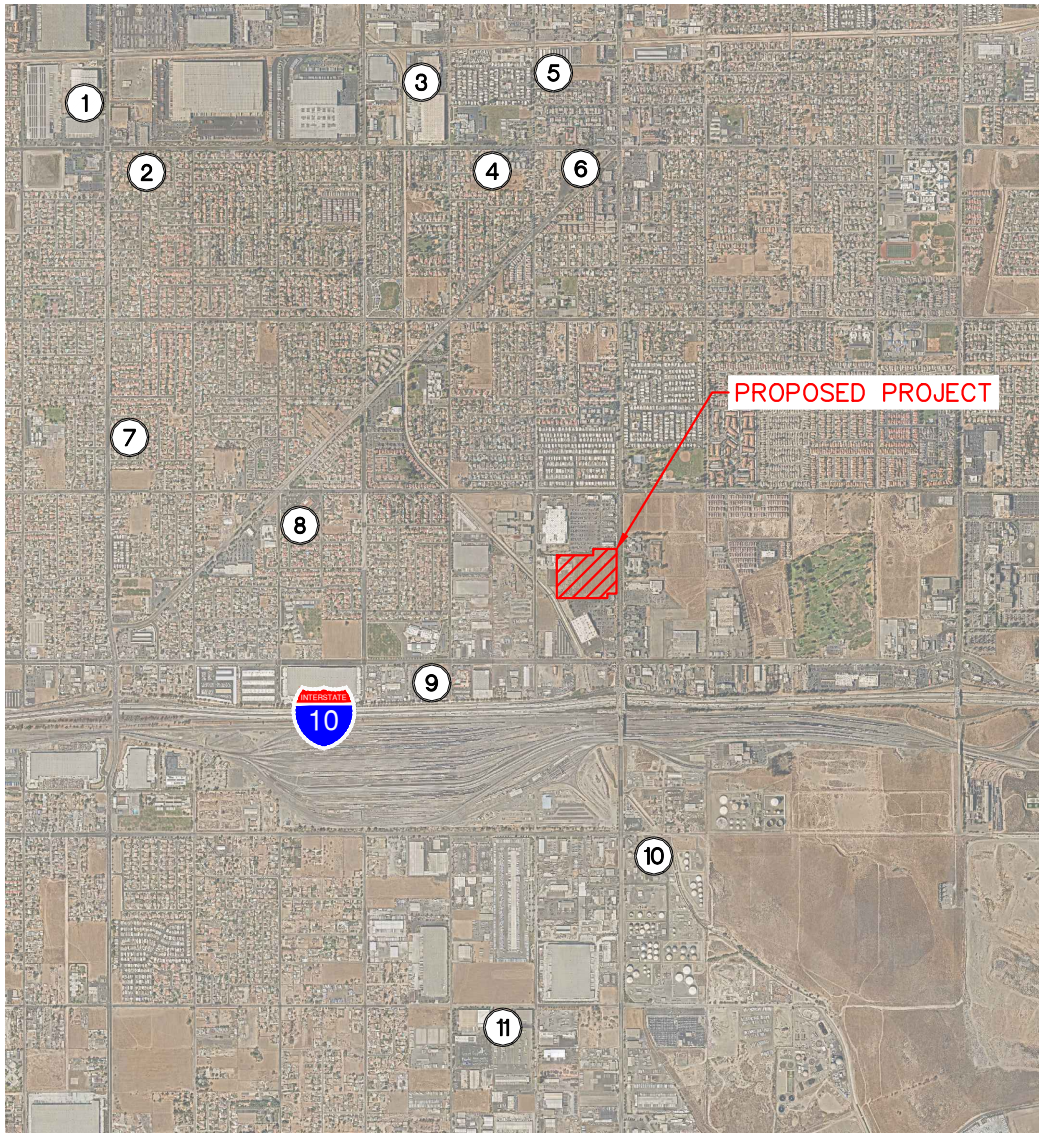
A summary of Cumulative Projects in the project vicinity and the trip generation associated with each is provided on Table 3. The locations of the Cumulative Projects are shown on Figure 5. Cumulative Project traffic volumes are shown on Figure 6. Cumulative Project Trip Distribution and Trip Assignment sheets are provided in *Appendix D*.

The Opening Year 2022 Without Project traffic volumes, and are shown on Figure 7.

TABLE 3
SUMMARY OF CUMULATIVE PROJECTS

Proj #	Description	Land Use	Quantity	Units	Trip Generation Estimates						
						AM Peak Hour			PM Peak Hour		
					Daily	In	Out	Total	In	Out	Total
1	NWC Cedar Ave and Merrill Ave	Warehousing	127.990	KSF	223	17	5	22	7	18	25
2	N/S Merrill Ave, 250' E of Cedar Ave	Manufacturing	4.500	KSF	18	2	1	3	1	2	3
3	NWC of Lilac Ave and Merrill Ave	Single-Family Detached Housing	65	DU	614	12	36	48	41	24	65
4	364 W Merrill Ave	Single-Family Detached Housing	2	DU	19	0	1	1	1	1	2
5	Bonnie View Dr and Willow Ave	Single-Family Detached Housing	29	DU	274	5	16	21	18	11	29
6	164 W Merrill Ave	Senior Adult Housing-Detached	70	DU	299	6	11	17	13	8	21
7	Cedar Ave, between Woodcrest St and Miramont St	Single-Family Detached Housing	10	DU	94	2	6	8	6	4	10
8	San Bernardino Ave, between Spruce Ave and Idylwild Ave	Single-Family Detached Housing	19	DU	179	4	11	15	12	7	19
9	515 W Valley Blvd	Automobile Sales (New)	4.642	KSF	129	6	2	8	5	7	12
10	Slover Ave, 190' W of Riverside Ave	Recreational Vehicle Sales	17.000	KSF	85	7	1	8	4	9	13
11	SWC of Santa Ana Ave and Willow Ave	Manufacturing	47.447	KSF	186	23	7	30	10	22	32
Total Project Trips					2,120	84	97	181	118	113	231

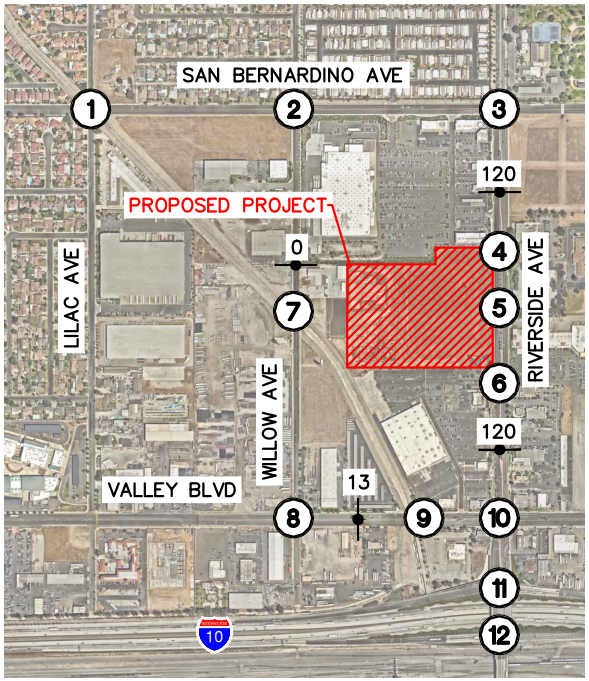
DU = Dwelling Unit, KSF = 1,000 square feet



NOT TO SCALE

LEGEND:
(X) = Cumulative Project Location

FIGURE 5
CUMULATIVE PROJECT LOCATIONS
SOURCE: NEARMAP



NOT TO SCALE

1. San Bernardino Avenue at Lilac Avenue	2. San Bernardino Avenue at Willow Avenue	3. San Bernardino Avenue at Riverside Avenue	4. Riverside Avenue at Senior Way
←2/5 4/3→	←2/5 4/3→	←6/4 ←2/5 4/3→ 2/7→	←6/4 2/7→

5. Riverside Avenue at Project Driveway	6. Riverside Avenue at Gateway Plaza/ Value Center	7. Willow Avenue at Project Driveway	8. Valley Boulevard at Willow Avenue
Future Intersection	←6/4 2/7→	Future Intersection	←1/1 0/1→

9. Valley Boulevard at Gateway Plaza/ Value Center	10. Valley Boulevard at Riverside Avenue	11. Riverside Avenue at I-10 WB Ramps	12. Riverside Avenue at I-10 EB Ramps
←1/1 0/1→	←6/4 ←1/1 0/1→ 2/7→	←3/2 ←3/2 ↖1/4 ↖2/1 0/2 ↑ 1/4 ↑	←2/1 ←3/2 1/4 ↗ 2/1 ↘ 0/2 ↑ 0/2 ↑

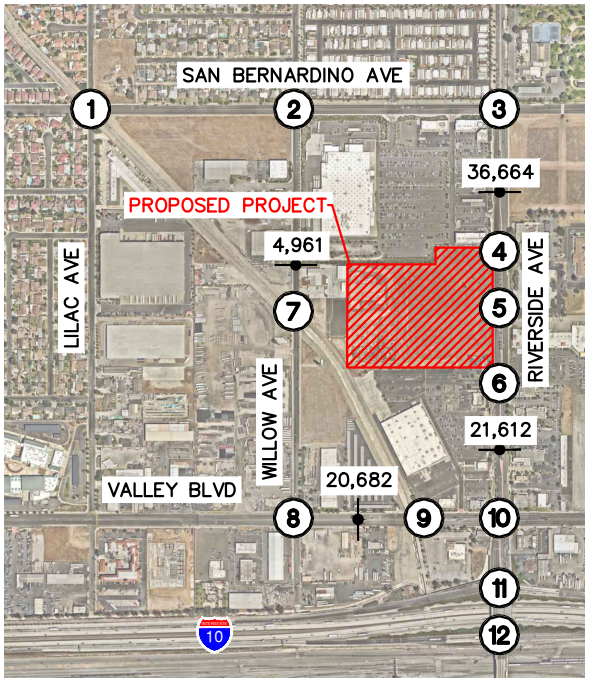
LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Volumes

XXX = Average Daily Traffic Volume

FIGURE 6
CUMULATIVE PROJECT
TRAFFIC VOLUMES



NOT TO SCALE

1. San Bernardino Avenue at Lilac Avenue	2. San Bernardino Avenue at Willow Avenue	3. San Bernardino Avenue at Riverside Avenue	4. Riverside Avenue at Senior Way
63/10 ← 55/47 ← 107/23 → 74/32 ← 201/341 ← 46/35 29/17 → 246/351 → 130/27 ↘ 84/27 ↑ 38/55 ↑ 33/21	23/21 ← 182/149 ← 85/87 → 71/86 ← 279/355 ← 19/8 14/17 → 337/360 → 33/24 ↘ 19/22 ↑ 53/153 ↑ 11/30	86/50 ← 699/554 ← 90/72 → 74/72 ← 238/232 ← 307/267 79/134 → 211/352 → 109/102 ↘ 56/168 ↑ 393/795 ↑ 138/449	1128/1031 ← 15/4 → 4/12 ← 3/11 634/1519 ↑ 8/2
5. Riverside Avenue at Project Driveway	**6. Riverside Avenue at Gateway Plaza/ Value Center**	**7. Willow Avenue at Project Driveway**	**8. Valley Boulevard at Willow Avenue**
Future Intersection	74/93 ← 946/775 ← 112/132 → 32/119 ← 2/13 ← 26/53 24/101 → 3/6 → 46/43 ↘ 43/84 ↑ 605/1337 ↑ 30/55	Future Intersection	50/27 ← 0/1 ← 179/157 → 57/133 ← 463/624 ← 6/6 20/51 → 592/745 → 0/5 ↘ 1/3 ↑ 0/1 ↑ 2/12

9. Valley Boulevard at Gateway Plaza/ Value Center	10. Valley Boulevard at Riverside Avenue	11. Riverside Avenue at I-10 WB Ramps	12. Riverside Avenue at I-10 EB Ramps
7/18 ← 3/7 → 3/10 ← 515/742 ← 2/22 10/43 → 753/861 → 0/1 ↑	26/60 ← 979/753 ← 45/106 → 35/122 ← 145/315 ← 150/155 32/90 → 200/374 → 522/430 ↘ 340/409 ↑ 583/1233 ↑ 110/182	530/403 ← 1119/889 → 388/430 ← 1/4 ← 469/347 145/291 ↑ 635/1335 ↑	1120/882 ← 468/354 221/534 → 250/312 ↘ 559/1096 ↑ 355/449 ↑

LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Volumes

X,XXX = Average Daily Traffic Volume

FIGURE 7
OPENING YEAR 2022 WITHOUT PROJECT
TRAFFIC VOLUMES

Kimley»Horn

3. Opening Year 2022 Without Project Delay and Level of Service

Peak Hour Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours using the analysis procedures and assumptions described previously in this report. The results of the intersection analysis for the Opening Year 2022 Without Project scenario are shown on Table 4.

Review of this table indicates that all study intersections would continue to operate at an acceptable Level of Service. Copies of Opening Year 2022 Without Project intersection analysis worksheets are provided in *Appendix C*.

Daily Roadway Operating Conditions

Roadway Level of Service analysis was conducted based on the roadway capacities presented previously in this report. The results of the roadway analysis for Opening Year 2022 Without Project are shown on Table 5.

Review of this table indicates that the study roadway segments are currently operating within their current Level of Service D capacity.

B. Project Traffic

1. Project Trip Generation

Trip generation estimates for the project are based on daily and peak hourly trip generation rates obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition). ITE trip generation estimates for the project are based on the trip generation rates for the following ITE Land Uses: ITE Land Use 110 – General Light Industrial; and ITE Land Use 821 – Shopping Plaza (40K-150K). It is assumed that trips generated by the shopping plaza are all passenger vehicle trips. According to the ITE 10th Edition Supplement, the trips generated by the light industrial use would be 92% passenger vehicles and 8% trucks. The City of Rialto TIA Report Guidelines specify a truck split of 70% of trucks being 4+-axle, 28% of trucks being 3-axle, 2% of trucks being 2-axle. These truck classification splits were applied to the daily and peak hour trip generation to develop an estimate of truck volumes by number of axles which would be associated with the proposed project.

TABLE 4
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2022 WITHOUT PROJECT

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	San Bernardino Ave at Lilac Ave	U	14.2	B	13.0	B
2	San Bernardino Ave at Willow Ave	U	24.5	C	29.4	D
3	San Bernardino Ave at Riverside Dr	S	30.8	C	37.4	D
4	Riverside Dr at Senior Wy	S	2.2	A	3.3	A
5	Riverside Dr at Project Dwy	Future				
6	Riverside Dr at Gateway Plaza/Value Ctr	S	4.6	A	8.0	A
7	Willow Ave at Project Dwy	Future				
8	Valley Blvd at Willow Ave	S	22.1	C	20.7	C
9	Valley Blvd at Gateway Plaza/Value Ctr	S	20.6	C	19.2	B
10	Valley Blvd at Riverside Dr	S	18.1	B	17.6	B
11	Riverside Dr at I-10 WB Ramps	S	12.2	B	12.3	B
12	Riverside Dr at I-10 EB Ramps	S	10.2	B	19.4	B

Note:

- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

TABLE 5
SUMMARY OF ROADWAY ANALYSIS
OPENING YEAR 2022 WITHOUT PROJECT

Roadway	Segment	LOS Capacity [1]	Opening Year ADT	Cumulative Projects ADT	Opening Year + Cumulative Projects ADT	V/C	LOS
Riverside Avenue	Senior Way to Rialto Marketplace	49,499	36,544	120	36,664	0.741	C
	Gateway Plaza/Value Center to Valley Boulevard	49,499	21,492	120	21,612	0.437	A
Willow Avenue	Valley Boulevard to San Bernardino Avenue	12,499	4,961	0	4,961	0.397	A
Valley Boulevard	Willow Avenue to Riverside Avenue	35,998	20,669	13	20,682	0.575	A

Notes: [1] Source: *City of Rialto Traffic Impact Analysis Guidelines for VMT and LOS Asssessment (2021)*

ADT = Average Daily Traffic

V/C = Volume to Capacity

Passenger car equivalent (PCE) factors were then applied to the truck types, based on number of axles (1.5 PCE for 2-axle trucks, 2.0 PCE for 3-axle trucks, and 3.0 PCE for 4+-axle trucks) to determine the total PCE volumes to be generated by the project. The trip generation rates and PCE factors, and the resulting trip generation estimates for the project, are summarized on Table 6. With the PCE factors, the project is estimated to generate 6,396 PCE trips on a daily basis, with 290 PCE trips in the morning peak hour, and 628 PCE trips in the evening peak hour.

Not all trips from the project are anticipated to be new. Some trips are expected to be captured by the internal land uses, or from the existing flow of traffic passing the site. Internal capture and pass-by were applied to the project based on discussion with the City and methodology within the City of Rialto TIA Report Guidelines.

2. Trip Distribution and Assignment

Trip distribution assumptions for the project were developed by taking into account the proposed site uses, and the routes to and from the freeway system for the vehicles. Trip distribution assumptions are shown on Figure 8. The resulting project-related trips are shown on Figure 9. Pass-by volumes which are shown on Figure 10 were then added to the project-related trips to determine total project traffic volumes. The resulting project volumes are shown on Figure 11.

C. Opening Year 2022 With Project (Existing Plus Ambient Growth Plus Cumulative Projects Plus Project)

Peak Hour Operating Conditions

The total proposed project traffic volumes were added to the Opening Year 2022 Without Project traffic volumes to determine the Opening Year 2022 With Project conditions. The resulting Opening Year 2022 With Project traffic volumes are shown on Figure 12. Intersection Level of Service analysis was conducted for the morning and evening peak hours, and the results of this analysis are shown on Table 7. Intersection analysis worksheets for this scenario are provided in *Appendix C*.

Review of this table indicates that with the addition of project traffic, all study intersections would operate at an acceptable Level of Service.

Daily Roadway Operating Conditions

Roadway Level of Service analysis was conducted based on the roadway capacities presented previously in this report. The results of the roadway analysis for Opening Year 2022 With Project conditions are shown on Table 8.

Review of this table indicates that the study roadway segments would continue to operate within their current Level of Service D capacity with the addition of Project traffic.

TABLE 6
SUMMARY OF PROJECT TRIP GENERATION

Land Use	ITE Code	Unit	Trip Generation Rates [1] Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Shopping Plaza (40K - 150K)	821	KSF	94.490	2.189	1.341	3.53	4.334	4.696	9.03
General Light Industrial	110	KSF	4.870	0.651	0.089	0.74	0.091	0.559	0.65

Land Use		Quantity	Unit	Trip Generation Estimates Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Shopping Plaza (40K - 150K)		93.023	KSF	8,790	204	125	329	403	437	840
Internal Capture 10% [2]				-879	-20	-13	-33	-40	-44	-84
Pass-by 25% [2]				-1,978	-46	-28	-74	-91	-98	-189
General Light Industrial		83.272	KSF	406	54	7	61	8	47	55
Passenger Vehicles	92.00%			374	50	6	56	7	43	50
Trucks	8.00%			32	4	1	5	1	4	5

GENERAL LIGHT INDUSTRIAL PROJECT TRIPS - PASSENGER CAR EQUIVALENTS (PCE)

Vehicle Type	Vehicle Mix [2]	Daily Vehicles	PCE Factor [2]	Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Passenger Vehicles	92.00%	374	1.0	374	50	6	56	7	43	50
2-Axle Trucks	0.16%	1	1.5	2	0	0	0	0	0	0
3-Axle Trucks	2.24%	9	2.0	18	2	0	2	0	2	2
4+ Axle Trucks	5.60%	23	3.0	69	9	1	10	1	8	9
Total Truck PCE Trips				89	11	1	12	1	10	11
Total Proposed Project PCE Trips				463	61	7	68	8	53	61
Total Project Trips				6,396	199	91	290	280	348	628

[1] Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition
[2] Source: City of Rialto Traffic Impact Analysis Report Guidelines and Requirements

TABLE 6
SUMMARY OF PROJECT TRIP GENERATION

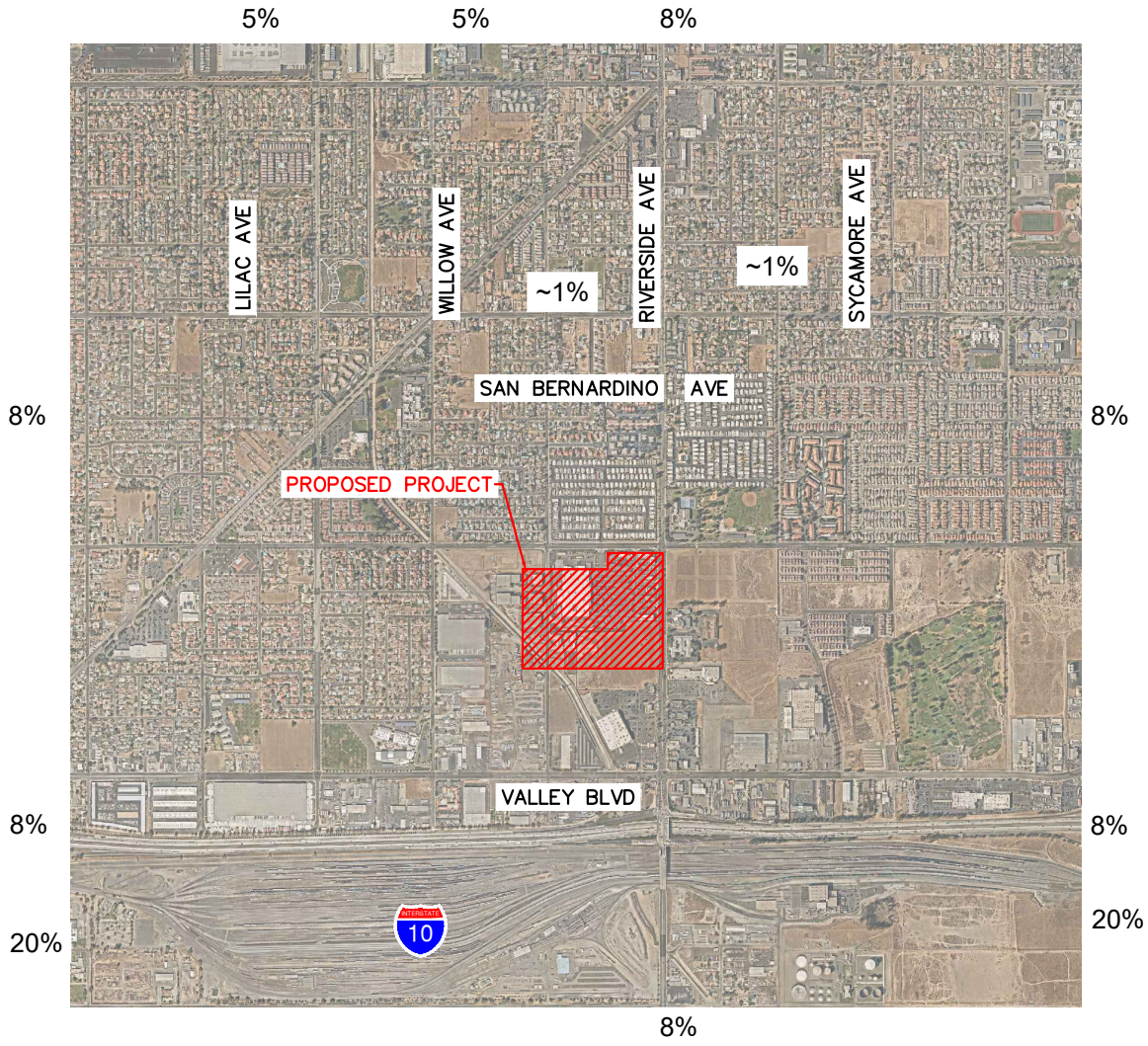
Land Use	ITE Code	Unit	Trip Generation Rates [1] Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Shopping Plaza (40K - 150K)	821	KSF	94.490	2.189	1.341	3.53	4.334	4.696	9.03
General Light Industrial	110	KSF	4.870	0.651	0.089	0.74	0.091	0.559	0.65

Land Use		Quantity	Unit	Trip Generation Estimates Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Shopping Plaza (40K - 150K)		93.023	KSF	8,790	204	125	329	403	437	840
Internal Capture 10% [2]				-879	-20	-13	-33	-40	-44	-84
Pass-by 25% [2]				-1,978	-46	-28	-74	-91	-98	-189
General Light Industrial		83.272	KSF	406	54	7	61	8	47	55
Passenger Vehicles	92.00%			374	50	6	56	7	43	50
Trucks	8.00%			32	4	1	5	1	4	5

GENERAL LIGHT INDUSTRIAL PROJECT TRIPS - PASSENGER CAR EQUIVALENTS (PCE)

Vehicle Type	Vehicle Mix [2]	Daily Vehicles	PCE Factor [2]	Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Passenger Vehicles	92.00%	374	1.0	374	50	6	56	7	43	50
2-Axle Trucks	0.16%	1	1.5	2	0	0	0	0	0	0
3-Axle Trucks	2.24%	9	2.0	18	2	0	2	0	2	2
4+ Axle Trucks	5.60%	23	3.0	69	9	1	10	1	8	9
Total Truck PCE Trips				89	11	1	12	1	10	11
Total Proposed Project PCE Trips				463	61	7	68	8	53	61
Total Project Trips				6,396	199	91	290	280	348	628

[1] Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition
[2] Source: City of Rialto Traffic Impact Analysis Report Guidelines and Requirements



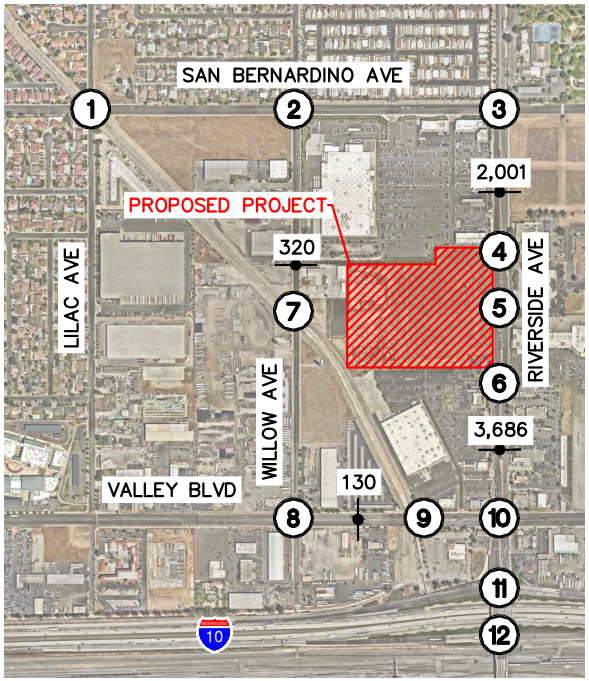
NOT TO SCALE

LEGEND:

Project Site

XX% Trip Distribution Percentage

FIGURE 8
PROJECT TRIP DISTRIBUTION ASSUMPTIONS
SOURCE: NEARMAP



NOT TO SCALE

1. San Bernardino Avenue at Lilac Avenue	2. San Bernardino Avenue at Willow Avenue	3. San Bernardino Avenue at Riverside Avenue	4. Riverside Avenue at Senior Way
10/14 ↖ 5/17 ←7/29 17/23 →	10/14 ← 12/46 27/37 → 5/17 ↑	20/28 ← 17/23 ← 27/37 ↘ 12/46 ↑ 9/35 ↑ 7/29 ↗	17/23 ↖ 47/65 ← 21/81 ↗ 34/45 ↗ 7/29 ↑ 9/36 ↘

5. Riverside Avenue at Project Driveway	6. Riverside Avenue at Gateway Plaza/ Value Center	7. Willow Avenue at Project Driveway	8. Valley Boulevard at Willow Avenue
36/50 ↖ 20/50 ↖ 31/114 ↘ 42/74 →	11/14 ↖ 41/150 ↖ 7/29 ↗ 78/117 ↑ 34/45 ↑ 12/49 ↘	10/14 ↖ 5/17 ↖ 6/22 ← 13/17 ↑	6/22 ↖ ←2/7 13/17 ↗ 4/6 →

9. Valley Boulevard at Gateway Plaza/ Value Center	10. Valley Boulevard at Riverside Avenue	11. Riverside Avenue at I-10 WB Ramps	12. Riverside Avenue at I-10 EB Ramps
←2/7 4/6 →	2/7 ← 43/163 ← 7/29 ↖ 17/23 4/6 ↗ 91/134 →	18/67 ← 25/96 ↖ 37/56 54/78 →	7/29 ← 18/67 ← 37/56 ↗ 17/23 ↑

LEGEND:

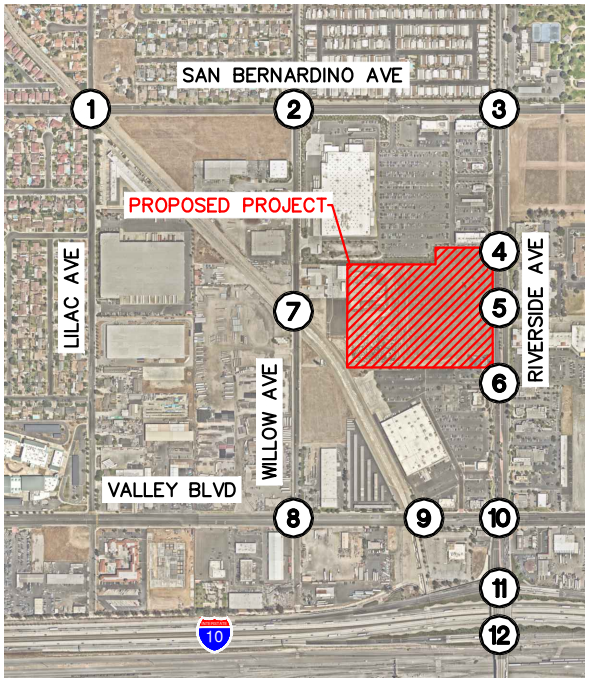
(X) = Study Intersection

XX/YY = AM/PM Peak Hour Volumes

X,XXX = Average Daily Traffic Volume

FIGURE 9
PROJECT–RELATED TRAFFIC VOLUMES

Kimley»Horn



NOT TO SCALE

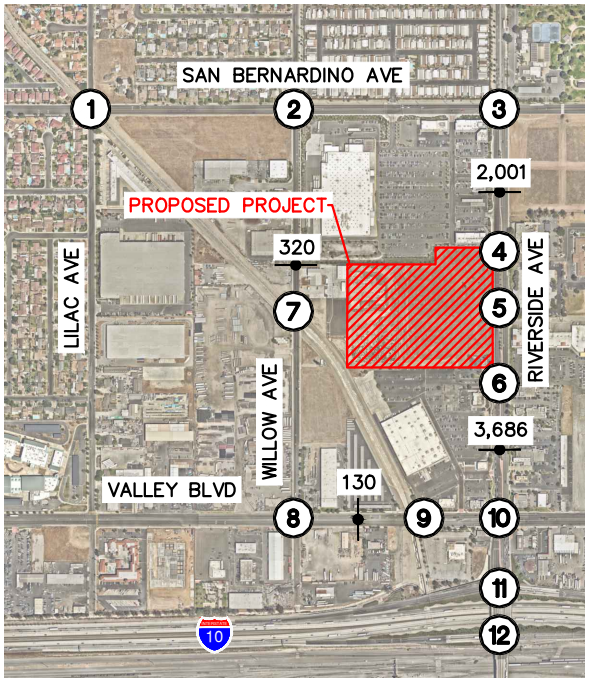
4. Riverside Avenue at Senior Way		6. Riverside Avenue at Gateway Plaza/ Value Center	
10/20 ↓ ← 10/20		7/13 ↓ ← 7/13	
6/21 →	12/23 → ← 12/23	11/38 →	18/35 → ← 18/35
7/25 ↘		4/14 ↘	

LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Volumes

FIGURE 10
PASS–BY TRAFFIC VOLUMES



NOT TO SCALE

1. San Bernardino Avenue at Lilac Avenue	2. San Bernardino Avenue at Willow Avenue	3. San Bernardino Avenue at Riverside Avenue	4. Riverside Avenue at Senior Way
10/14 ↖ 5/17 ←7/29 17/23 →	10/14 ← 12/46 27/37 → 5/17 ↑	20/28 ← 17/23 ← 27/37 ↘ 12/46 ↑ 9/35 ↑ 7/29 ↗	17/23 ↖ 47/65 ← 21/81 ↗ 34/45 ↗ 7/29 ↑ 9/36 ↘

5. Riverside Avenue at Project Driveway	6. Riverside Avenue at Gateway Plaza/ Value Center	7. Willow Avenue at Project Driveway	8. Valley Boulevard at Willow Avenue
36/50 ↖ 20/50 ↖ 31/114 ↘ 42/74 →	11/14 ↖ 41/150 ↖ 7/29 ↗ 78/117 ↑ 34/45 ↑ 12/49 ↘	10/14 ↖ 5/17 ↖ 6/22 ← 13/17 ↑	6/22 ↖ ←2/7 13/17 ↗ 4/6 →

9. Valley Boulevard at Gateway Plaza/ Value Center	10. Valley Boulevard at Riverside Avenue	11. Riverside Avenue at I-10 WB Ramps	12. Riverside Avenue at I-10 EB Ramps
←2/7 4/6 →	2/7 ← 43/163 ← 7/29 ↖ 17/23 4/6 ↗ 91/134 →	18/67 ← 25/96 ← 37/56 ↖ 54/78 →	7/29 ← 18/67 ← 37/56 ↗ 17/23 ↑

LEGEND:

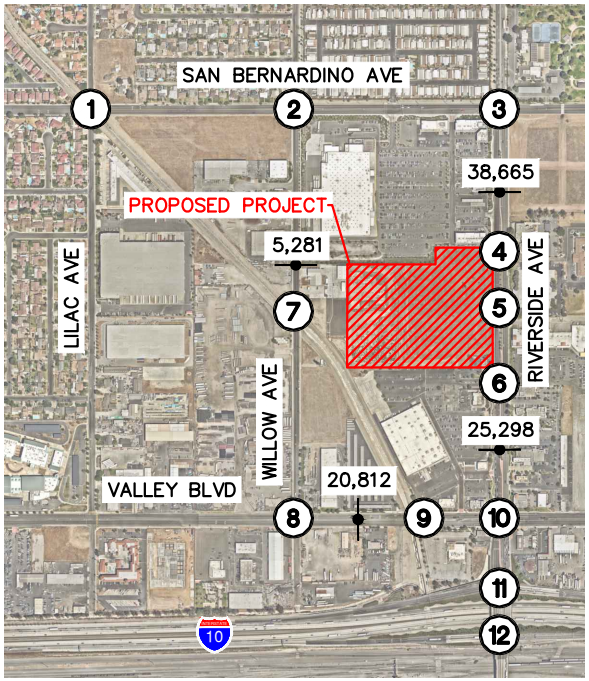
(X) = Study Intersection

XX/YY = AM/PM Peak Hour Volumes

X,XXX = Average Daily Traffic Volume

FIGURE 11
TOTAL PROJECT TRAFFIC VOLUMES

Kimley»Horn



NOT TO SCALE

1. San Bernardino Avenue at Lilac Avenue	2. San Bernardino Avenue at Willow Avenue	3. San Bernardino Avenue at Riverside Avenue	4. Riverside Avenue at Senior Way
63/10 ← 55/47 ← 117/37 → 79/49 ← 208/370 ← 46/35 29/17 → 263/374 → 130/27 ↘ 84/27 ↑ 38/55 ↑ 33/21	23/21 ← 192/163 ← 85/87 → 71/86 ← 291/401 ← 19/8 14/17 → 364/397 → 33/24 ↘ 19/22 ↑ 58/170 ↑ 11/30	86/50 ← 719/582 ← 90/72 → 74/72 ← 238/232 ← 324/290 79/134 → 211/352 → 136/139 ↘ 68/214 ↑ 402/830 ↑ 145/478	27/43 ← 1165/1076 ← 15/4 → 4/12 ← 3/11 27/102 → 16/61 ↘ 46/68 ↑ 629/1525 ↑ 8/2
5. Riverside Avenue at Project Driveway	**6. Riverside Avenue at Gateway Plaza/ Value Center**	**7. Willow Avenue at Project Driveway**	**8. Valley Boulevard at Willow Avenue**
36/50 ← 26/54 31/114 → 44/81 ↑	92/120 ← 980/912 ← 112/132 → 32/119 ← 2/13 ← 26/53 42/168 → 3/6 → 62/106 ↘ 139/236 ↑ 621/1347 ↑ 30/55	10/14 → 5/17 ← 6/22 13/17 ↑	56/49 ← 0/1 ← 179/157 → 57/133 ← 465/631 ← 6/6 33/68 → 596/751 → 0/5 ↘ 1/3 ↑ 0/1 ↑ 2/12
9. Valley Boulevard at Gateway Plaza/ Value Center	**10. Valley Boulevard at Riverside Avenue**	**11. Riverside Avenue at I-10 WB Ramps**	**12. Riverside Avenue at I-10 EB Ramps**
7/18 ← 3/7 ← 3/10 ← 517/749 ← 2/22 10/43 → 757/867 → 0/1 ↑	28/67 ← 1022/916 ← 52/135 → 52/145 ← 145/315 ← 150/155 36/96 → 200/374 → 522/430 ↘ 340/409 ↑ 674/1367 ↑ 110/182	548/470 ← 1144/985 → 425/486 ← 1/4 ← 469/347 145/291 ↑ 689/1413 ↑	1127/911 ← 486/421 258/590 → 250/312 ↘ 576/1119 ↑ 355/449 ↑

LEGEND:

- (X) = Study Intersection
- XX/YY = AM/PM Peak Hour Volumes
- X,XXX = Average Daily Traffic Volume

FIGURE 12
OPENING YEAR 2022 WITH PROJECT TRAFFIC VOLUMES

TABLE 7
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2022 WITH PROJECT CONDITIONS

Int. #	Intersection	Traffic Control	AM Peak Hour					PM Peak Hour				
			Without Project		With Project		Change in Delay	Without Project		With Project		Change in Delay
			Delay	LOS	Delay	LOS		Delay	LOS	Delay	LOS	
1	San Bernardino Ave at Lilac Ave	U	14.2	B	15.0	B	0.8	13.0	B	14.0	B	1.0
2	San Bernardino Ave at Willow Ave	U	24.5	C	27.6	D	3.1	29.4	D	39.9	E	10.5
3	San Bernardino Ave at Riverside Dr	S	30.8	C	33.0	C	2.2	37.4	D	40.7	D	3.3
4	Riverside Dr at Senior Wy	S	2.2	A	5.7	A	3.5	3.3	A	10.9	B	7.6
5	Riverside Dr at Project Dwy	Future			9.3	A				10.0	B	
6	Riverside Dr at Gateway Plaza/Value Ctr	S	4.6	A	5.6	A	1.0	8.0	A	11.2	B	3.2
7	Willow Ave at Project Dwy	Future			8.6	A				8.7	A	
8	Valley Blvd at Willow Ave	S	22.1	C	22.1	C	0.0	20.7	C	20.7	C	0.0
9	Valley Blvd at Gateway Plaza/Value Ctr	S	20.6	C	20.6	C	0.0	19.2	B	19.2	B	0.0
10	Valley Blvd at Riverside Dr	S	18.1	B	18.2	B	0.1	17.6	B	19.3	B	1.7
11	Riverside Dr at I-10 WB Ramps	S	12.2	B	12.6	B	0.4	12.3	B	13.5	B	1.2
12	Riverside Dr at I-10 EB Ramps	S	10.2	B	10.7	B	0.5	19.4	B	25.5	C	6.1

Notes:

- Delay values for unsignalized (U) intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

TABLE 8
SUMMARY OF ROADWAY ANALYSIS
OPENING YEAR 2022 WITH PROJECT

Roadway	Segment	LOS Capacity [1]	Opening Year ADT	Cumulative Projects ADT	Opening Year + Cumulative Projects ADT	Net Daily Project Traffic	Opening Year + Cumulative + Project ADT	V/C	LOS
Riverside Avenue	Senior Way to Rialto Marketplace	49,499	36,544	120	36,664	2,001	38,665	0.781	C
	Gateway Plaza/Value Center to Valley Boulevard	49,499	21,492	120	21,612	3,686	25,298	0.511	A
Willow Avenue	Valley Boulevard to San Bernardino Avenue	12,499	4,961	0	4,961	320	5,281	0.423	A
Valley Boulevard	Willow Avenue to Riverside Avenue	35,998	20,669	13	20,682	130	20,812	0.578	A

Notes: [1] Source: *City of Rialto Traffic Impact Analysis Guidelines for VMT and LOS Asssessment (2021)*

LOS = Level of Service

ADT = Average Daily Traffic

V/C = Volume to Capacity

IV. STORAGE CAPACITY AT LEFT-TURN POCKETS

Per request from City staff, queue lengths at left-turn pockets were assessed at the following locations:

- Riverside Avenue at Senior Way
  - Northbound Left Turn
  - Eastbound Left Turn
- Riverside Avenue at Gateway Plaza/Value Center
  - Northbound Left Turn
- Riverside Avenue at I-10 Westbound Ramps
  - Northbound Left Turn
- Riverside Avenue at I-10 Eastbound Ramps
  - Southbound Left Turn

A summary of left-turn pocket storage capacity, as well at the 50th and 95th percentile queue lengths at the locations noted above are shown on Table 9 for all scenarios. Review of this table indicates that all left-turn pocket queues would be within the available storage capacity for all study scenarios. The left-turn pocket capacity worksheets are provided in *Appendix C*.

V. DELIVERY TRUCK DRIVEWAY ACCESS

Vehicular access provisions for delivery trucks at the proposed site would be provided via four driveways: two full-movement signalized driveways on Riverside Avenue; one RIRO only unsignalized driveway on Riverside Avenue; and one full-movement unsignalized driveway on Willow Avenue.

Truck turn templates for delivery trucks taking access at the project driveways are shown on Figure 13.

VI. VEHICLE MILES TRAVELED

A. Vehicle Miles Traveled (VMT) Analysis

To be consistent with the previous Traffic Impact Study that was completed for this project, LOS was the decided metric used for determining the project impacts and mitigations for the proposed project; therefore, a VMT analysis was not performed for this project.

TABLE 9
SUMMARY OF LEFT-TURN POCKET STORAGE CAPACITY
RESIDENTIAL AND INDUSTRIAL DEVELOPMENT PROJECT

Intersection	Peak Hour	Left-Turn Movement	Storage Capacity (ft/ln)	Existing		Opening Year 2022		Opening Year 2022 Plus Project	
				50th Percentile	95th Percentile	50th Percentile	95th Percentile	50th Percentile	95th Percentile
Riverside Avenue at Senior Way	AM	NBL	150	Future		Future		0	42
	PM			Future		Future		10	68
	AM	EBL	200	Future		Future		0	7
	PM			Future		Future		36	117
Riverside Avenue at Gateway Plaza/Value Center	AM	NBL	230	Future		Future		17	97
	PM			Future		Future		57	202
Riverside Avenue at I-10 Westbound Ramps	AM	NBL	150	15	45	16	48	17	48
	PM			36	84	39	86	44	95
Riverside Avenue at I-10 Eastbound Ramps	AM	SBL	200	54	120	59	131	68	150
	PM			123	115	134	132	93	189

NOT TO SCALE

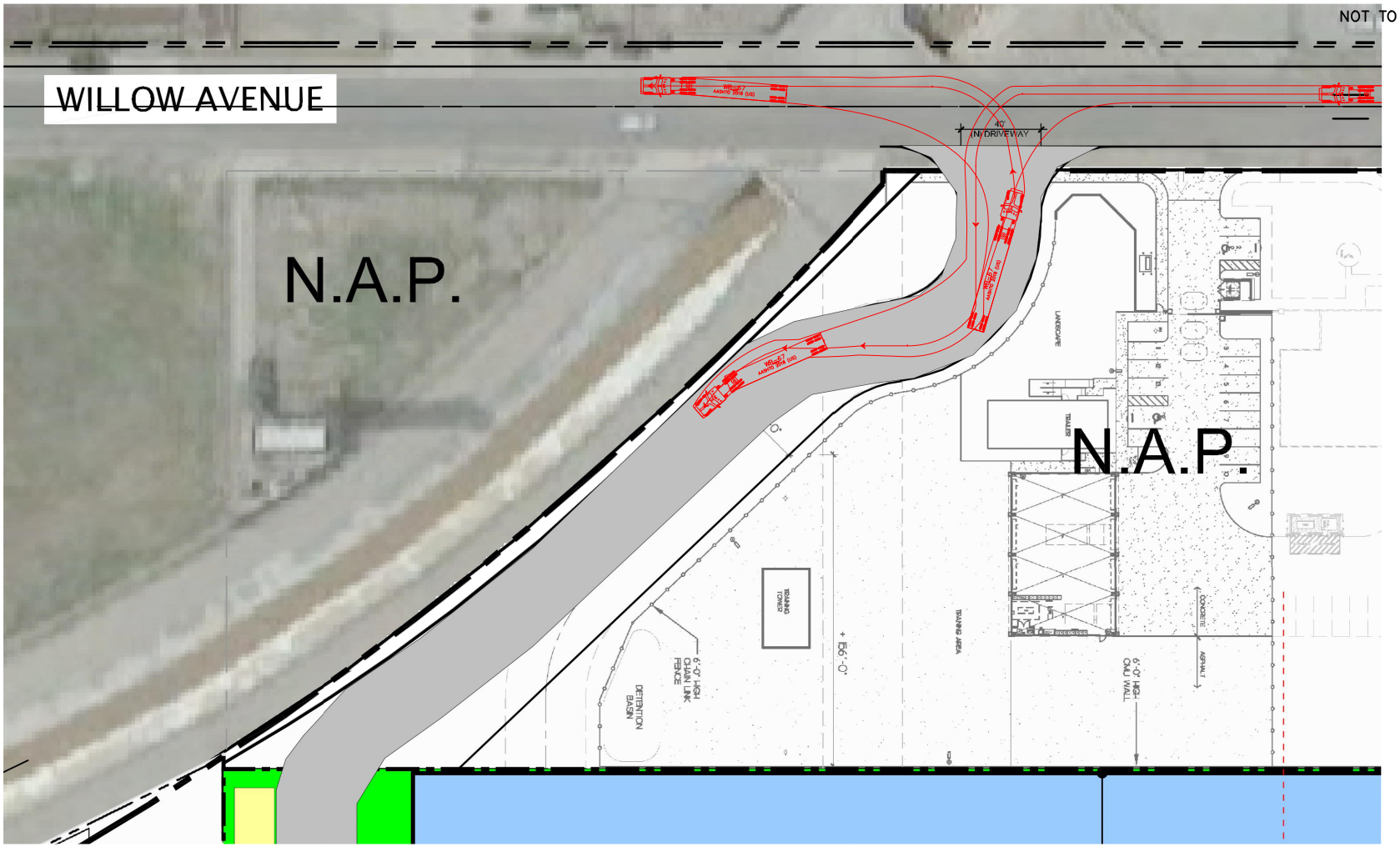


FIGURE 13A
DELIVERY TRUCK DRIVEWAY ACCESS –
WILLOW AVENUE AND PROJECT DRIVEWAY

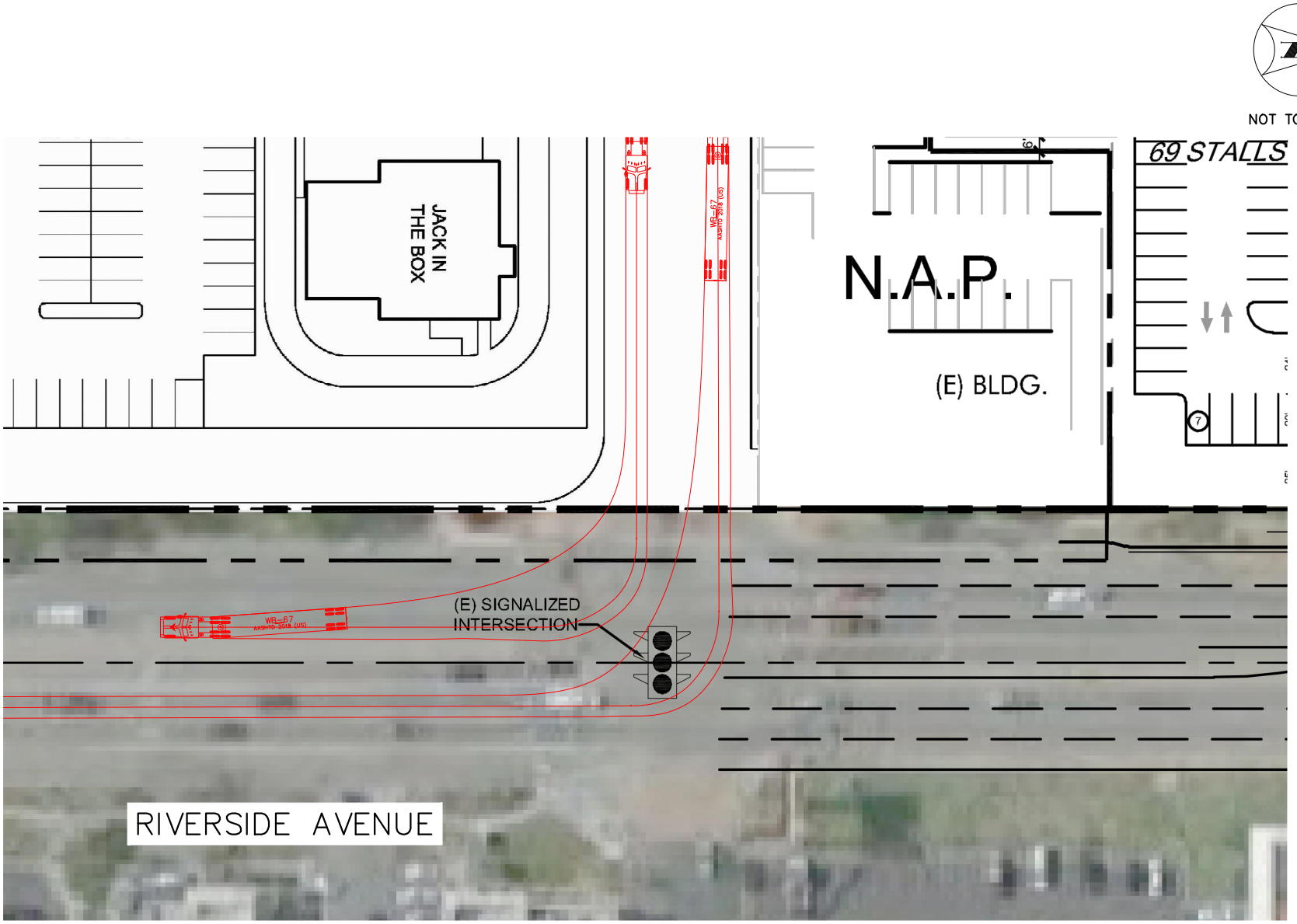


FIGURE 13B
DELIVERY TRUCK DRIVEWAY ACCESS –
RIVERSIDE AVENUE AND GATEWAY PLAZA/VALUE CENTER

NOT TO SCALE

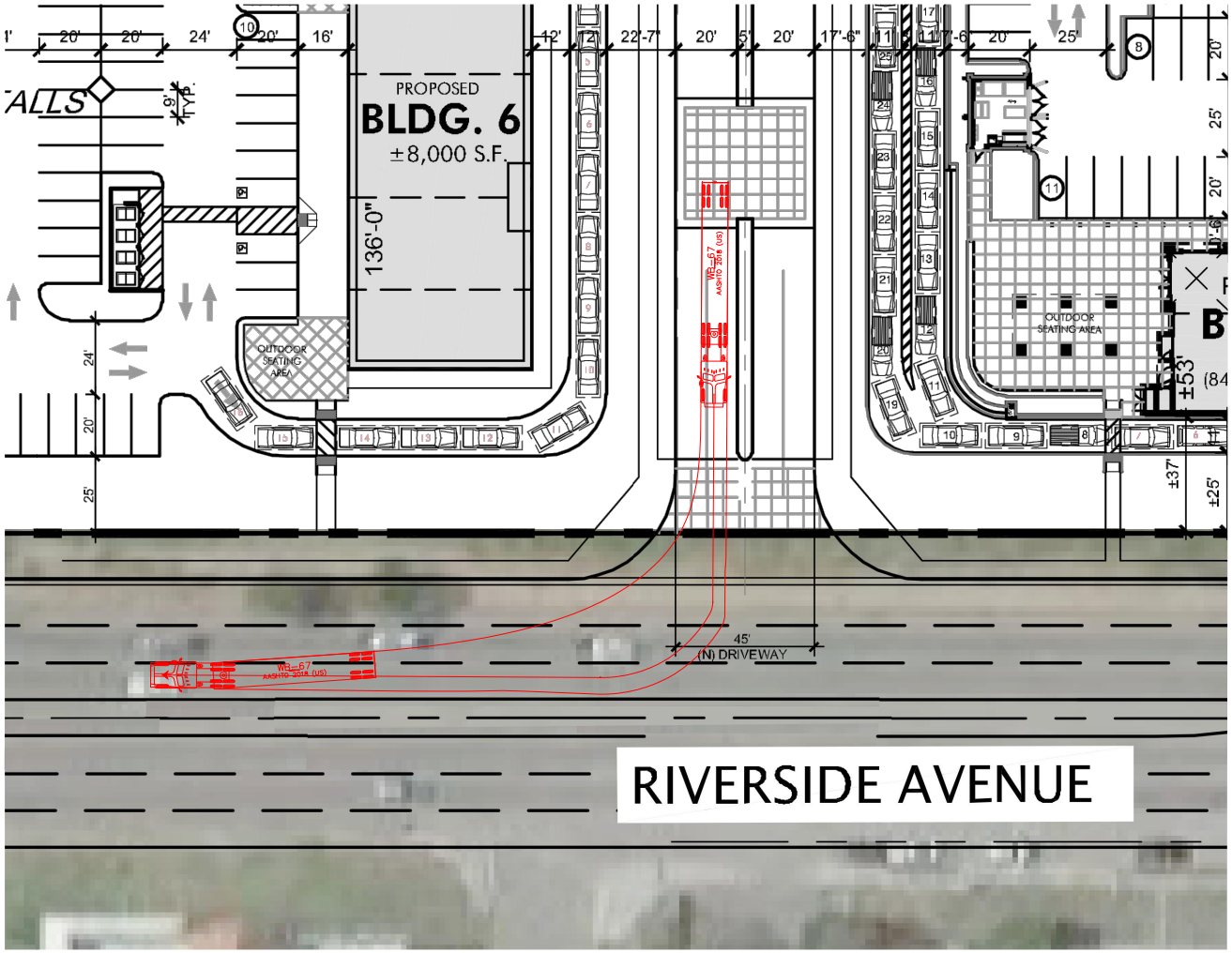
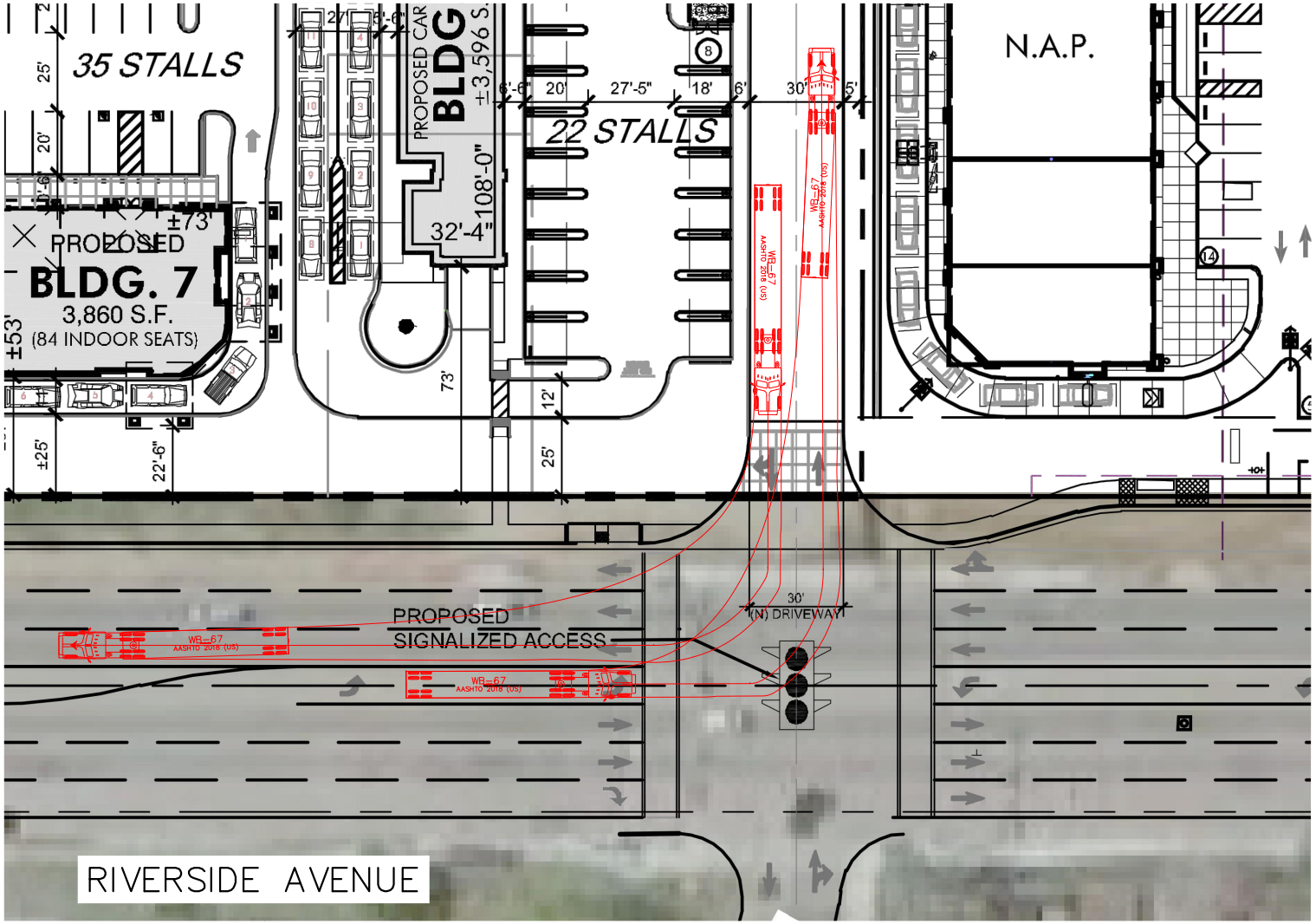


FIGURE 13C
DELIVERY TRUCK DRIVEWAY ACCESS –
RIVERSIDE AVENUE AND PROJECT DRIVEWAY



NOT TO SCALE

FIGURE 13D
DELIVERY TRUCK DRIVEWAY ACCESS –
RIVERSIDE AVENUE AND SENIOR WAY

VII. FINDINGS AND CONCLUSIONS

This Traffic Impact Study has been prepared to address the traffic-related effects of the proposed retail and industrial development in the City of Rialto. The project will involve the construction of a shopping center with 79,676 square feet of retail use, 9,660 square feet of fast-food restaurant with drive-through use, 3,596 square feet of automated car wash use, and 83,272 square feet of general light industrial use on the currently vacant site.

Existing morning peak period (7:00 to 9:00 AM) and evening peak period (4:00 to 6:00 PM) turning movement counts, as well as 24-hour roadway segment counts, were collected for the study intersections and study roadway segments.

Under Existing Conditions, all study intersections and study roadway segments currently operate at an acceptable Level of Service.

An ambient growth rate of 2.0% per year to Opening Year 2022 was applied to existing peak hour traffic volumes to develop the base Opening Year 2022 forecasts. In addition to ambient growth, traffic volumes for Cumulative Projects (approved and pending projects) were added to the base Opening Year 2022 traffic volumes. In the Opening Year 2022 Without Project scenario, all study intersections and roadway segments continue to operate at an acceptable Level of Service.

Proposed project trips were added to the Opening Year 2022 Without Project traffic volumes to determine the Opening Year 2022 With Project conditions. In the Opening Year 2022 With Project scenario, all study intersections and roadway segments would continue to operate at an acceptable Level of Service.

Queue lengths at the left-turn pockets were assessed at the project driveways and the I-10 ramps for all study scenarios. All left-turn pocket queues would be within the available storage capacity in all study scenarios.

APPENDIX A

APPROVED SCOPING AGREEMENT

Kimley»Horn

December 6, 2021

Justin Schlaefli
TKE Engineering, Inc.
73710 Fred Waring Drive, #104
Palm Desert, CA 92260

RE: *Traffic Impact Study Scoping Agreement for the Proposed Retail and Industrial Development at the Southwest Corner of Senior Way and Riverside Avenue*

Dear Mr. Schlaefli:

Kimley-Horn and Associates, Inc. is pleased to submit this Scoping Agreement for the proposed Retail and Industrial Development at the Southwest Corner of Senior Way and Riverside Avenue in the City of Rialto. The scope of the traffic impact study is summarized below.

This scope of work is based on the requirements indicated by the City of Rialto Traffic Impact Analysis Report Guidelines and Requirements (December 2014) and in the San Bernardino County Transportation Authority Congestion Management Plan (CMP).

Project Description

The applicant proposes a shopping center development consisting of 79,767 square feet of retail use, 9,660 square feet of fast-food restaurant with drive-through use, 3,596 square feet of automated car wash use, and 83,272 square feet of general light industrial use. The existing site is vacant. The project site plan is shown on Attachment 1.

Study Scenarios

The following study scenarios will be included for analysis:

- Existing Conditions
- Opening Year 2022 Without Project (Existing Plus Ambient Growth Plus Cumulative Projects)
- Opening Year 2022 With Project (Existing Plus Ambient Growth Plus Cumulative Projects Plus Project)

Study Methodology

Intersection Level of Service calculations will be based on the Highway Capacity Manual (HCM) Methodology for unsignalized and signalized intersections to be consistent with City, CMP, and Caltrans guidelines.

Roadway segment analysis will be conducted based on volume-to-capacity ratios established by the City of Rialto.

Project Trip Generation

Daily and peak hour trips for the proposed project were calculated using the trip generation rates published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition (2021). Trip rates are based on the following ITE Land Use Categories:

- LU 110 – General Light Industrial
- LU 821 – Shopping Plaza (40K – 150K)

It is recognized that not all inbound and outbound trips to the proposed project will be "new" trips on the roadway system in the vicinity of the project site. Some trips are expected to remain internal to the project site, as patrons move from different land uses within the shopping center. For instance, a patron could utilize the car wash land use and the fast-food land use within the same visit. Furthermore, some trips to the project site will consist of "pass-by" trips -- motorists who are already traveling on the surrounding roadways from one place to another. Common pass-by trips for a shopping plaza would be individuals who stop at the project site on the way to work, home, or school.

Internal capture rates and pass-by rates are provided within the City of Rialto traffic study guidelines. An internal capture rate of 10%, and a pass-by rate of 25%, were applied to the land uses within the project site as applicable.

Passenger vehicle and truck mix assumptions were applied to the general light industrial use component of the project, based on the City of Rialto traffic study guidelines. Passenger car equivalent (PCE) factors were then applied to the truck types, based on the number of axles (1.5 PCE for 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for 4+-axle trucks) to determine the total PCE trips to be generated by the project.

The resulting trip rates and the project trip generation estimates are shown in Attachment 2. The project is estimated to generate approximately 290 trips in the morning peak hour (199 inbound, 91 outbound) and 628 trips in the evening peak hour (280 inbound, 348 outbound), with 6,396 vehicle trips on a daily basis.

Project Trip Distribution

Project trip distribution assumptions are shown on Attachment 3.

Background Traffic

The project is anticipated to be open in 2022. Existing traffic volumes will be grown at a rate of 2% per year to account for ambient growth between Existing and Future scenarios. Additionally, traffic from cumulative projects will be included in the opening year scenario.

Study Intersections

The following study intersections are proposed:

1. San Bernardino Avenue and Lilac Avenue
2. San Bernardino Avenue and Willow Avenue
3. San Bernardino Avenue and Riverside Avenue
4. Riverside Avenue and Senior Way
5. Riverside Avenue and Gateway Plaza/Value Center
6. Valley Boulevard and Willow Avenue
7. Valley Boulevard and Gateway Plaza/Value Center
8. Valley Boulevard and Riverside Avenue
9. Riverside Avenue and I-10 WB Ramps
10. Riverside Avenue and I-10 EB Ramps
11. Riverside Avenue and Center Project Driveway
12. Willow Avenue and Project Driveway

Intersection Traffic Counts

Peak hour traffic counts at intersections will be conducted on a Tuesday, Wednesday, or Thursday during the morning and evening peak periods (7:00AM – 9:00AM, 4:00PM-6:00PM).

Study Roadway Segments

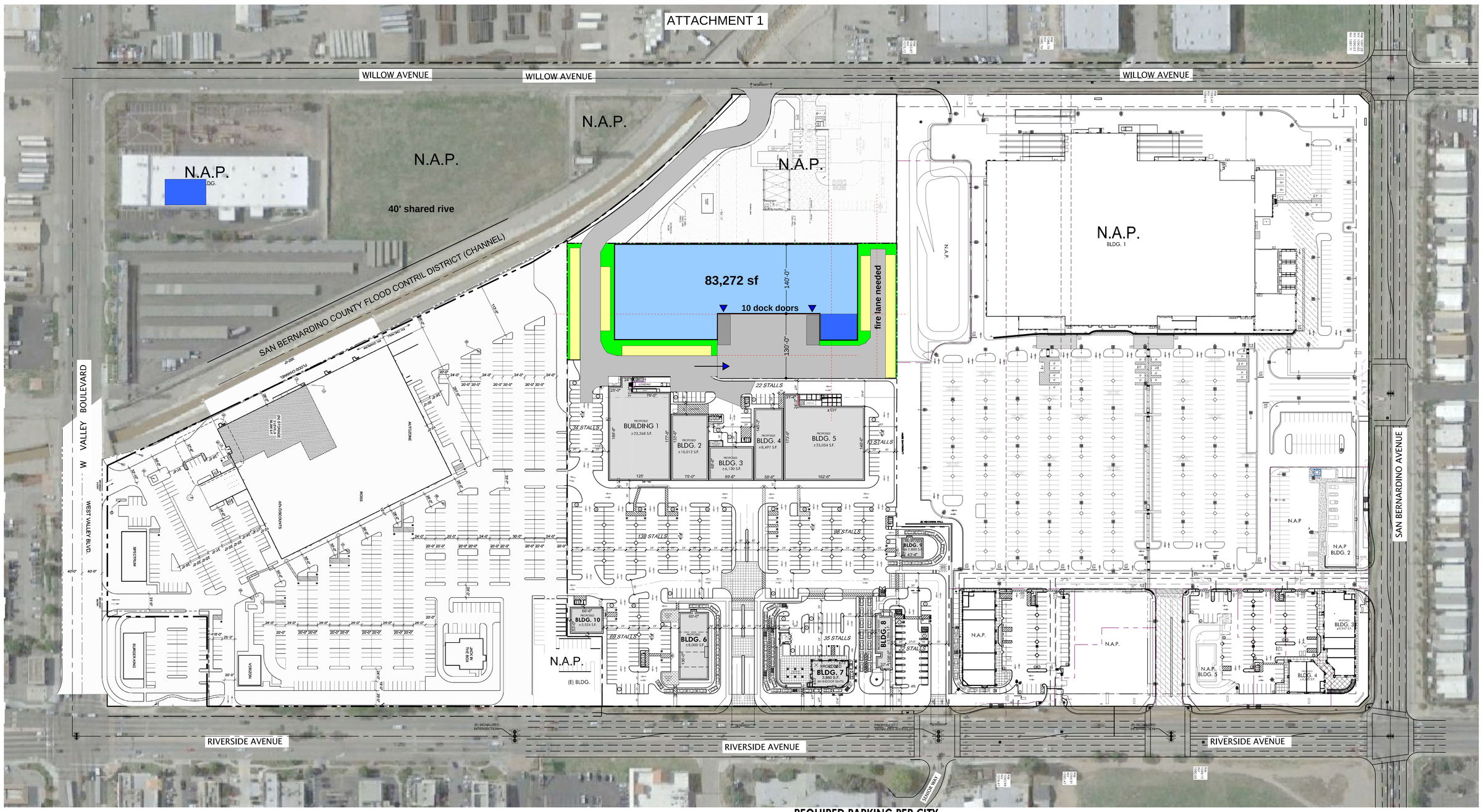
The following study roadway segments are proposed:

1. Riverside Avenue from Senior Way to Rialto Marketplace
2. Riverside Avenue from Gateway Plaza/Value Center to Valley Boulevard
3. Willow Avenue from Valley Boulevard to San Bernardino Avenue
4. Valley Boulevard from Willow Avenue to Riverside Avenue

Additional Elements

- Circulation discussion
- Truck turn templates for delivery vehicles at each driveway
- Queueing at Riverside Avenue project driveways and at Riverside Avenue at the I-10 Ramps
- Signal Warrants at unsignalized study intersections
- Fair Share Analysis – Direct and Cumulative Impacts
- Identify need for acceleration and deceleration lanes on Riverside Avenue

ATTACHMENT 1



CITY OF RIALTO

REQUIRED PARKING SHALL BE PROVIDED PURSUANT TO SECTION 18.58.050B OF THE CITY OF RIALTO MUNICIPAL CODES WHICH READS:

"COMMUNITY SHOPPING CENTER (TWO TO TWENTY NET ACRES IN SIZE) ONE SPACE PER EACH TWO HUNDRED FIFTY SQUARE FEET OF GROSS FLOOR AREA ON THE GROUND FLOOR, PLUS ONE SPACE FOR EACH FOUR HUNDRED SQUARE FEET ON ALL FLOORS OTHER THAN THE GROUND FLOOR."

SITE AREA:	10.8 ACRES	± 472,210 S.F.
F.A.R. (±.472,210 S.F. \ ± 93,741 S.F.)		5.0 RATIO
BUILDING COVERAGE		19 %
BUILDING AREA:		± 93,741 S.F.

REQUIRED PARKING PER CITY

BUILDING 1:	23,268 SF RETAIL @ 1/250	= 93.07 STALLS
BUILDING 2:	10,012 SF RETAIL @ 1/250	= 40.04 STALLS
BUILDING 3:	6,130 SF SHOPS @ 1/250	= 24.52 STALLS
BUILDING 4:	8,497 SF RETAIL @ 1/250	= 33.98 STALLS
BUILDING 5:	25,054 SF RETAIL @ 1/250	= 100.21 STALLS
BUILDING 6:	8,000 SF	
	4,000 SF RETAIL @ 1/250	= 16.00 STALLS
	4,000 SF RESTAURANT @ 1/250	= 16.00 STALLS
BUILDING 7:	3,860 SF REST. @ 1/250 SF	= 15.44 STALLS
BUILDING 8:	3,596 SF	
	EMPLOYEE PARKING	= 6 STALLS
	5 SPACES PER CAR LENGTH	= 0 STALL
BUILDING 9:	1,800 SF RESTAURANT @ 1/250	= 7.20 STALLS
BUILDING 10:	3,524 SF RETAIL @ 1/ 250	= 14.09 STALLS
TOTAL PARKING REQUIRED		= 366.55 STALLS
TOTAL PARKING PROVIDED (SURPLUS 64.45 STALLS)		= 431 STALLS

NOTE:
TOTAL PARKING PROVIDED DO NOT INCLUDE FUTURE EV CHARGING STATION & CLEAN AIR STALLS.

GRAPHIC SCALE
80 0 40 80 160 240
1 Inch = 80 feet

OVERALL PLAN

SCALE: 1" = 80'-0"

PRELIMINARY SITE PLAN SUBJECT TO CHANGE

RIALTO - PHASE II

SWC SAN BERNARDINO AVENUE AND RIVERSIDE AVENUE
RIALTO, CALIFORNIA

Newmark Merrill Companies
5850 CANOGA AVENUE, SUITE 650, WOODLAND HILLS, CA 91367
(TEL.) 818.710.6100 (FAX) 818.710.6116

NewMark Merrill Companies
5850 Canoga Avenue, Suite 650
Woodland Hills, CA 91367
Phone (818) 710.6100 Fax (818) 710-6116
www.newmarkmerrill.com

McKently Malak ARCHITECTS
35 Hugus Alley, Suite 200
Pasadena, California 91103-3648
TEL 626.583.8348 FAX 626.583.8387

SITE PLAN
09.13.2021 16177MMA

OV-26

ATTACHMENT 2
SUMMARY OF PROJECT TRIP GENERATION

Land Use	ITE Code	Unit	Trip Generation Rates [1]						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Shopping Plaza (40K - 150K)	821	KSF	94.490	2.189	1.341	3.53	4.334	4.696	9.03
General Light Industrial	110	KSF	4.870	0.651	0.089	0.74	0.091	0.559	0.65

Land Use	Quantity	Unit	Trip Generation Estimates						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Shopping Plaza (40K - 150K)	93.023	KSF	8,790	204	125	329	403	437	840
Internal Capture 10% [2]			-879	-20	-13	-33	-40	-44	-84
Pass-by 25% [2]			-1,978	-46	-28	-74	-91	-98	-189
General Light Industrial	83.272	KSF	406	54	7	61	8	47	55
Passenger Vehicles 92.00%			374	50	6	56	7	43	50
Trucks 8.00%			32	4	1	5	1	4	5

GENERAL LIGHT INDUSTRIAL PROJECT TRIPS - PASSENGER CAR EQUIVALENTS (PCE)

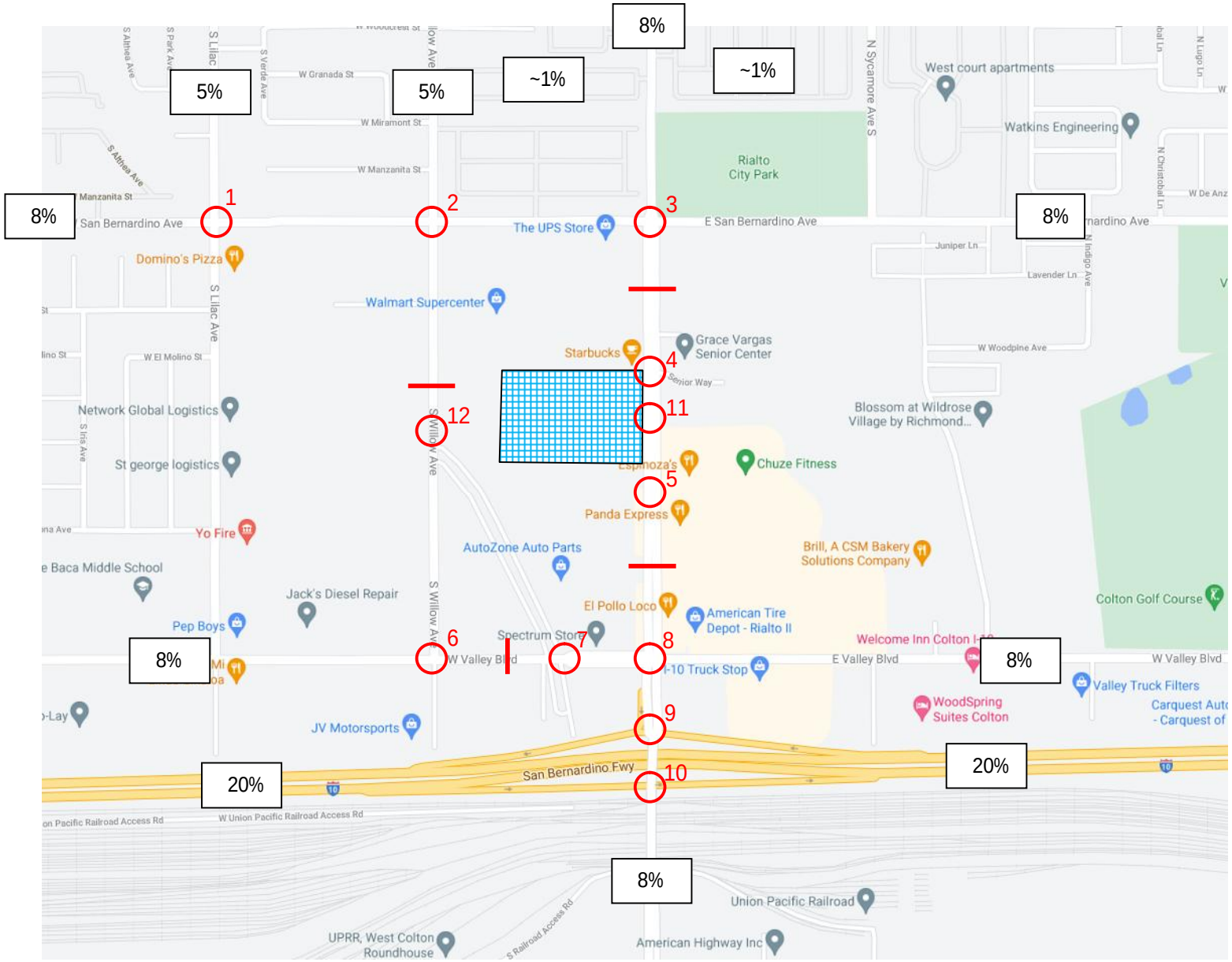
Vehicle Type	Vehicle Mix [2]	Daily Vehicles	PCE Factor [2]		AM Peak Hour			PM Peak Hour		
				Daily	In	Out	Total	In	Out	Total
Passenger Vehicles	92.00%	374	1.0	374	50	6	56	7	43	50
2-Axle Trucks	0.16%	1	1.5	2	0	0	0	0	0	0
3-Axle Trucks	2.24%	9	2.0	18	2	0	2	0	2	2
4+ Axle Trucks	5.60%	23	3.0	69	9	1	10	1	8	9
Total Truck PCE Trips				89	11	1	12	1	10	11
Total Proposed Project PCE Trips				**463**	**61**	**7**	**68**	**8**	**53**	**61**
Total Project Trips				**6,396**	**199**	**91**	**290**	**280**	**348**	**628**

[1] Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition

[2] Source: City of Rialto Traffic Impact Analysis Report Guidelines and Requirements

ATTACHMENT 3

RIALTO PHASE II – TRIP DISTRIBUTION AND SUGGESTED STUDY AREA

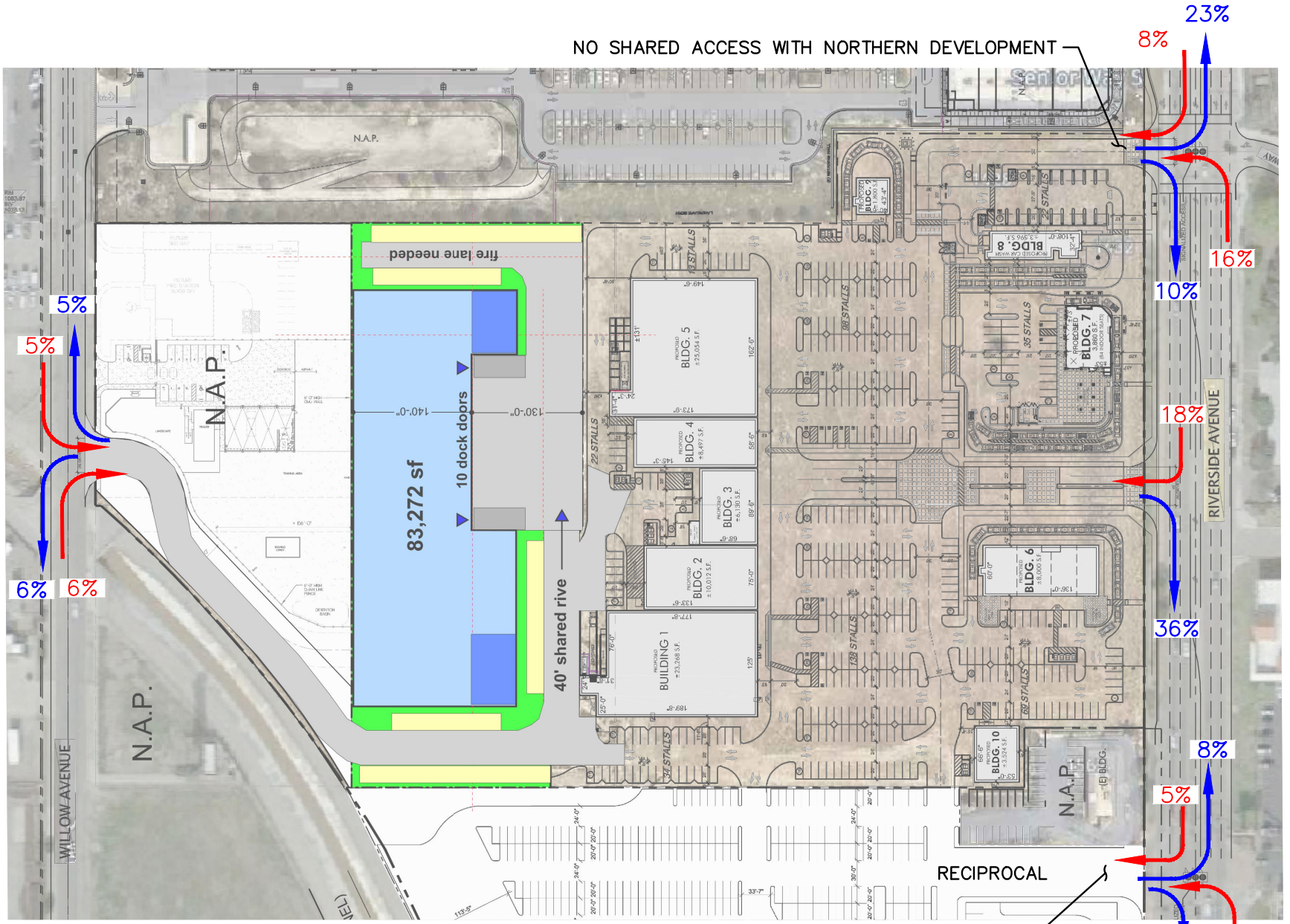


X STUDY INTERSECTION

STUDY ROADWAY SEGMENT

XX% PROJECT TRIP DISTRIBUTION

PROJECT SITE



NOT TO SCALE

FIGURE
DRIVEWAY TRIP DISTRIBUTION

Kimley»Horn

Exhibit A

SCOPING AGREEMENT FOR TRAFFIC IMPACT ANALYSIS

This following form shall be used to acknowledge preliminary approval of the scope for the traffic impact analysis (TIA) of the following project. The TIA must follow the City of Rialto Traffic Impact Analysis – Report Guidelines and Requirements, adopted by the City Council on _____.

City of Rialto

Traffic Impact Analysis

Scoping Agreement

Case No. _____

Related Cases -

SP No. _____

EIR No. _____

GPA No. _____

ZC No. _____

Project Name: Rialto Phase II - See Attachment 1 - Site Plan

Project Address: Southwest Corner of San Bernardino Avenue and Riverside Avenue

Project Description: Shopping Center with 79,767 SF of retail use, 9,660 sf of fast-food restaurant with drive-through, and a 3,596 SF automated car wash, and 83,272 SF of general light industrial use.

	Consultant	Developer
Name:	Kimley-Horn and Associates, Inc.	Newmark Merrill Companies
Address:	110 W Town and Country Rd, Ste 700 Orange, CA 92868	5850 Canogo Avenue, Ste 650 Woodland Hills, CA 91367
Telephone:	(714)475-2672	(818)710-6100
Fax:	N/A	N/A

1. Trip Generation Source: ITE Trip Generation Manual, 11th Edition (2021)

Existing GP Land Use Vacant Proposed Land Use Shopping Plaza (ITE 821), General Light Industrial (ITE 110)

Current Zoning: Gateway Specific Plan Proposed Zoning: N/A

Total Daily Project Trips: 6,396 - ***See Attachment 2 - Trip Generation Table***

	Current Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	N/A	N/A	N/A	199	91	290
PM Trips	N/A	N/A	N/A	280	348	628

Internal Trip Allowance (Yes) No (10 % Trip Discount)

Pass-By Trip Allowance (Yes) No (25 % Trip Discount)

For appropriate land uses, a pass-by trip discount may be allowed not to exceed 25%. Discount trips shall be indicated on a report figure for intersections and access locations.

2. Trip Geographic Distribution: N 20 % S 8 % E 36 % W 36%

(Detailed exhibits of trip distribution must be attached with Trucks as a separate exhibit)

3. Background Growth Traffic

Project Completion Year: 2022 Annual Background Growth Rate: 2 %

Other Phase Years N/A

Other area projects to be considered: We will request the current Cumulative Projects list from the Planning Department.

(Contact Planning for Lists. Correlate projects to exhibit map and also indicate which projects have been included in study area forecasts for existing + background growth + project + cumulative)

Model/Forecast methodology: Existing plus Growth plus Cum Project plus Project to Opening Year

4. Study Intersections: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies received.)

1. San Bernardino Ave and Lilac Ave
2. San Bernardino Ave and Willow Ave
3. San Bernardino Ave and Riverside Ave
4. Riverside Ave and Senior Wy
5. Riverside Ave and Gateway Plz/Value Ctr
6. Valley Blvd and Willow Ave
7. Valley Blvd and Gateway Plz
8. Valley Blvd and Riverside Ave
9. Riverside Ave and I-10 WB Ramps
10. Riverside Ave and I-10 EB Ramps
11. Riverside Ave and Center Project Dwy
12. Willow Ave and Project Dwy

5. Study Roadway Segments: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies received.)

1. Riverside Ave - Senior Wy to Rialto Marketplace
2. Riverside Ave - Gateway Plz/Value Ctr to Valley Blvd
3. Willow Ave - Valley Blvd to San Bernardino Ave
4. Valley Blvd - Willow Ave to Riverside Ave
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

6. Other Jurisdictional Impacts

Is this project within any other Agency's Sphere of Influence or within one-mile of another jurisdictional boundary?

(YES)
NO

If so, name of Jurisdiction: City of Colton

7. Site Plan (please attach 11" x 17" legible copy) ***See Attachment 1 - Site Plan***

8. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (to be filled out by the City of Rialto Public Works Department) (NOTE: If the traffic study states that "a traffic signal is warranted" (or "a traffic signal appears to be warranted," or similar statement) at an existing un-signalized intersection under existing conditions, 8-hour approach traffic volume information must be submitted in addition to the peak hourly turning movement counts for that intersection.)

Identify need for acceleration and decelaration lanes on Riverside Ave, Circulation Discussion, Truck turn templates for delivery vehicles at each driveway, Signal Warrants at unsignalized study intersections, Queuing at Riverside Ave project driveways and at Riverside Ave at the I-10 Ramps, Fair Share Analysis.

9. Existing Conditions

Traffic count data must be new or within one year. Provide traffic count dates if using other than new counts.

Date of counts: Due to reduced traffic amid COVID-19, a growth rate will be applied, if necessary, to newly collected counts based on direction from the City.

NOTE Fees are due and must be submitted with, or prior to submittal of this form. The City will not process the Scoping Agreement prior to the receipt of the processing fee.

Fees Paid: _____ Date _____

Recommended:

Scoping Agreement Submittal date 6/7/2021

Scoping Agreement Resubmittal date 12/6/2021

Kimley-Horn and Associates, Inc. December 6, 2021

Applicant/Engineer Date

Land Use Concurrence:

Development Services Department Date

Approved by:

Public Works Department Date

NOTE:

The Applicant/Engineer acknowledges that the Scoping Agreement is intended to assist in the preparation of any required TIA. It is preliminary in nature and the City does not have sufficient data to determine the ultimate conditions that may be imposed for the project. It does not provide nor limit the requirements imposed on the Project but is intended only to provide initial input into the parameters for review of the traffic generated by the Project and the initial areas to be considered and studied. Subsequent changes to scope of required analysis to be included in the TIA may be required by the Transportation Commission, Planning Commission, and/or the City Council upon Public Works Director/City Engineer review and approval.

APPENDIX B

TRAFFIC COUNT
DATA SHEETS

INTERSECTION TURNING MOVEMENT COUNTS

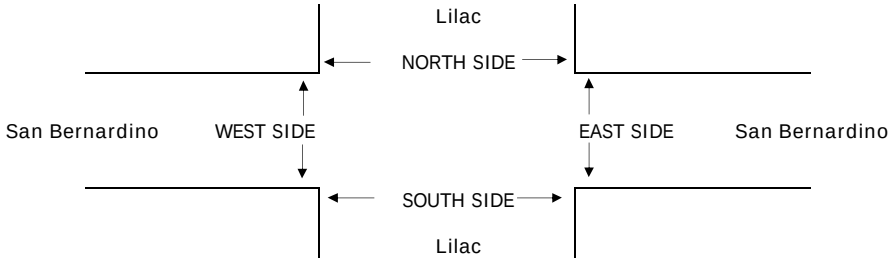
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Rialto	PROJECT #:	SC3039
Thu, Sep 2, 21	NORTH & SOUTH:	Lilac	LOCATION #:	1
	EAST & WEST:	San Bernardino	CONTROL:	STOP ALL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

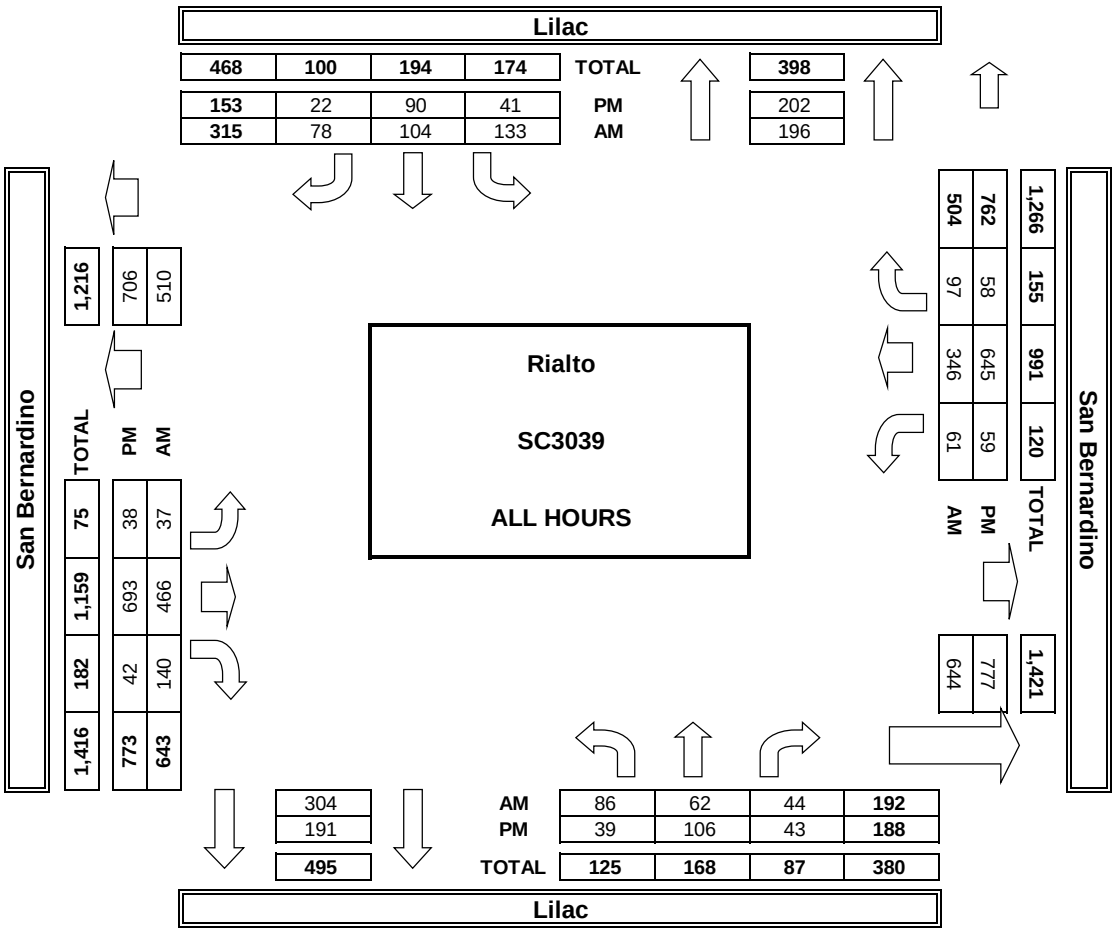
		NORTHBOUND Lilac			SOUTHBOUND Lilac			EASTBOUND San Bernardino			WESTBOUND San Bernardino			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 2	ER 0	WL 0	WT 2	WR 0	TOTAL
AM	7:00 AM	1	6	1	4	15	3	2	49	5	2	32	10	130
	7:15 AM	10	10	3	16	16	11	6	46	15	8	38	18	197
	7:30 AM	20	9	9	24	10	9	12	60	41	12	60	25	291
	7:45 AM	27	9	11	46	8	33	8	72	64	19	50	26	373
	8:00 AM	25	9	9	19	20	9	2	59	7	6	47	4	216
	8:15 AM	1	6	2	5	14	4	1	58	3	3	46	6	149
	8:30 AM	1	5	3	11	14	6	4	69	1	4	29	5	152
	8:45 AM	1	8	6	8	7	3	2	53	4	7	44	3	146
	VOLUMES	86	62	44	133	104	78	37	466	140	61	346	97	1,654
	APPROACH %	45%	32%	23%	42%	33%	25%	6%	72%	22%	12%	69%	19%	
	APP/DEPART	192	/	196	315	/	304	643	/	644	504	/	510	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	82	37	32	105	54	62	28	237	127	45	195	73	1,077
	APPROACH %	54%	25%	21%	48%	24%	28%	7%	60%	32%	14%	62%	23%	
	PEAK HR FACTOR		0.803			0.635			0.681			0.807		0.722
	APP/DEPART	151	/	138	221	/	226	392	/	374	313	/	339	0
PM	4:00 PM	5	13	3	2	12	2	4	84	2	6	65	8	206
	4:15 PM	6	14	4	6	12	1	7	78	6	8	84	3	229
	4:30 PM	7	13	6	8	13	5	3	93	8	7	88	7	258
	4:45 PM	4	14	5	5	12	2	5	84	8	7	70	12	228
	5:00 PM	9	13	6	4	9	2	2	86	4	12	87	9	243
	5:15 PM	6	13	4	2	6	3	5	87	3	8	81	5	223
	5:30 PM	0	11	11	8	13	3	3	89	2	5	83	5	233
	5:45 PM	2	15	4	6	13	4	9	92	9	6	87	9	256
	VOLUMES	39	106	43	41	90	22	38	693	42	59	645	58	1,876
	APPROACH %	21%	56%	23%	27%	59%	14%	5%	90%	5%	8%	85%	8%	
	APP/DEPART	188	/	202	153	/	191	773	/	777	762	/	706	0
	BEGIN PEAK HR		4:15 PM											
	VOLUMES	26	54	21	23	46	10	17	341	26	34	329	31	958
	APPROACH %	26%	53%	21%	29%	58%	13%	4%	89%	7%	9%	84%	8%	
	PEAK HR FACTOR		0.902			0.760			0.923			0.912		0.928
	APP/DEPART	101	/	102	79	/	106	384	/	385	394	/	365	0

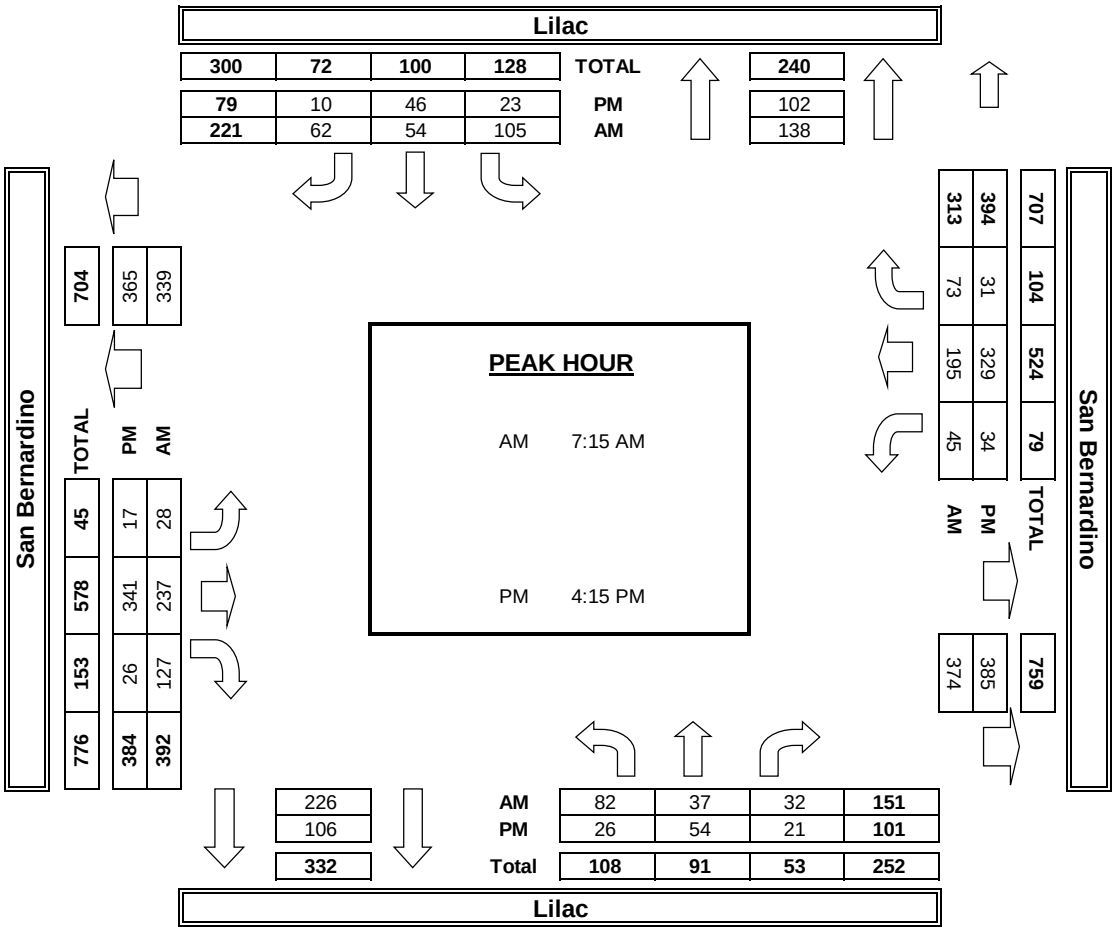


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR	7:15 AM					0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR	4:15 PM					0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

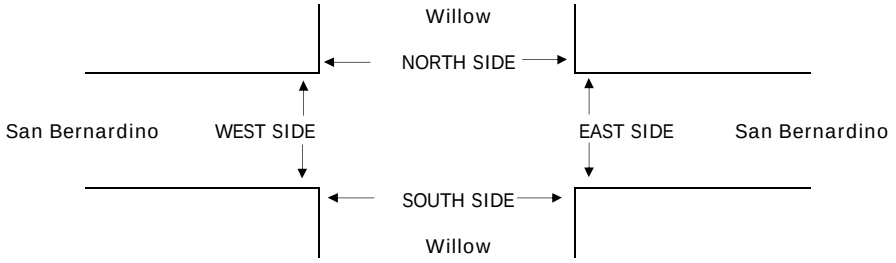
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Rialto	PROJECT #:	SC3039
Thu, Sep 2, 21	NORTH & SOUTH:	Willow	LOCATION #:	2
	EAST & WEST:	San Bernardino	CONTROL:	STOP ALL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

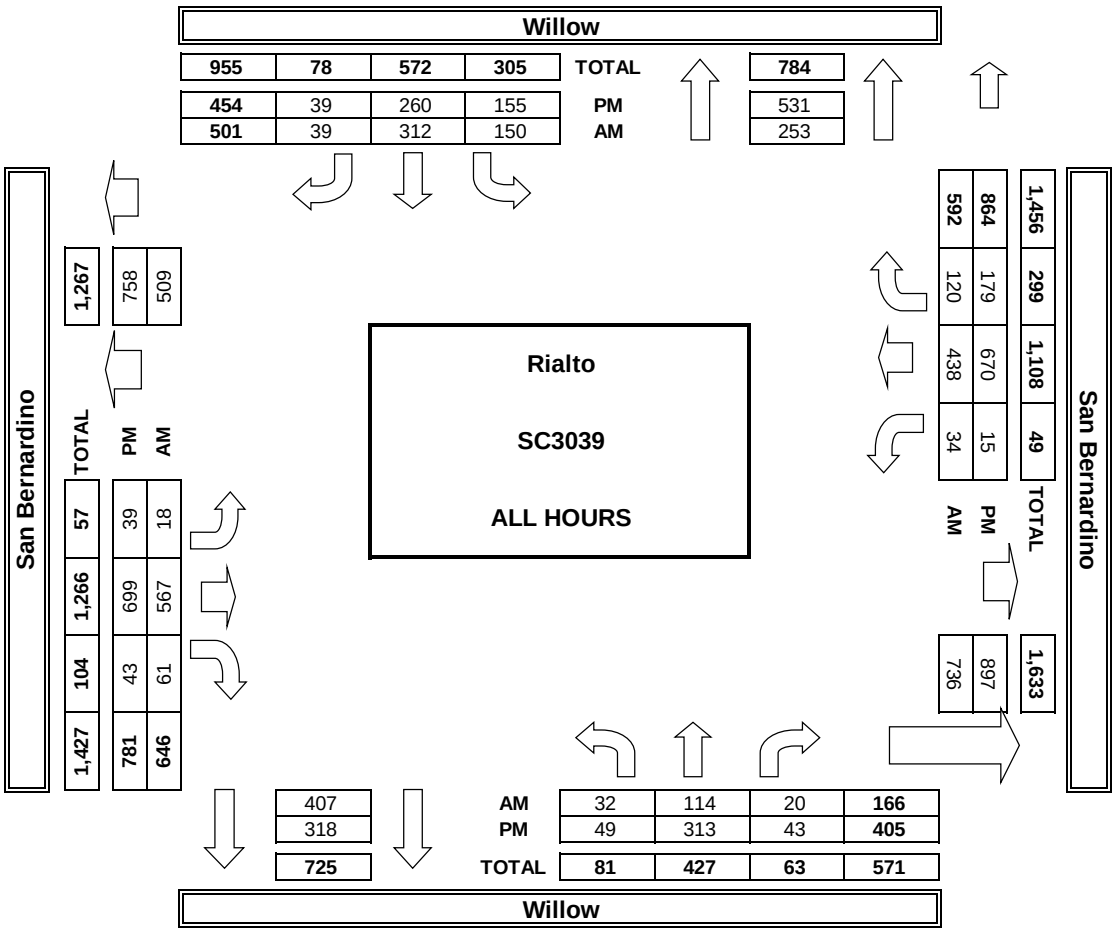
		NORTHBOUND Willow			SOUTHBOUND Willow			EASTBOUND San Bernardino			WESTBOUND San Bernardino			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
AM	7:00 AM	4	16	1	18	34	2	0	53	3	3	39	11	184
	7:15 AM	6	21	3	13	48	4	1	56	6	1	55	18	232
	7:30 AM	6	9	2	29	52	3	2	79	2	5	88	20	297
	7:45 AM	4	7	5	22	37	10	7	113	17	11	79	20	332
	8:00 AM	3	15	1	19	41	6	4	78	7	2	50	12	238
	8:15 AM	2	13	3	15	32	5	0	58	7	5	48	13	201
	8:30 AM	5	16	2	11	36	6	3	71	9	3	28	11	201
	8:45 AM	2	17	3	23	32	3	1	59	10	4	51	15	220
	VOLUMES	32	114	20	150	312	39	18	567	61	34	438	120	1,905
	APPROACH %	19%	69%	12%	30%	62%	8%	3%	88%	9%	6%	74%	20%	
	APP/DEPART	166	/	253	501	/	407	646	/	736	592	/	509	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	19	52	11	83	178	23	14	326	32	19	272	70	1,099
	APPROACH %	23%	63%	13%	29%	63%	8%	4%	88%	9%	5%	75%	19%	
	PEAK HR FACTOR		0.683			0.845			0.679			0.799		0.828
	APP/DEPART	82	/	137	284	/	229	372	/	419	361	/	314	0
PM	4:00 PM	6	52	4	18	24	1	10	73	3	0	70	20	281
	4:15 PM	7	30	4	10	34	6	4	83	4	2	87	29	300
	4:30 PM	5	40	7	23	49	9	6	96	9	2	83	21	350
	4:45 PM	4	42	5	21	37	4	6	84	4	2	84	21	314
	5:00 PM	9	37	10	16	21	7	2	84	4	1	90	18	299
	5:15 PM	4	31	7	25	39	1	3	86	7	3	86	24	316
	5:30 PM	2	41	3	21	26	4	5	91	7	2	87	26	315
	5:45 PM	12	40	3	21	30	7	3	102	5	3	83	20	329
	VOLUMES	49	313	43	155	260	39	39	699	43	15	670	179	2,504
	APPROACH %	12%	77%	11%	34%	57%	9%	5%	90%	6%	2%	78%	21%	
	APP/DEPART	405	/	531	454	/	318	781	/	897	864	/	758	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	22	150	29	85	146	21	17	350	24	8	343	84	1,279
	APPROACH %	11%	75%	14%	34%	58%	8%	4%	90%	6%	2%	79%	19%	
	PEAK HR FACTOR		0.897			0.778			0.881			0.962		0.914
	APP/DEPART	201	/	251	252	/	178	391	/	464	435	/	386	0

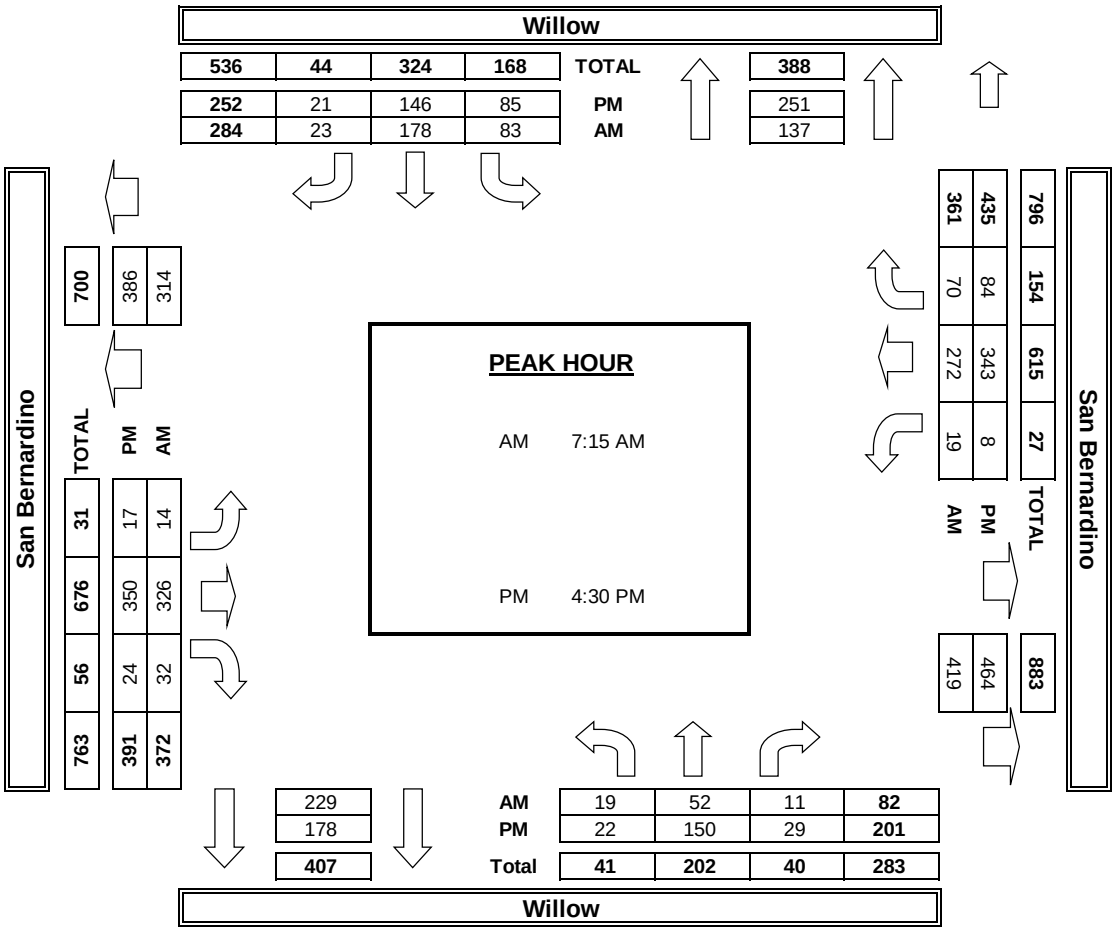


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR	7:15 AM					0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR	4:30 PM					0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

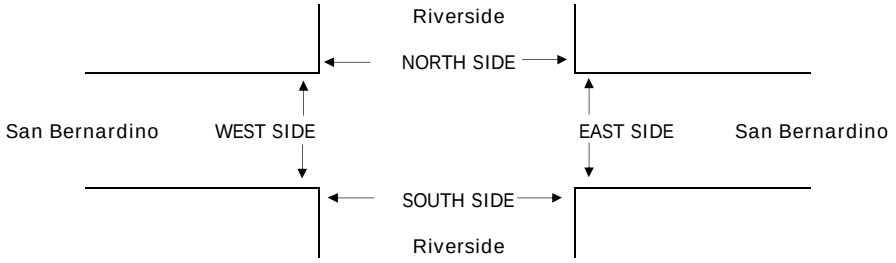
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Rialto	PROJECT #:	SC3039
Thu, Sep 2, 21	NORTH & SOUTH:	Riverside	LOCATION #:	3
	EAST & WEST:	San Bernardino	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

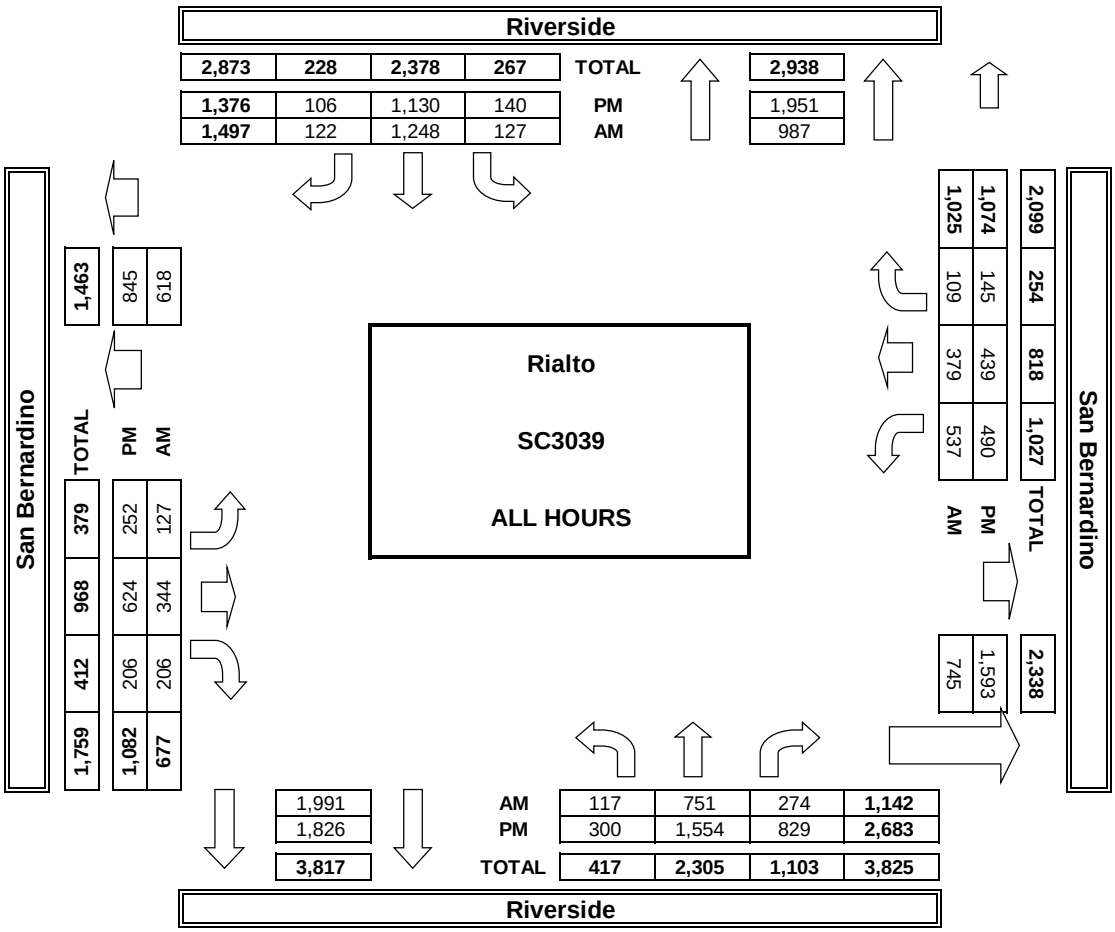
		NORTHBOUND Riverside			SOUTHBOUND Riverside			EASTBOUND San Bernardino			WESTBOUND San Bernardino			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
AM	7:00 AM	19	99	33	7	147	7	8	28	30	61	31	11	481
	7:15 AM	21	92	31	13	173	11	6	24	18	59	34	6	488
	7:30 AM	23	99	25	17	174	31	15	41	33	84	54	10	606
	7:45 AM	14	76	29	34	177	32	25	47	29	74	75	26	638
	8:00 AM	13	114	41	18	152	10	23	57	25	79	48	23	603
	8:15 AM	5	94	40	19	176	11	14	58	20	64	54	14	569
	8:30 AM	10	89	42	10	138	11	13	41	15	60	34	15	478
	8:45 AM	12	88	33	9	111	9	23	48	36	56	49	4	478
	VOLUMES	117	751	274	127	1,248	122	127	344	206	537	379	109	4,341
	APPROACH %	10%	66%	24%	8%	83%	8%	19%	51%	30%	52%	37%	11%	
	APP/DEPART	1,142	/	987	1,497	/	1,991	677	/	745	1,025	/	618	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	55	383	135	88	679	84	77	203	107	301	231	73	2,416
	APPROACH %	10%	67%	24%	10%	80%	10%	20%	52%	28%	50%	38%	12%	
	PEAK HR FACTOR		0.853			0.876			0.921			0.864		0.947
	APP/DEPART	573	/	533	851	/	1,087	387	/	426	605	/	370	0
PM	4:00 PM	26	201	104	12	138	14	25	72	23	66	57	19	757
	4:15 PM	38	195	80	25	165	15	36	71	26	43	36	19	749
	4:30 PM	38	181	104	13	131	12	28	72	34	62	65	19	759
	4:45 PM	33	204	101	19	157	16	32	67	23	57	58	17	784
	5:00 PM	38	175	109	13	122	10	36	93	25	69	70	20	780
	5:15 PM	47	216	97	17	170	9	34	78	25	63	46	12	814
	5:30 PM	31	169	114	13	119	13	35	99	29	64	59	18	763
	5:45 PM	49	213	120	28	128	17	26	72	21	66	48	21	809
	VOLUMES	300	1,554	829	140	1,130	106	252	624	206	490	439	145	6,215
	APPROACH %	11%	58%	31%	10%	82%	8%	23%	58%	19%	46%	41%	14%	
	APP/DEPART	2,683	/	1,951	1,376	/	1,826	1,082	/	1,593	1,074	/	845	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	165	773	440	71	539	49	131	342	100	262	223	71	3,166
	APPROACH %	12%	56%	32%	11%	82%	7%	23%	60%	17%	47%	40%	13%	
	PEAK HR FACTOR		0.902			0.841			0.879			0.874		0.972
	APP/DEPART	1,378	/	975	659	/	901	573	/	853	556	/	437	0

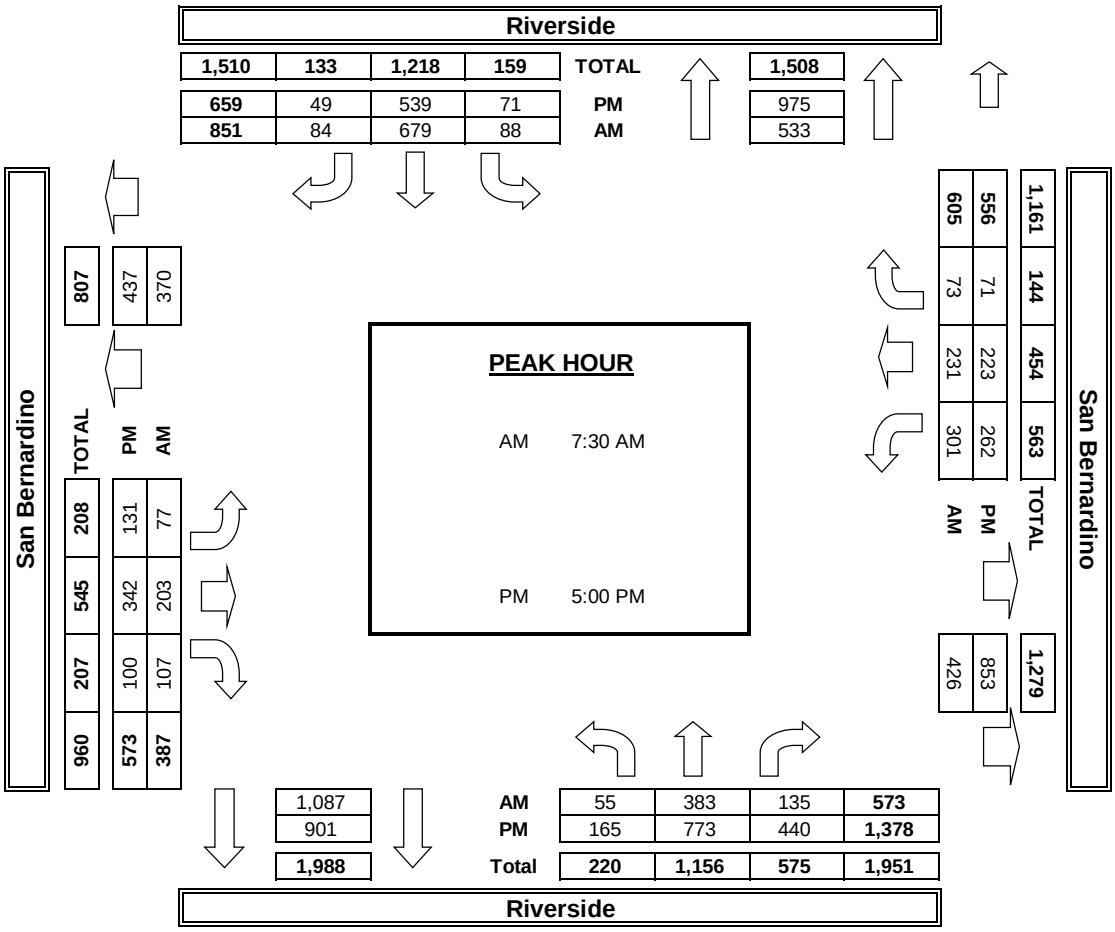


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR	7:30 AM					0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR	5:00 PM					0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

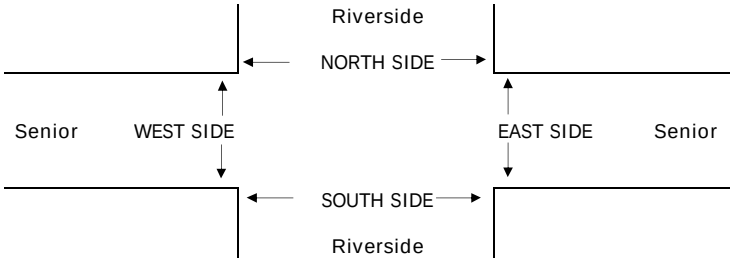
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Rialto	PROJECT #:	SC3039
Thu, Sep 2, 21	NORTH & SOUTH:	Riverside	LOCATION #:	4
	EAST & WEST:	Senior	CONTROL:	SIGNAL

NOTES:

AM PM MD OTHER OTHER — ▲ N ◄ W E ► S ▼

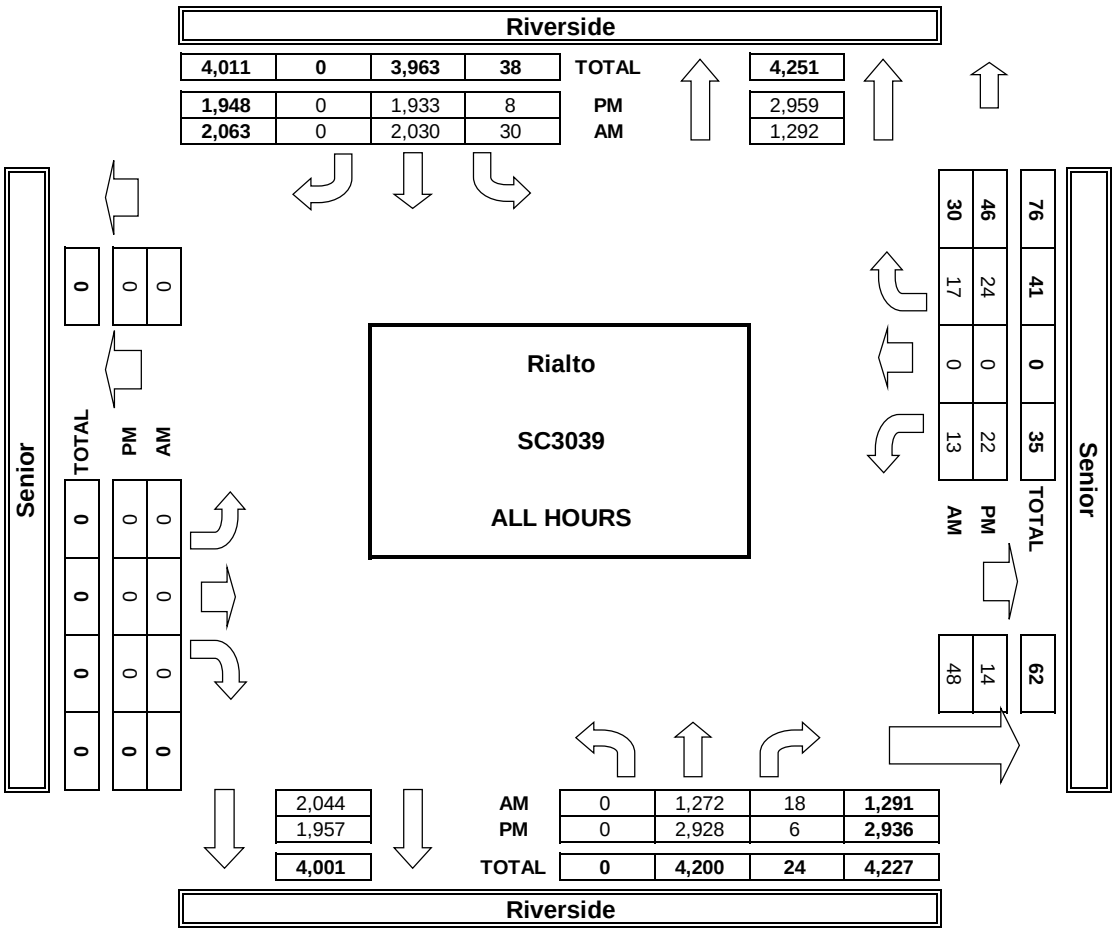
		NORTHBOUND Riverside			SOUTHBOUND Riverside			EASTBOUND Senior			WESTBOUND Senior			
	LANES:	NL X	NT 3	NR 0	SL 1	ST 3	SR X	EL X	ET X	ER X	WL 0	WT X	WR 0	TOTAL
AM	7:00 AM	0	156	4	11	250	0	0	0	0	7	0	8	436
	7:15 AM	0	171	2	2	245	0	0	0	0	0	0	2	422
	7:30 AM	0	156	3	5	310	0	0	0	0	1	0	3	478
	7:45 AM	0	124	2	5	263	0	0	0	0	1	0	0	395
	8:00 AM	0	178	1	1	270	0	0	0	0	1	0	1	452
	8:15 AM	0	162	2	4	257	0	0	0	0	0	0	0	425
	8:30 AM	0	148	1	1	234	0	0	0	0	3	0	2	389
	8:45 AM	0	177	3	1	201	0	0	0	0	0	0	1	383
	VOLUMES	0	1,272	18	30	2,030	0	0	0	0	13	0	17	3,384
	APPROACH %	0%	99%	1%	1%	98%	0%	0%	0%	0%	43%	0%	57%	
	APP/DEPART	1,291	/	1,292	2,063	/	2,044	0	/	48	30	/	0	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	0	620	8	15	1,100	0	0	0	0	3	0	4	1,754
	APPROACH %	0%	99%	1%	1%	98%	0%	0%	0%	0%	43%	0%	57%	
	PEAK HR FACTOR		0.874			0.887			0.000			0.438		0.917
	APP/DEPART	629	/	627	1,118	/	1,104	0	/	23	7	/	0	0
PM	4:00 PM	0	375	0	0	227	0	0	0	0	3	0	5	610
	4:15 PM	0	313	0	1	252	0	0	0	0	3	0	3	572
	4:30 PM	0	383	4	2	236	0	0	0	0	5	0	3	633
	4:45 PM	0	343	2	1	244	0	0	0	0	1	0	3	594
	5:00 PM	0	373	0	1	248	0	0	0	0	2	0	4	628
	5:15 PM	0	367	0	1	259	0	0	0	0	1	0	3	631
	5:30 PM	0	399	0	1	256	0	0	0	0	7	0	2	665
	5:45 PM	0	375	0	1	211	0	0	0	0	0	0	1	588
	VOLUMES	0	2,928	6	8	1,933	0	0	0	0	22	0	24	4,930
	APPROACH %	0%	100%	0%	0%	99%	0%	0%	0%	0%	48%	0%	52%	
	APP/DEPART	2,936	/	2,959	1,948	/	1,957	0	/	14	46	/	0	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	0	1,482	2	4	1,007	0	0	0	0	11	0	12	2,523
	APPROACH %	0%	100%	0%	0%	99%	0%	0%	0%	0%	48%	0%	52%	
	PEAK HR FACTOR		0.928			0.972			0.000			0.639		0.946
	APP/DEPART	1,485	/	1,498	1,015	/	1,019	0	/	6	23	/	0	0

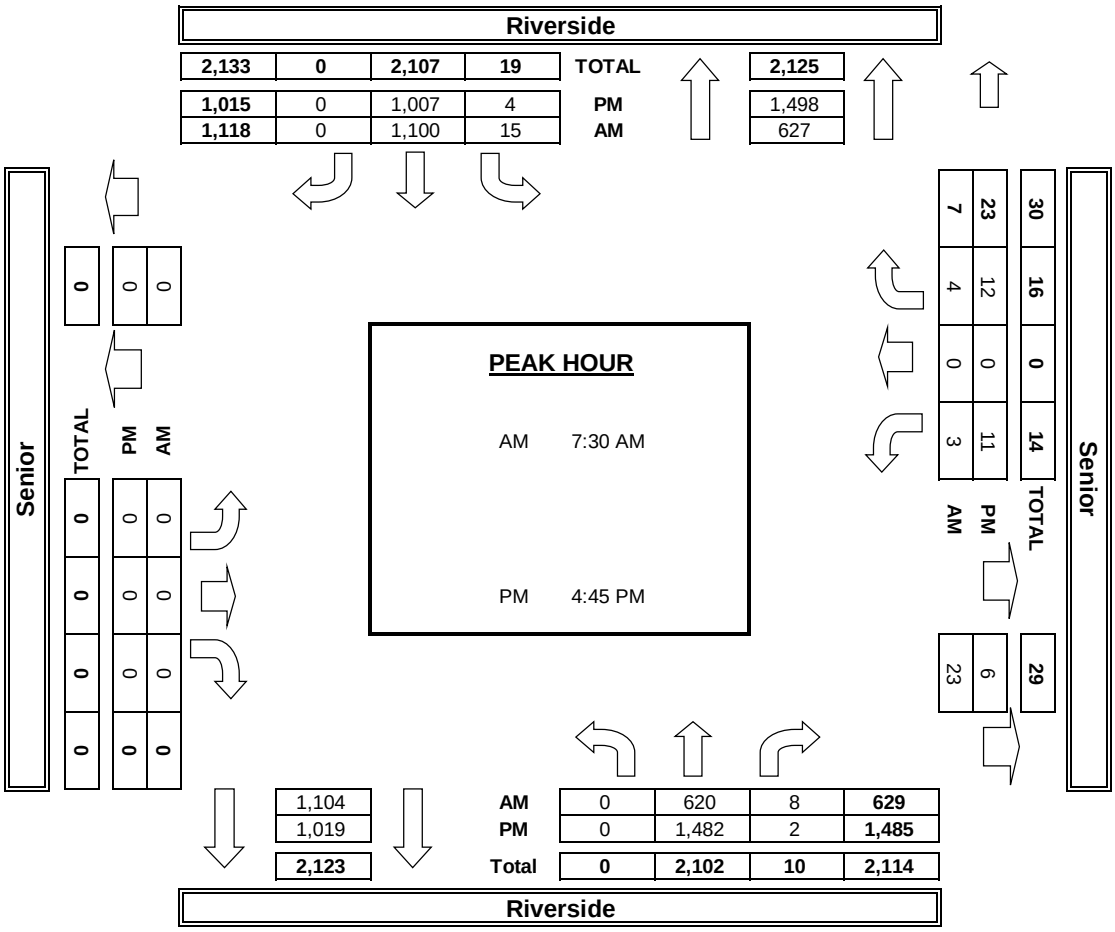


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR	7:30 AM					0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR	4:45 PM					0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

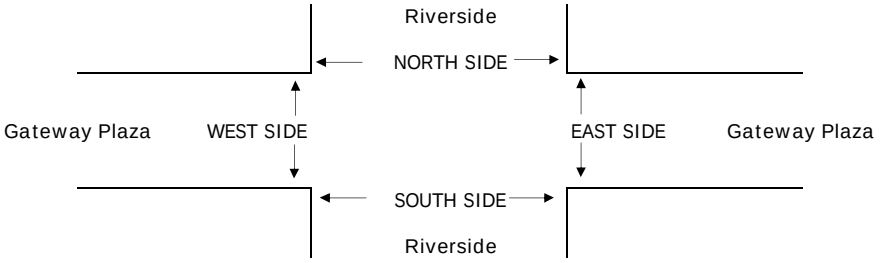
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Rialto	PROJECT #:	SC3039
Thu, Sep 2, 21	NORTH & SOUTH:	Riverside	LOCATION #:	5
	EAST & WEST:	Gateway Plaza	CONTROL:	SIGNAL

NOTES:

AM PM MD OTHER OTHER — ▲ N, ◄ W, E ►, S ▼

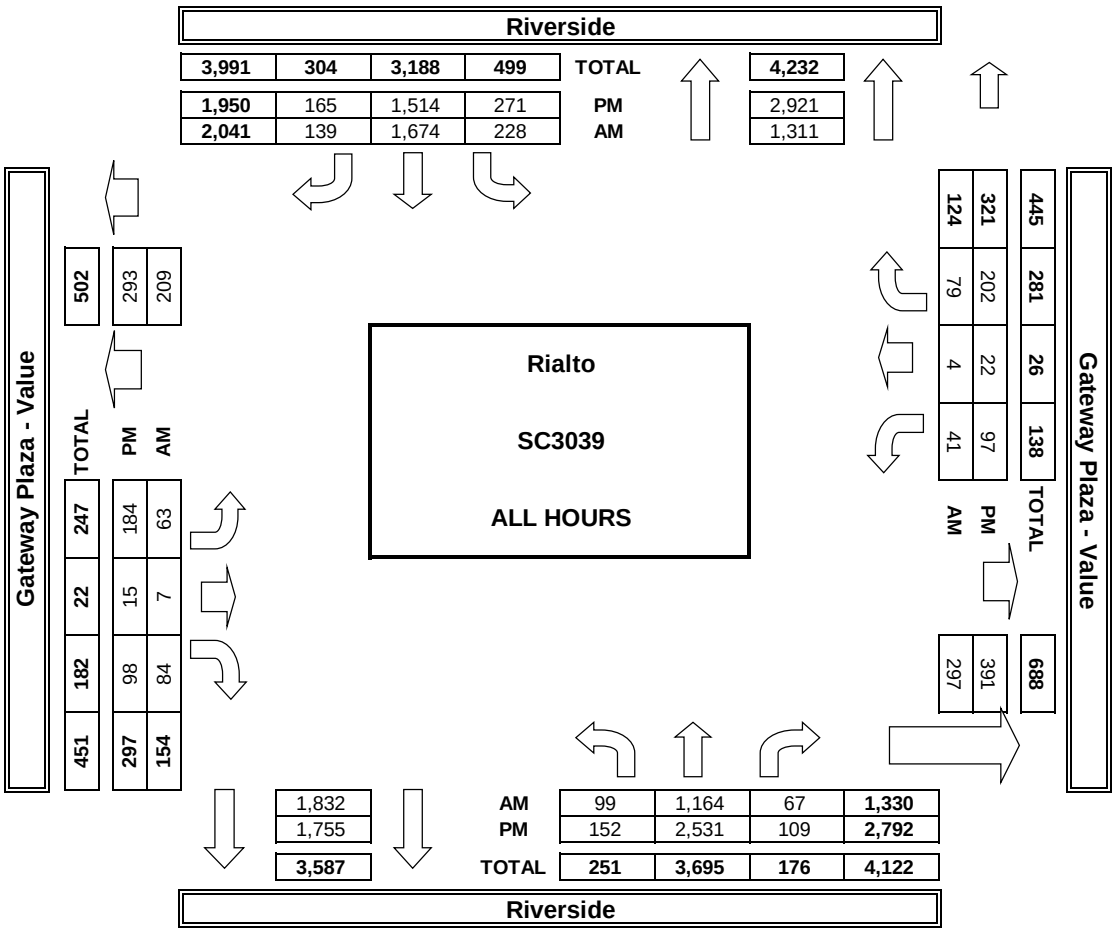
		NORTHBOUND Riverside			SOUTHBOUND Riverside			EASTBOUND Gateway Plaza - Value			WESTBOUND Gateway Plaza - Value			
	LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 0.5	ER 0.5	WL 1	WT 0.5	WR 0.5	TOTAL
AM	7:00 AM	11	161	5	11	229	10	3	0	9	3	1	10	453
	7:15 AM	10	145	8	11	225	14	10	1	15	5	1	4	449
	7:30 AM	9	147	4	24	281	8	2	0	9	6	0	11	501
	7:45 AM	13	127	9	37	193	20	4	1	10	9	1	7	431
	8:00 AM	10	172	8	38	223	31	8	1	11	5	0	9	516
	8:15 AM	13	136	9	33	197	10	12	1	8	8	1	9	437
	8:30 AM	14	127	9	40	175	24	10	3	13	2	0	11	428
	8:45 AM	19	149	15	34	151	22	14	0	9	3	0	18	434
	VOLUMES	99	1,164	67	228	1,674	139	63	7	84	41	4	79	3,649
	APPROACH %	7%	88%	5%	11%	82%	7%	41%	5%	55%	33%	3%	64%	
	APP/DEPART	1,330	/	1,311	2,041	/	1,832	154	/	297	124	/	209	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	42	591	29	110	922	73	24	3	45	25	2	31	1,897
	APPROACH %	6%	89%	4%	10%	83%	7%	33%	4%	63%	43%	3%	53%	
	PEAK HR FACTOR		0.871			0.883			0.692			0.853		0.919
	APP/DEPART	662	/	650	1,105	/	1,006	72	/	138	58	/	103	0
PM	4:00 PM	16	291	15	36	175	19	24	2	13	11	2	18	622
	4:15 PM	22	284	8	29	205	18	24	2	16	9	2	21	640
	4:30 PM	15	329	14	45	184	21	19	1	15	13	2	25	683
	4:45 PM	17	323	18	32	194	16	18	4	12	12	3	21	670
	5:00 PM	20	297	11	36	187	19	22	3	9	16	5	29	654
	5:15 PM	24	349	17	27	207	22	25	1	12	7	3	20	714
	5:30 PM	13	319	13	36	205	26	27	0	8	16	0	33	696
	5:45 PM	25	339	13	30	157	24	25	2	13	13	5	35	681
	VOLUMES	152	2,531	109	271	1,514	165	184	15	98	97	22	202	5,360
	APPROACH %	5%	91%	4%	14%	78%	8%	62%	5%	33%	30%	7%	63%	
	APP/DEPART	2,792	/	2,921	1,950	/	1,755	297	/	391	321	/	293	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	82	1,304	54	129	756	91	99	6	42	52	13	117	2,745
	APPROACH %	6%	91%	4%	13%	77%	9%	67%	4%	29%	29%	7%	64%	
	PEAK HR FACTOR		0.923			0.914			0.919			0.858		0.961
	APP/DEPART	1,440	/	1,521	976	/	872	147	/	188	182	/	164	0

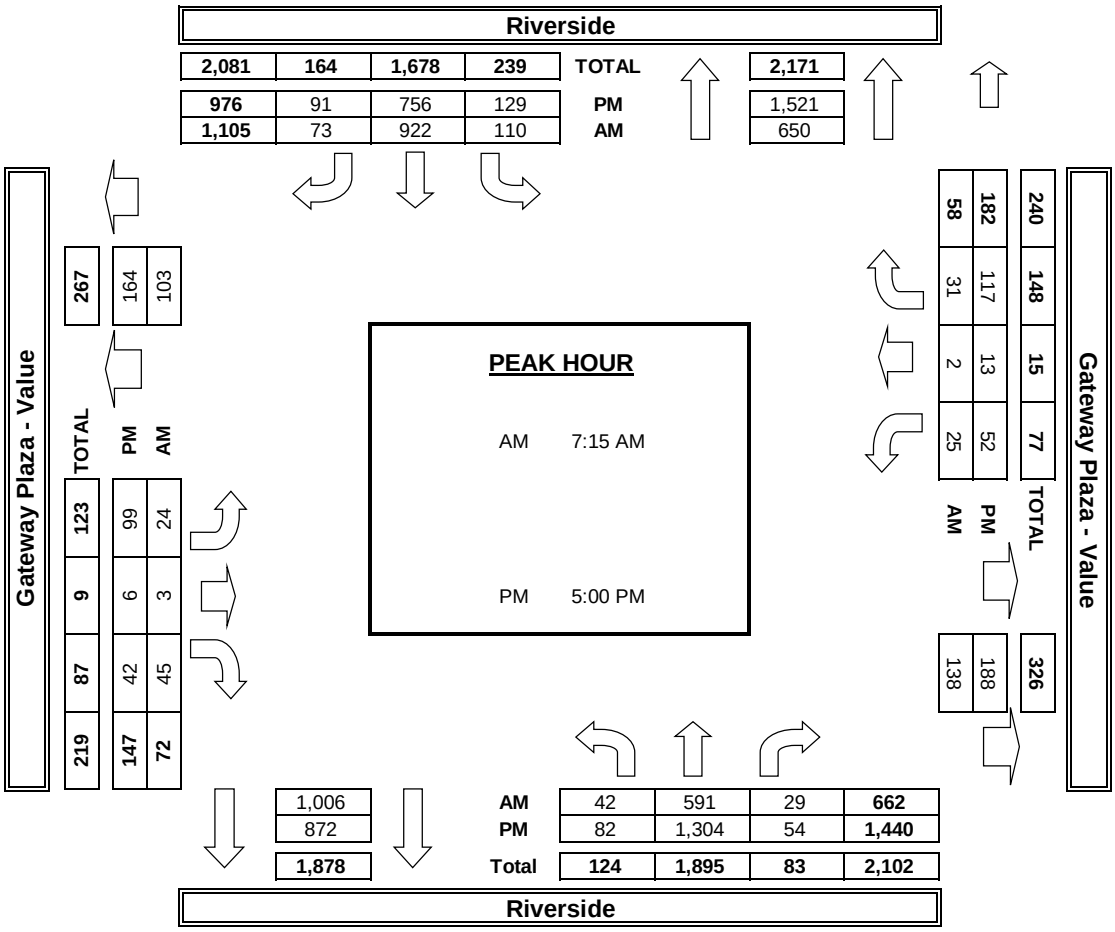


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR			7:15 AM			0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR			5:00 PM			0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

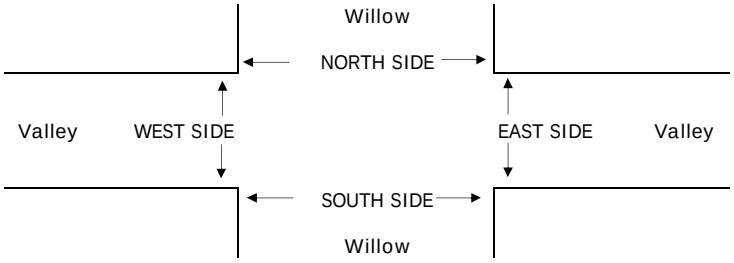
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Rialto	PROJECT #:	SC3039
Thu, Sep 2, 21	NORTH & SOUTH:	Willow	LOCATION #:	6
	EAST & WEST:	Valley	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ◄ W — ▲ N — S ▼ — E ►

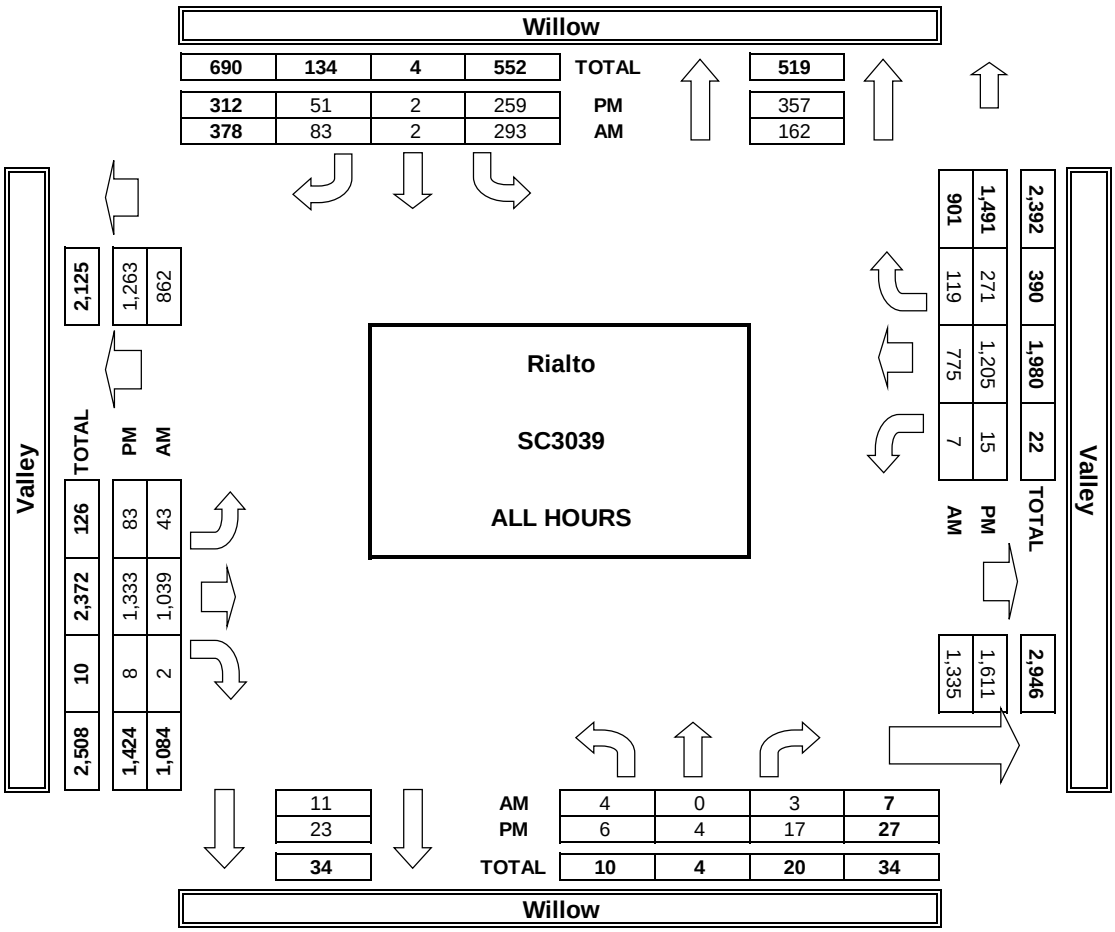
		NORTHBOUND (Willow)			SOUTHBOUND (Willow)			EASTBOUND (Valley)			WESTBOUND (Valley)			
	LANES:	NL 1	NT 0.5	NR 0.5	SL 0.3	ST 0.3	SR 0.3	EL 1	ET 1.5	ER 0.5	WL 1	WT 1.5	WR 0.5	TOTAL
AM	7:00 AM	1	0	1	30	0	8	7	127	0	0	69	18	261
	7:15 AM	0	0	1	44	0	8	2	118	0	2	103	22	300
	7:30 AM	1	0	0	46	0	12	8	143	0	0	140	11	361
	7:45 AM	0	0	0	45	0	21	5	178	0	2	113	9	373
	8:00 AM	0	0	1	40	0	8	5	141	0	2	97	14	308
	8:15 AM	0	0	0	21	1	12	7	112	0	0	71	12	236
	8:30 AM	0	0	0	38	1	6	3	101	2	1	88	17	257
	8:45 AM	2	0	0	29	0	8	6	119	0	0	94	16	274
	VOLUMES	4	0	3	293	2	83	43	1,039	2	7	775	119	2,370
	APPROACH %	57%	0%	43%	78%	1%	22%	4%	96%	0%	1%	86%	13%	
	APP/DEPART	7	/	162	378	/	11	1,084	/	1,335	901	/	862	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	1	0	2	175	0	49	20	580	0	6	453	56	1,342
	APPROACH %	33%	0%	67%	78%	0%	22%	3%	97%	0%	1%	88%	11%	
	PEAK HR FACTOR		0.750			0.848			0.820			0.853		0.899
	APP/DEPART	3	/	76	224	/	6	600	/	757	515	/	503	0
PM	4:00 PM	0	2	1	30	1	2	12	156	2	3	123	41	373
	4:15 PM	3	1	0	25	0	10	5	163	0	3	160	33	403
	4:30 PM	0	0	1	50	1	11	10	200	0	1	128	35	437
	4:45 PM	1	1	5	37	0	7	13	175	4	1	158	35	437
	5:00 PM	1	0	1	33	0	2	16	186	1	2	166	36	444
	5:15 PM	1	0	5	34	0	6	11	168	0	2	159	24	410
	5:30 PM	0	0	3	28	0	4	7	141	1	2	146	31	363
	5:45 PM	0	0	1	22	0	9	9	144	0	1	165	36	387
	VOLUMES	6	4	17	259	2	51	83	1,333	8	15	1,205	271	3,254
	APPROACH %	22%	15%	63%	83%	1%	16%	6%	94%	1%	1%	81%	18%	
	APP/DEPART	27	/	357	312	/	23	1,424	/	1,611	1,491	/	1,263	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	3	1	12	154	1	26	50	729	5	6	611	130	1,728
	APPROACH %	19%	6%	75%	85%	1%	14%	6%	93%	1%	1%	82%	17%	
	PEAK HR FACTOR		0.571			0.730			0.933			0.915		0.973
	APP/DEPART	16	/	180	181	/	11	784	/	896	747	/	641	0

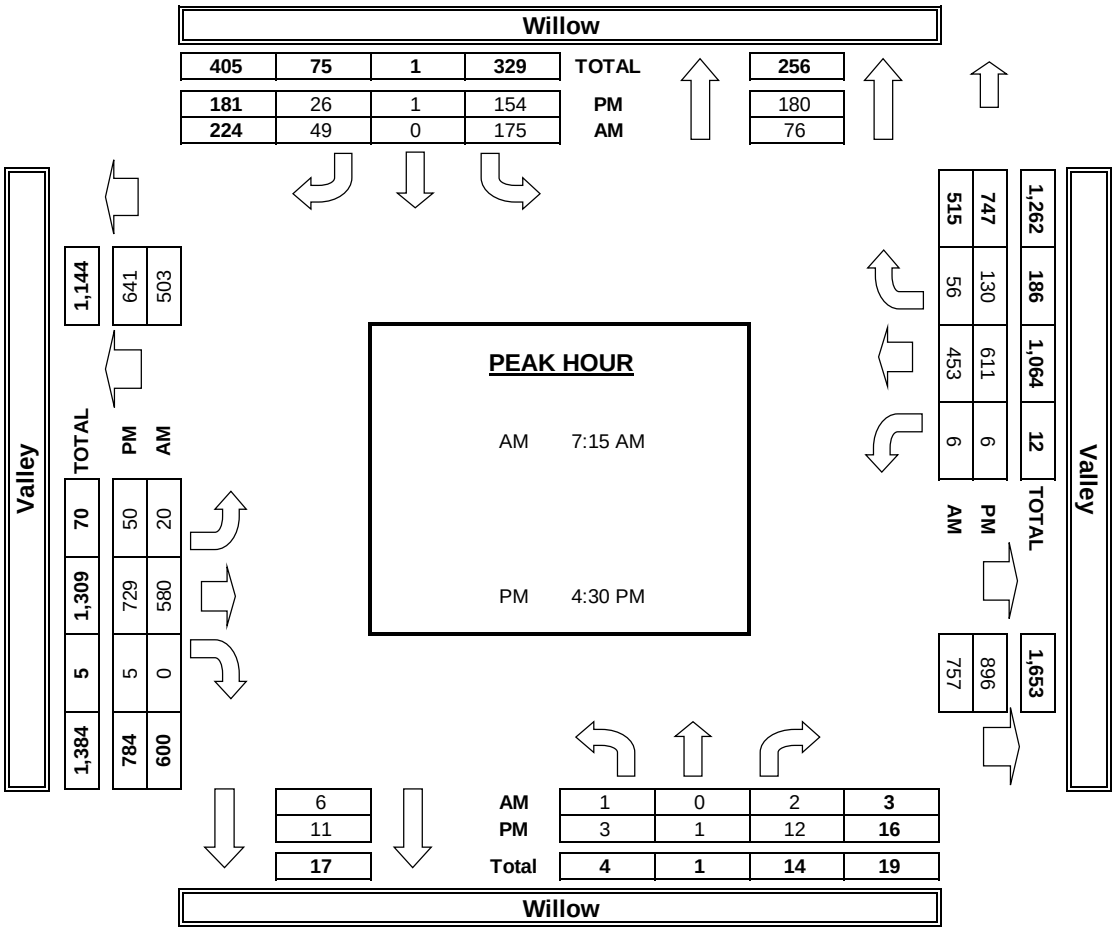


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR	7:15 AM					0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR	4:30 PM					0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

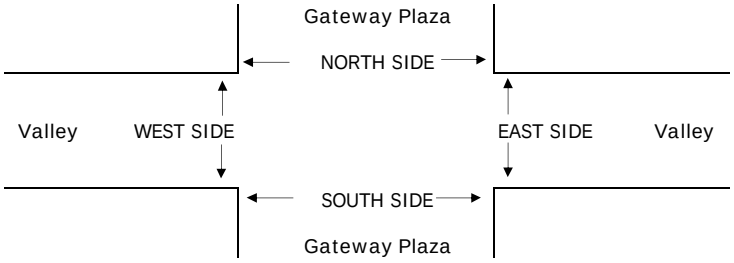
DATE:	LOCATION:	Rialto	PROJECT #:	SC3039
Thu, Sep 2, 21	NORTH & SOUTH:	Gateway Plaza	LOCATION #:	7
	EAST & WEST:	Valley	CONTROL:	SIGNAL

NOTES:

Queue EB AM/PM

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

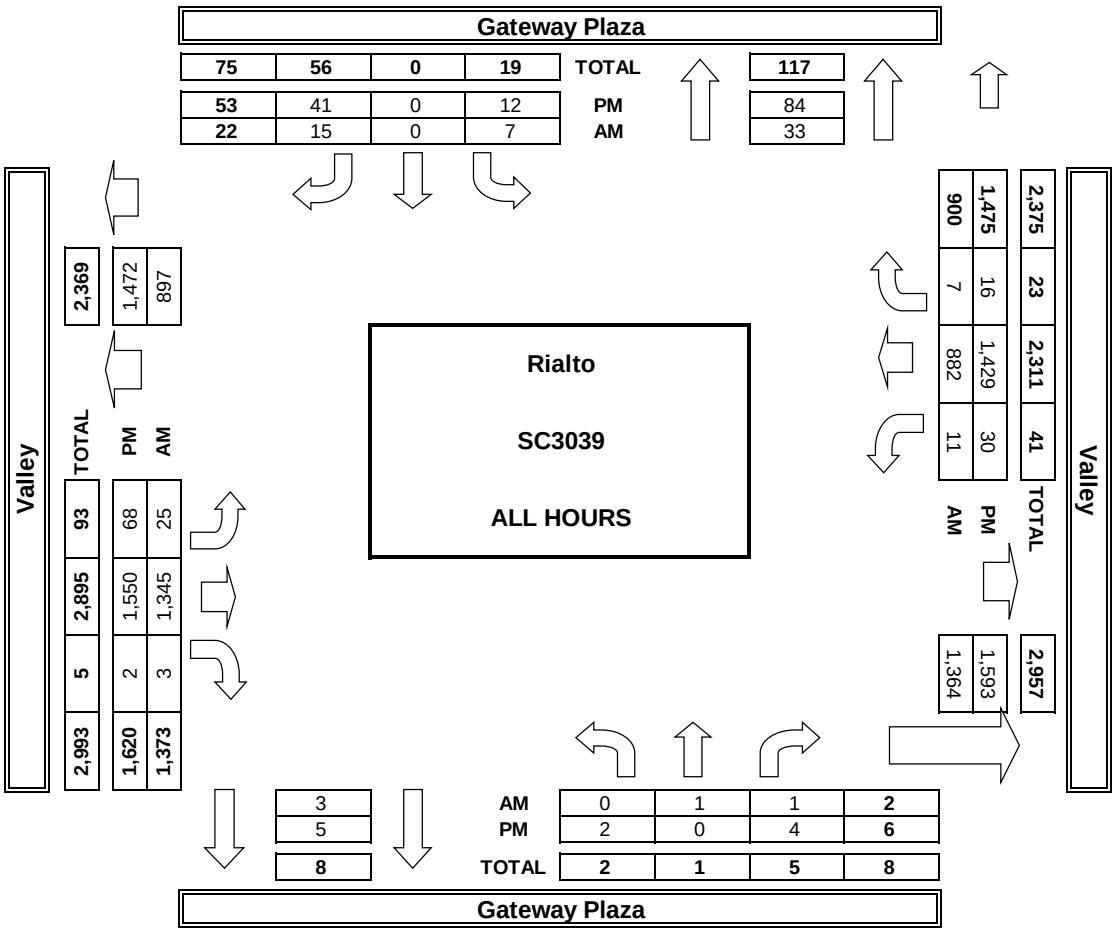
		NORTHBOUND Gateway Plaza			SOUTHBOUND Gateway Plaza			EASTBOUND Valley			WESTBOUND Valley			
	LANES:	NL 1	NT 0.5	NR 0.5	SL 0	ST 1	SR 0	EL 1	ET 3	ER 0	WL 1	WT 2	WR 0	TOTAL
AM	7:00 AM	0	0	0	0	0	2	3	181	0	0	86	0	272
	7:15 AM	0	0	0	2	0	1	1	163	0	1	119	0	287
	7:30 AM	0	0	0	0	0	1	3	174	0	1	152	0	331
	7:45 AM	0	0	0	0	0	4	1	227	0	0	124	0	356
	8:00 AM	0	0	0	1	0	1	5	174	0	0	109	3	293
	8:15 AM	0	0	0	2	0	3	6	156	0	2	81	0	250
	8:30 AM	0	1	0	1	0	0	2	132	2	3	110	1	252
	8:45 AM	0	0	1	1	0	3	4	138	1	4	101	3	256
	VOLUMES	0	1	1	7	0	15	25	1,345	3	11	882	7	2,297
	APPROACH %	0%	50%	50%	32%	0%	68%	2%	98%	0%	1%	98%	1%	
	APP/DEPART	2	/	33	22	/	3	1,373	/	1,364	900	/	897	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	0	0	0	3	0	7	10	738	0	2	504	3	1,267
	APPROACH %	0%	0%	0%	30%	0%	70%	1%	99%	0%	0%	99%	1%	
	PEAK HR FACTOR		0.000			0.625			0.820			0.832		0.890
	APP/DEPART	0	/	13	10	/	0	748	/	743	509	/	511	0
PM	4:00 PM	1	0	1	0	0	8	8	162	1	3	165	3	352
	4:15 PM	0	0	2	1	0	5	7	204	1	1	169	2	392
	4:30 PM	1	0	0	0	0	5	14	208	0	3	163	2	396
	4:45 PM	0	0	0	2	0	5	10	217	0	4	193	6	437
	5:00 PM	0	0	0	3	0	6	8	212	0	9	179	0	417
	5:15 PM	0	0	0	2	0	2	10	206	0	6	191	2	419
	5:30 PM	0	0	1	1	0	4	9	164	0	4	193	0	376
	5:45 PM	0	0	0	3	0	6	2	177	0	0	176	1	365
	VOLUMES	2	0	4	12	0	41	68	1,550	2	30	1,429	16	3,154
	APPROACH %	33%	0%	67%	23%	0%	77%	4%	96%	0%	2%	97%	1%	
	APP/DEPART	6	/	84	53	/	5	1,620	/	1,593	1,475	/	1,472	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	1	0	0	7	0	18	42	843	0	22	726	10	1,669
	APPROACH %	100%	0%	0%	28%	0%	72%	5%	95%	0%	3%	96%	1%	
	PEAK HR FACTOR		0.250			0.694			0.975			0.933		0.955
	APP/DEPART	1	/	52	25	/	2	885	/	870	758	/	745	0

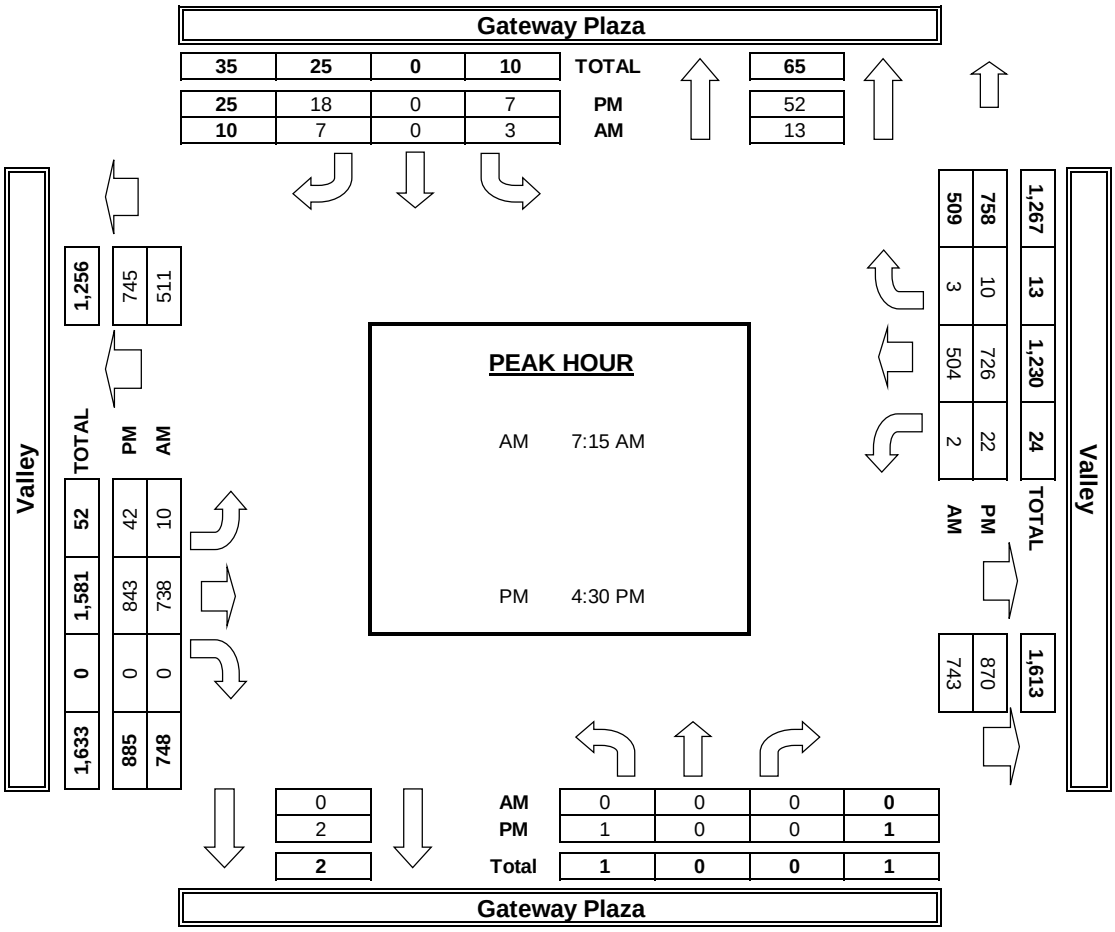


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR			7:15 AM			0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR			4:30 PM			0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

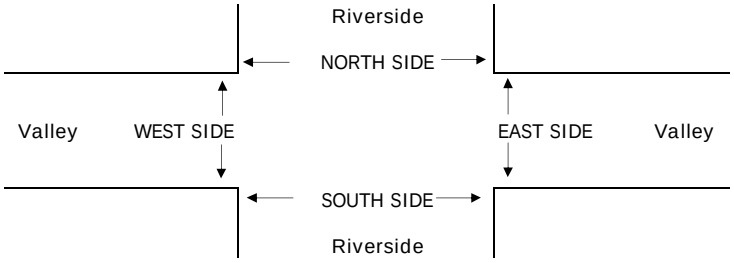
DATE:	LOCATION:	Rialto	PROJECT #:	SC3039
Thu, Sep 2, 21	NORTH & SOUTH:	Riverside	LOCATION #:	8
	EAST & WEST:	Valley	CONTROL:	SIGNAL

NOTES:

Queue SB PM

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

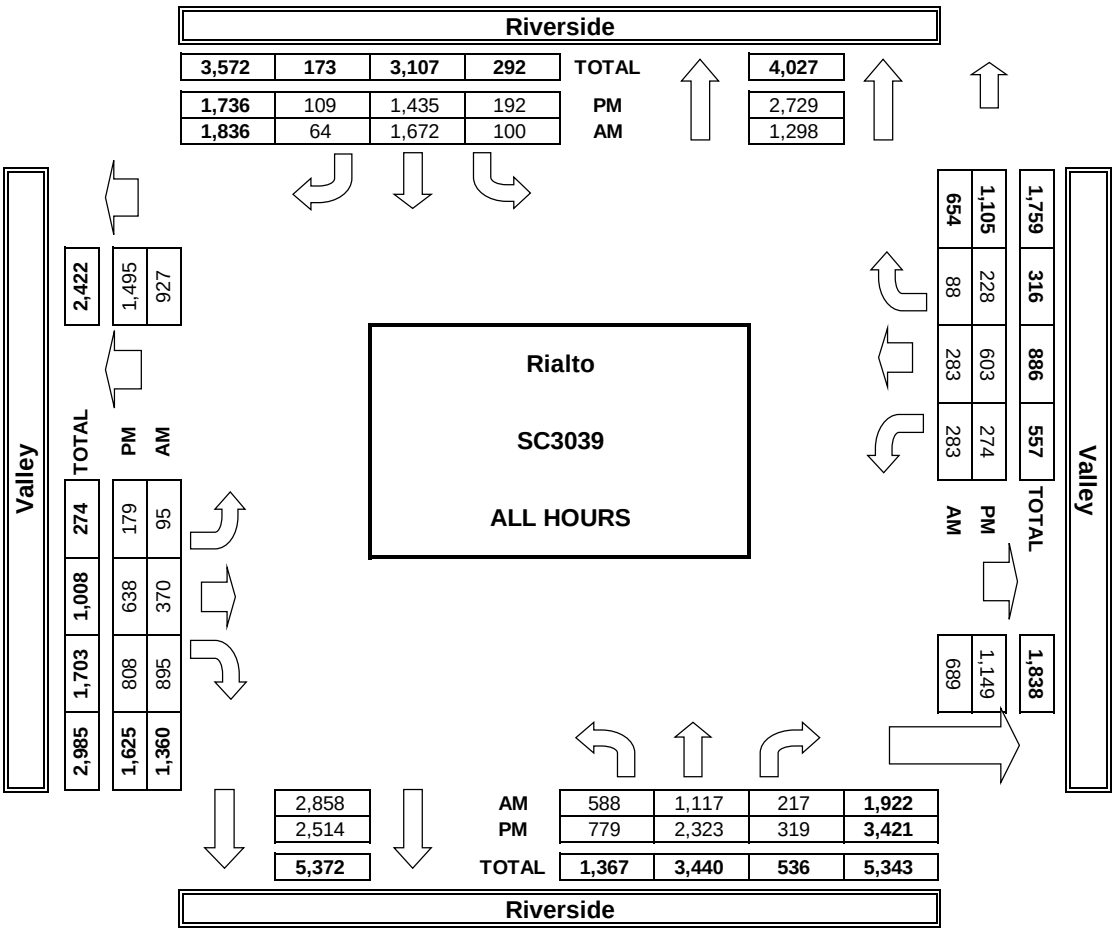
		NORTHBOUND (Riverside)			SOUTHBOUND (Riverside)			EASTBOUND (Valley)			WESTBOUND (Valley)			
	LANES:	NL 2	NT 2.5	NR 0.5	SL 1	ST 2.5	SR 0.5	EL 1	ET 2	ER 1	WL 1	WT 2	WR 1	TOTAL
AM	7:00 AM	63	151	32	8	218	4	9	59	124	35	29	11	743
	7:15 AM	93	151	27	11	245	9	8	23	128	30	28	6	759
	7:30 AM	93	142	21	13	265	4	6	33	126	43	49	8	803
	7:45 AM	84	126	28	12	226	8	8	81	134	39	35	9	790
	8:00 AM	65	155	30	10	199	11	17	47	110	39	38	16	737
	8:15 AM	47	128	25	22	209	7	13	50	102	33	32	9	677
	8:30 AM	74	120	26	10	160	11	15	42	83	38	34	14	627
	8:45 AM	69	144	28	14	150	10	19	35	88	26	38	15	636
	VOLUMES	588	1,117	217	100	1,672	64	95	370	895	283	283	88	5,772
	APPROACH %	31%	58%	11%	5%	91%	3%	7%	27%	66%	43%	43%	13%	
	APP/DEPART	1,922	/	1,298	1,836	/	2,858	1,360	/	689	654	/	927	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	333	570	108	44	954	25	31	196	512	147	141	34	3,095
	APPROACH %	33%	56%	11%	4%	93%	2%	4%	27%	69%	46%	44%	11%	
	PEAK HR FACTOR		0.933			0.907			0.828			0.805		0.964
	APP/DEPART	1,011	/	634	1,023	/	1,615	739	/	349	322	/	497	0
PM	4:00 PM	90	276	37	15	170	10	12	71	93	28	63	25	890
	4:15 PM	85	251	47	26	182	18	28	82	107	36	84	22	968
	4:30 PM	108	306	48	14	180	15	21	70	122	33	58	32	1,007
	4:45 PM	99	291	44	22	192	12	30	93	81	46	79	31	1,020
	5:00 PM	92	286	45	37	157	16	17	117	113	34	89	30	1,033
	5:15 PM	102	319	41	31	205	16	20	86	106	39	82	27	1,074
	5:30 PM	89	280	28	21	179	11	32	57	92	33	75	35	932
	5:45 PM	114	314	29	26	170	11	19	62	94	25	73	26	963
	VOLUMES	779	2,323	319	192	1,435	109	179	638	808	274	603	228	7,887
	APPROACH %	23%	68%	9%	11%	83%	6%	11%	39%	50%	25%	55%	21%	
	APP/DEPART	3,421	/	2,729	1,736	/	2,514	1,625	/	1,149	1,105	/	1,495	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	401	1,202	178	104	734	59	88	366	422	152	308	120	4,134
	APPROACH %	23%	67%	10%	12%	82%	7%	10%	42%	48%	26%	53%	21%	
	PEAK HR FACTOR		0.964			0.890			0.887			0.929		0.962
	APP/DEPART	1,781	/	1,408	897	/	1,307	876	/	650	580	/	769	0

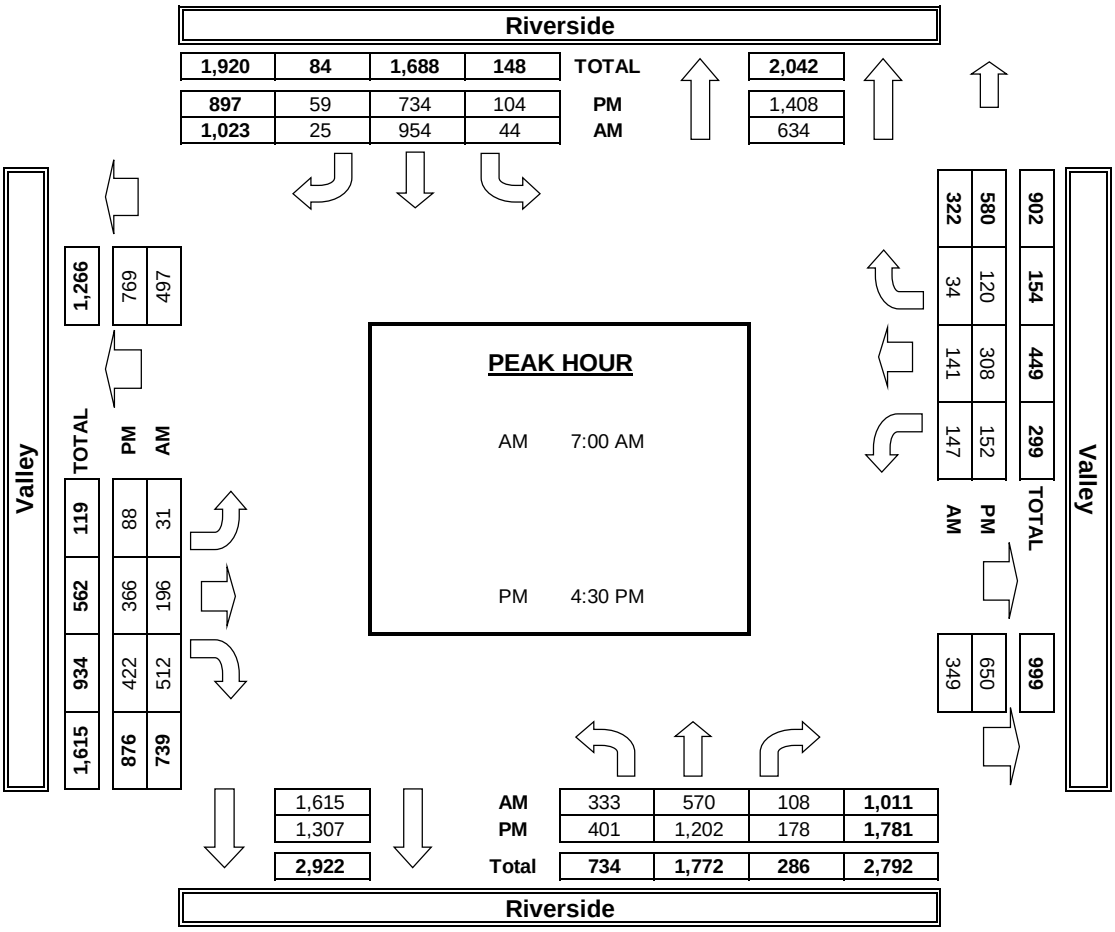


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR	7:00 AM					0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR	4:30 PM					0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

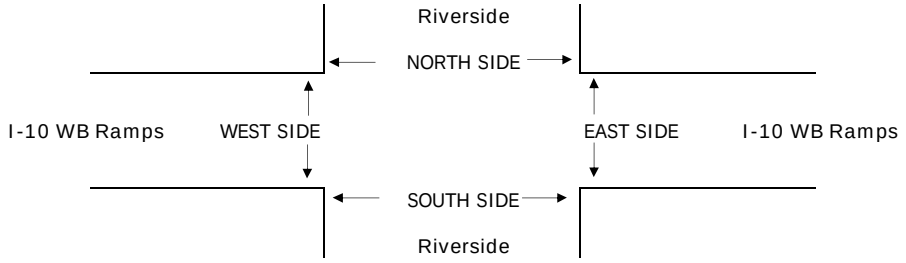
DATE:	LOCATION:	Rialto	PROJECT #:	SC3039
Thu, Sep 2, 21	NORTH & SOUTH:	Riverside	LOCATION #:	9
	EAST & WEST:	I-10 WB Ramps	CONTROL:	SIGNAL

NOTES:

Queue SB AM/PM; NB PM

AM PM MD OTHER OTHER — ▲ N, ◄ W, E ►, S ▼

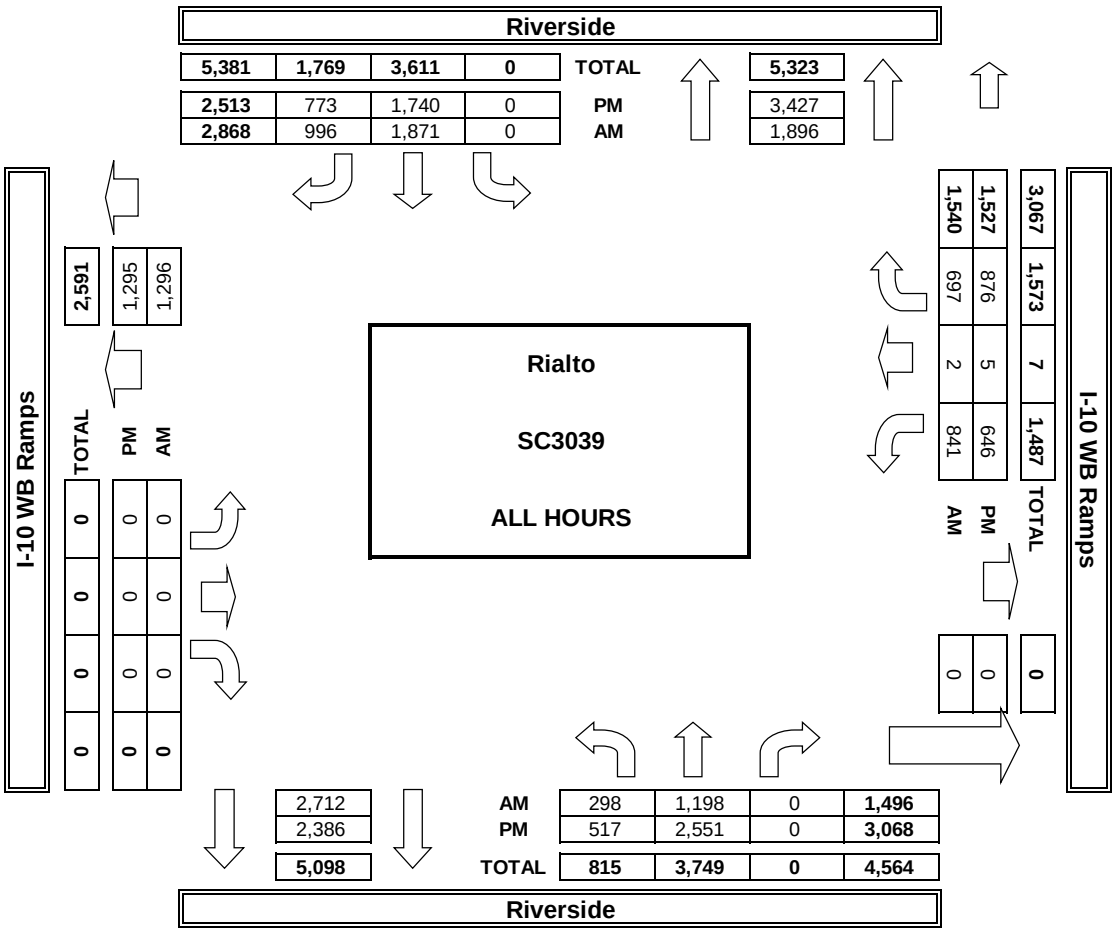
		NORTHBOUND Riverside			SOUTHBOUND Riverside			EASTBOUND I-10 WB Ramps			WESTBOUND I-10 WB Ramps			
	LANES:	NL 2	NT 3	NR X	SL X	ST 4	SR 1	EL X	ET X	ER X	WL 1,3	WT 0.3	WR 1,3	TOTAL
AM	7:00 AM	35	166	0	0	204	157	0	0	0	100	1	84	747
	7:15 AM	39	172	0	0	280	138	0	0	0	85	1	97	812
	7:30 AM	29	153	0	0	268	144	0	0	0	119	0	101	814
	7:45 AM	36	133	0	0	297	105	0	0	0	125	0	105	801
	8:00 AM	38	164	0	0	249	130	0	0	0	129	0	76	786
	8:15 AM	39	135	0	0	213	120	0	0	0	96	0	55	658
	8:30 AM	36	128	0	0	167	106	0	0	0	109	0	97	643
	8:45 AM	46	147	0	0	193	96	0	0	0	78	0	82	642
	VOLUMES	298	1,198	0	0	1,871	996	0	0	0	841	2	697	5,904
	APPROACH %	20%	80%	0%	0%	65%	35%	0%	0%	0%	55%	0%	45%	
	APP/DEPART	1,496	/	1,896	2,868	/	2,712	0	/	0	1,540	/	1,296	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	142	622	0	0	1,094	517	0	0	0	458	1	379	3,214
	APPROACH %	19%	81%	0%	0%	68%	32%	0%	0%	0%	55%	0%	45%	
	PEAK HR FACTOR		0.905			0.964			0.000			0.911		0.987
	APP/DEPART	764	/	1,002	1,612	/	1,552	0	/	0	838	/	660	0
PM	4:00 PM	66	306	0	0	226	93	0	0	0	74	0	124	889
	4:15 PM	54	266	0	0	224	96	0	0	0	91	0	117	848
	4:30 PM	54	337	0	0	207	92	0	0	0	76	0	105	871
	4:45 PM	68	327	0	0	239	103	0	0	0	98	1	115	951
	5:00 PM	75	325	0	0	182	103	0	0	0	93	1	106	885
	5:15 PM	62	313	0	0	239	88	0	0	0	69	2	102	875
	5:30 PM	78	340	0	0	210	99	0	0	0	79	0	95	901
	5:45 PM	60	337	0	0	213	99	0	0	0	66	1	112	888
	VOLUMES	517	2,551	0	0	1,740	773	0	0	0	646	5	876	7,108
	APPROACH %	17%	83%	0%	0%	69%	31%	0%	0%	0%	42%	0%	57%	
	APP/DEPART	3,068	/	3,427	2,513	/	2,386	0	/	0	1,527	/	1,295	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	283	1,305	0	0	870	393	0	0	0	339	4	418	3,612
	APPROACH %	18%	82%	0%	0%	69%	31%	0%	0%	0%	45%	1%	55%	
	PEAK HR FACTOR		0.950			0.923			0.000			0.889		0.950
	APP/DEPART	1,588	/	1,723	1,263	/	1,209	0	/	0	761	/	680	0

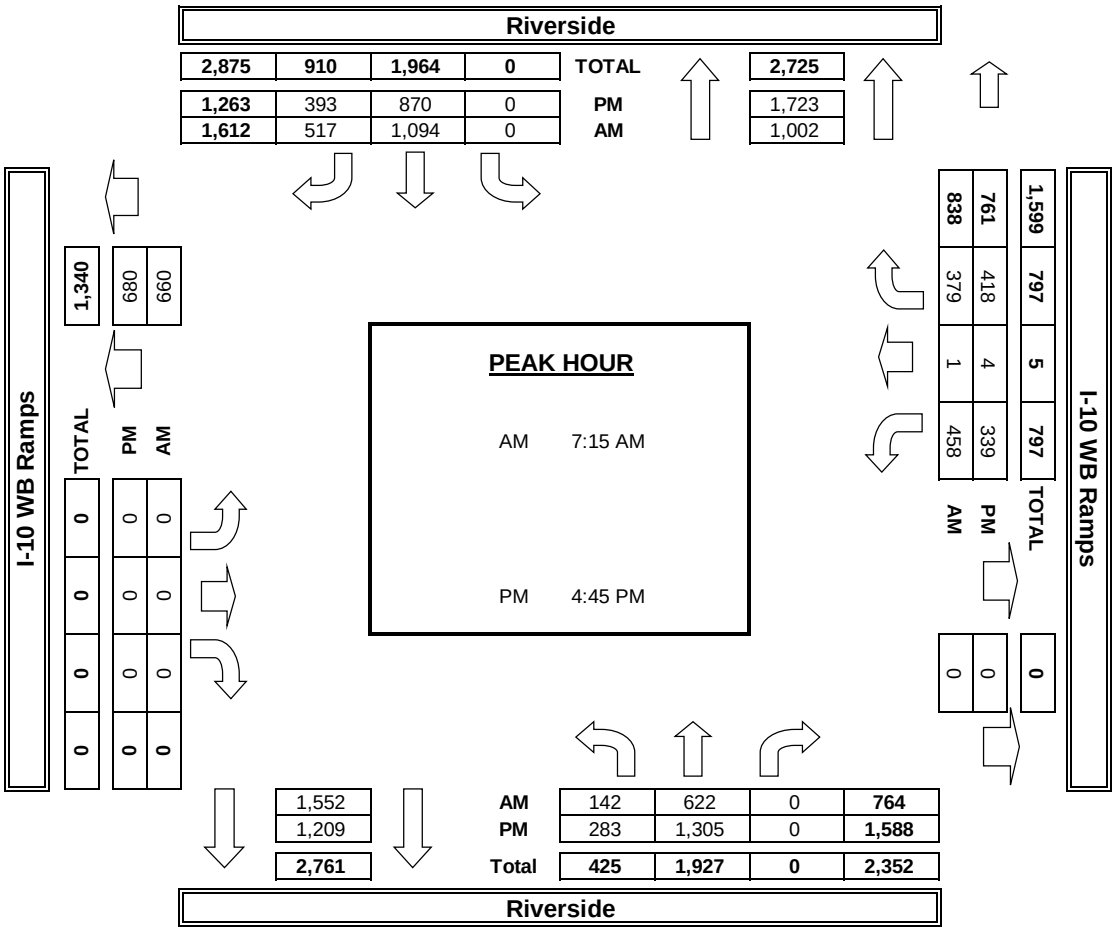


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR			7:15 AM			0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR			4:45 PM			0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

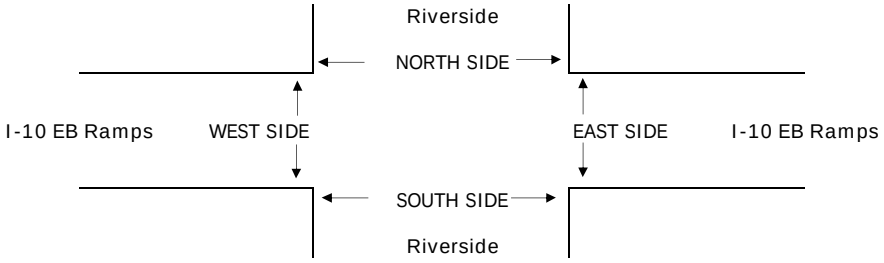
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Rialto	PROJECT #:	SC3039
Thu, Sep 2, 21	NORTH & SOUTH:	Riverside	LOCATION #:	10
	EAST & WEST:	I-10 EB Ramps	CONTROL:	SIGNAL

NOTES:

AM PM MD OTHER OTHER — ▲ N, ◄ W, E ►, S ▼

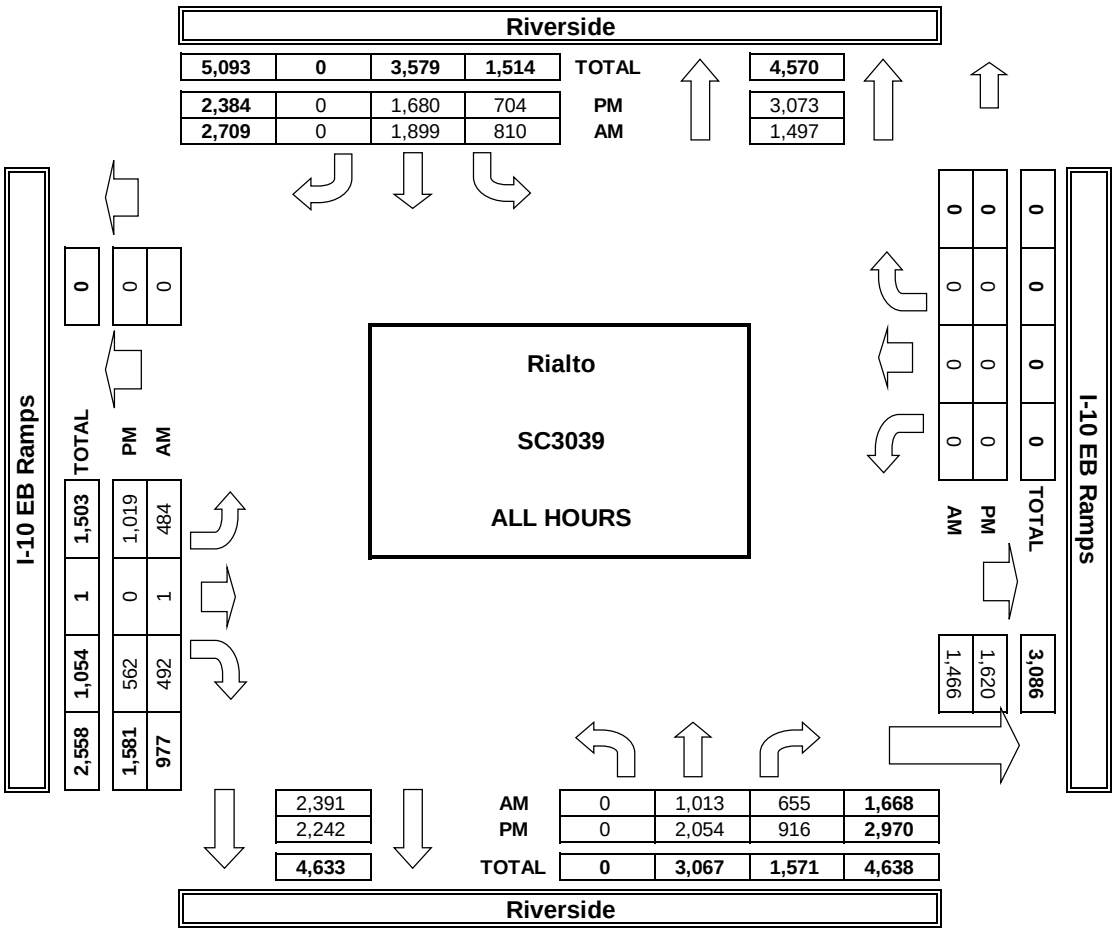
		NORTHBOUND Riverside			SOUTHBOUND Riverside			EASTBOUND I-10 EB Ramps			WESTBOUND I-10 EB Ramps			
	LANES:	NL X	NT 2.5	NR 0.5	SL 2	ST 2	SR X	EL 1.3	ET 0.3	ER 1.3	WL X	WT X	WR X	TOTAL
AM	7:00 AM	0	127	71	92	212	0	75	0	49	0	0	0	626
	7:15 AM	0	155	85	119	246	0	56	0	56	0	0	0	717
	7:30 AM	0	144	80	117	270	0	38	0	42	0	0	0	691
	7:45 AM	0	129	105	109	313	0	40	0	58	0	0	0	754
	8:00 AM	0	120	78	111	267	0	82	0	87	0	0	0	745
	8:15 AM	0	108	75	86	220	0	66	0	57	0	0	0	612
	8:30 AM	0	105	67	82	194	0	59	0	76	0	0	0	583
	8:45 AM	0	125	94	94	177	0	68	1	67	0	0	0	626
	VOLUMES	0	1,013	655	810	1,899	0	484	1	492	0	0	0	5,354
	APPROACH %	0%	61%	39%	30%	70%	0%	50%	0%	50%	0%	0%	0%	
	APP/DEPART	1,668	/	1,497	2,709	/	2,391	977	/	1,466	0	/	0	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	0	548	348	456	1,096	0	216	0	243	0	0	0	2,907
	APPROACH %	0%	61%	39%	29%	71%	0%	47%	0%	53%	0%	0%	0%	
	PEAK HR FACTOR		0.933			0.919			0.679			0.000		0.964
	APP/DEPART	896	/	764	1,552	/	1,339	459	/	804	0	/	0	0
PM	4:00 PM	0	245	131	81	219	0	127	0	52	0	0	0	855
	4:15 PM	0	202	105	101	212	0	118	0	70	0	0	0	808
	4:30 PM	0	246	143	96	187	0	145	0	65	0	0	0	882
	4:45 PM	0	274	133	87	250	0	121	0	72	0	0	0	937
	5:00 PM	0	263	117	75	200	0	137	0	64	0	0	0	856
	5:15 PM	0	251	100	77	231	0	124	0	73	0	0	0	856
	5:30 PM	0	285	88	106	183	0	138	0	96	0	0	0	896
	5:45 PM	0	288	99	81	198	0	109	0	70	0	0	0	845
	VOLUMES	0	2,054	916	704	1,680	0	1,019	0	562	0	0	0	6,935
	APPROACH %	0%	69%	31%	30%	70%	0%	64%	0%	36%	0%	0%	0%	
	APP/DEPART	2,970	/	3,073	2,384	/	2,242	1,581	/	1,620	0	/	0	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	0	1,073	438	345	864	0	520	0	305	0	0	0	3,545
	APPROACH %	0%	71%	29%	29%	71%	0%	63%	0%	37%	0%	0%	0%	
	PEAK HR FACTOR		0.928			0.897			0.881			0.000		0.946
	APP/DEPART	1,511	/	1,593	1,209	/	1,169	825	/	783	0	/	0	0

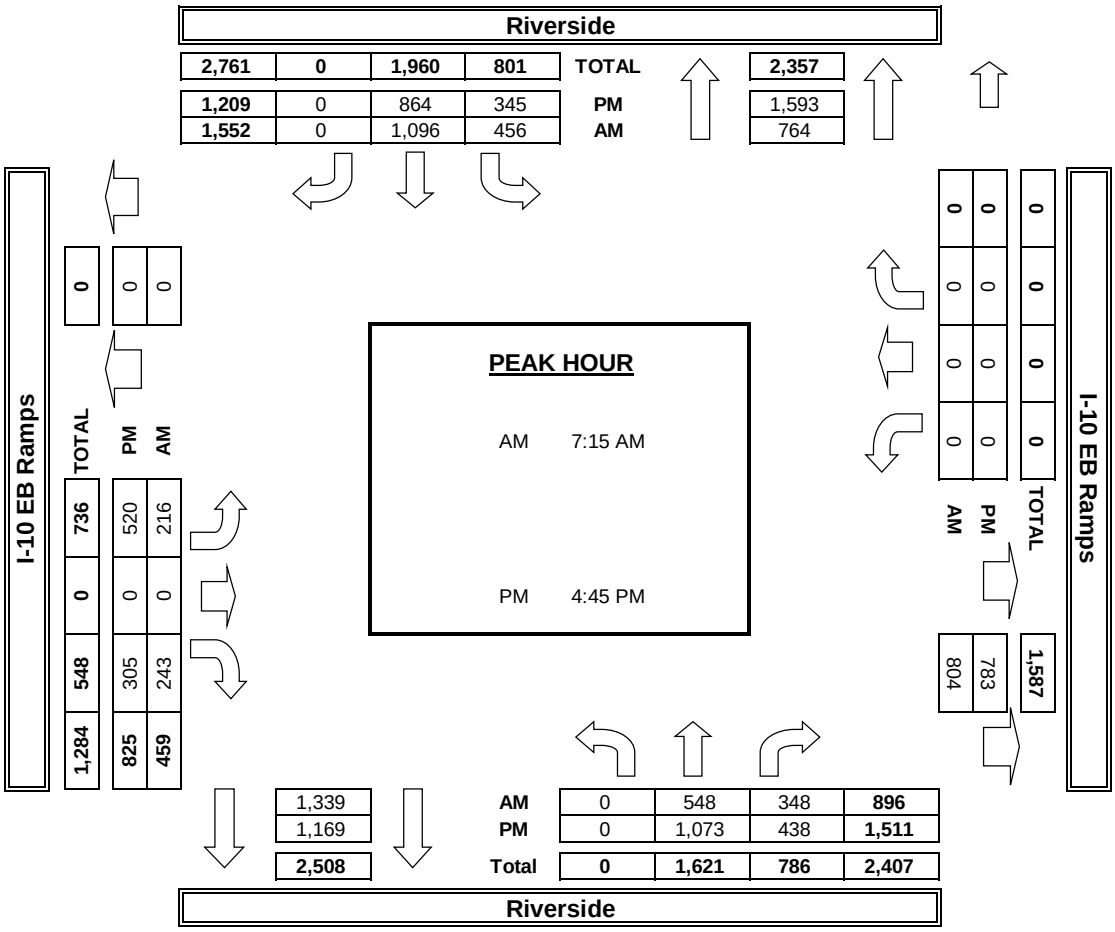


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR	7:15 AM					0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR	4:45 PM					0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





Thursday, September 02, 2021 CITY: Rialto PROJECT: SC3039

ADT1 Riverside Ave between Senior Way to Rialto Marketplace. Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB		SB			PM Period	NB		SB		
0:00	51		42			12:00	248		206		
0:15	52		44			12:15	267		226		
0:30	61		33			12:30	285		275		
0:45	54	218	25	144	362	12:45	252	1052	242	949	2001
1:00	43		28			13:00	252		236		
1:15	33		23			13:15	225		261		
1:30	44		25			13:30	265		264		
1:45	38	158	33	109	267	13:45	333	1075	240	1001	2076
2:00	26		34			14:00	294		247		
2:15	31		46			14:15	305		277		
2:30	31		44			14:30	345		284		
2:45	25	113	39	163	276	14:45	345	1289	266	1074	2363
3:00	21		51			15:00	360		238		
3:15	23		70			15:15	360		272		
3:30	27		103			15:30	325		297		
3:45	24	95	92	316	411	15:45	424	1469	242	1049	2518
4:00	39		78			16:00	334		230		
4:15	33		141			16:15	329		252		
4:30	50		228			16:30	375		250		
4:45	40	162	205	652	814	16:45	362	1400	242	974	2374
5:00	49		199			17:00	348		242		
5:15	49		247			17:15	395		256		
5:30	48		286			17:30	379		267		
5:45	66	212	211	943	1155	17:45	399	1521	211	976	2497
6:00	67		167			18:00	339		259		
6:15	89		200			18:15	349		265		
6:30	111		251			18:30	345		206		
6:45	114	381	253	871	1252	18:45	305	1338	217	947	2285
7:00	175		250			19:00	312		232		
7:15	159		250			19:15	289		191		
7:30	161		313			19:30	298		223		
7:45	141	636	250	1063	1699	19:45	271	1170	186	832	2002
8:00	189		292			20:00	232		214		
8:15	157		240			20:15	274		207		
8:30	148		239			20:30	230		159		
8:45	181	675	207	978	1653	20:45	223	959	172	752	1711
9:00	191		205			21:00	189		149		
9:15	167		201			21:15	190		156		
9:30	200		210			21:30	167		131		
9:45	246	804	208	824	1628	21:45	171	717	117	553	1270
10:00	235		217			22:00	164		94		
10:15	249		208			22:15	154		122		
10:30	200		225			22:30	127		76		
10:45	215	899	212	862	1761	22:45	121	566	81	373	939
11:00	208		197			23:00	110		77		
11:15	228		258			23:15	98		69		
11:30	251		259			23:30	94		61		
11:45	249	936	211	925	1861	23:45	88	390	55	262	652
Total Vol.		5289		7850	13139			12946		9742	22688

Daily Totals

NB	SB	Combined
18235	17592	35827

	AM			PM		
Split %	40.3%	59.7%	36.7%	57.1%	42.9%	63.3%
Peak Hour	11:45	7:15	11:45	17:00	14:00	15:00
Volume	1049	1105	1967	1521	1074	2518
P.H.F.	0.92	0.88	0.88	0.95	0.95	0.95

cs@aimtd.com Tell. 714 253 7888

Thursday, September 02, 2021 CITY: Rialto PROJECT: SC3039

ADT2 Riverside Ave between Gateway Plaza-Value Center to Valley Boulevard. Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB		SB			PM Period	NB		SB		
0:00	49		43			12:00	244		203		
0:15	48		43			12:15	260		211		
0:30	58		34			12:30	263		255		
0:45	56	211	26	146	357	12:45	224	991	227	896	1887
1:00	44		29			13:00	235		216		
1:15	36		25			13:15	230		252		
1:30	38		18			13:30	234		214		
1:45	36	154	32	104	258	13:45	324	1023	206	888	1911
2:00	33		39			14:00	283		203		
2:15	27		44			14:15	304		233		
2:30	28		43			14:30	307		241		
2:45	30	118	42	168	286	14:45	324	1218	245	922	2140
3:00	19		52			15:00	347		223		
3:15	21		65			15:15	351		237		
3:30	22		101			15:30	315		265		
3:45	25	87	89	307	394	15:45	408	1421	215	940	2361
4:00	40		77			16:00	322		202		
4:15	30		139			16:15	314		241		
4:30	54		223			16:30	358		217		
4:45	49	173	202	641	814	16:45	358	1352	223	883	2235
5:00	58		181			17:00	328		219		
5:15	59		240			17:15	390		234		
5:30	65		282			17:30	345		232		
5:45	70	252	202	905	1157	17:45	377	1440	187	872	2312
6:00	69		170			18:00	317		213		
6:15	87		189			18:15	339		229		
6:30	116		233			18:30	332		172		
6:45	119	391	250	842	1233	18:45	295	1283	199	813	2096
7:00	177		245			19:00	298		207		
7:15	163		248			19:15	265		180		
7:30	160		300			19:30	285		212		
7:45	149	649	217	1010	1659	19:45	257	1105	178	777	1882
8:00	190		241			20:00	223		178		
8:15	158		217			20:15	249		183		
8:30	150		194			20:30	214		150		
8:45	183	681	170	822	1503	20:45	201	887	151	662	1549
9:00	179		179			21:00	176		150		
9:15	160		177			21:15	172		155		
9:30	198		186			21:30	163		122		
9:45	240	777	180	722	1499	21:45	148	659	109	536	1195
10:00	228		180			22:00	152		90		
10:15	240		190			22:15	136		118		
10:30	183		196			22:30	108		78		
10:45	193	844	196	762	1606	22:45	107	503	79	365	868
11:00	204		170			23:00	91		80		
11:15	231		211			23:15	92		64		
11:30	224		232			23:30	98		64		
11:45	238	897	178	791	1688	23:45	92	373	54	262	635
Total Vol.		5234		7220	12454			12255		8816	21071

Daily Totals

NB	SB	Combined
17489	16036	33525

	AM			PM		
Split %	42.0%	58.0%	37.1%	58.2%	41.8%	62.9%
Peak Hour	11:45	6:45	11:45	17:00	14:45	15:00
Volume	1005	1043	1852	1440	970	2361
P.H.F.	0.96	0.87	0.89	0.90	0.92	0.95

cs@aimtd.com Tell. 714 253 7888

Thursday, September 02, 2021 CITY: Rialto PROJECT: SC3039

ADT3 Willow Avenue between Valley Boulevard to San Bernardino Avenue. Prepared by AimTD LLC tel. 714 253 7888

AM Period	NB		SB			PM Period	NB		SB		
0:00	2		4			12:00	29		30		
0:15	4		8			12:15	27		23		
0:30	6		5			12:30	25		37		
0:45	3	15	1	18	33	12:45	26	107	24	114	221
1:00	7		3			13:00	31		24		
1:15	5		4			13:15	30		41		
1:30	6		4			13:30	41		47		
1:45	3	21	5	16	37	13:45	39	141	38	150	291
2:00	0		4			14:00	37		45		
2:15	3		9			14:15	26		32		
2:30	1		6			14:30	29		49		
2:45	2	6	4	23	29	14:45	37	129	37	163	292
3:00	2		5			15:00	43		46		
3:15	3		11			15:15	32		39		
3:30	1		13			15:30	55		43		
3:45	2	8	19	48	56	15:45	48	178	44	172	350
4:00	7		15			16:00	55		33		
4:15	3		35			16:15	39		35		
4:30	9		40			16:30	44		62		
4:45	6	25	39	129	154	16:45	49	187	44	174	361
5:00	6		28			17:00	52		35		
5:15	10		44			17:15	35		40		
5:30	7		55			17:30	38		32		
5:45	14	37	41	168	205	17:45	45	170	31	138	308
6:00	10		35			18:00	39		43		
6:15	15		33			18:15	43		30		
6:30	17		49			18:30	39		33		
6:45	16	58	45	162	220	18:45	43	164	42	148	312
7:00	25		38			19:00	37		36		
7:15	24		52			19:15	36		30		
7:30	19		58			19:30	24		37		
7:45	14	82	66	214	296	19:45	29	126	18	121	247
8:00	19		48			20:00	28		25		
8:15	19		34			20:15	29		16		
8:30	20		45			20:30	23		23		
8:45	22	80	37	164	244	20:45	24	104	20	84	188
9:00	19		27			21:00	20		12		
9:15	24		32			21:15	20		17		
9:30	26		45			21:30	20		14		
9:45	30	99	45	149	248	21:45	9	69	10	53	122
10:00	21		36			22:00	18		19		
10:15	25		31			22:15	21		16		
10:30	28		29			22:30	6		11		
10:45	20	94	32	128	222	22:45	10	55	11	57	112
11:00	30		41			23:00	9		7		
11:15	23		30			23:15	9		11		
11:30	28		38			23:30	6		5		
11:45	24	105	31	140	245	23:45	13	37	11	34	71
Total Vol.		630		1359	1989			1467		1408	2875

Daily Totals		
NB	SB	Combined
2097	2767	4864

	AM			PM		
Split %	31.7%	68.3%	40.9%	51.0%	49.0%	59.1%
Peak Hour	11:30	7:15	7:15	15:30	16:30	16:00
Volume	108	224	300	197	181	361
P.H.F.	0.93	0.85	0.94	0.97	0.73	0.85

cs@aimtd.com Tell. 714 253 7888

Thursday, September 02, 2021 CITY: Rialto PROJECT: SC3039

ADT4 Valley Boulevard between Willow Avenue to Riverside Avenue. Prepared by AimTD LLC tel. 714 253 7888

AM Period	EB		WB			PM Period	EB		WB		
0:00	21		18			12:00	127		120		
0:15	34		26			12:15	116		134		
0:30	30		20			12:30	125		121		
0:45	22	107	15	79	186	12:45	132	500	133	508	1008
1:00	35		23			13:00	146		114		
1:15	29		9			13:15	163		116		
1:30	15		17			13:30	165		139		
1:45	12	91	9	58	149	13:45	177	651	155	524	1175
2:00	16		6			14:00	182		138		
2:15	24		14			14:15	183		154		
2:30	23		21			14:30	233		176		
2:45	19	82	17	58	140	14:45	163	761	193	661	1422
3:00	19		15			15:00	195		175		
3:15	32		17			15:15	185		173		
3:30	37		26			15:30	241		170		
3:45	51	139	19	77	216	15:45	198	819	191	709	1528
4:00	39		19			16:00	187		167		
4:15	80		12			16:15	189		196		
4:30	104		36			16:30	251		164		
4:45	156	379	59	126	505	16:45	217	844	194	721	1565
5:00	112		43			17:00	220		204		
5:15	134		37			17:15	208		185		
5:30	155		42			17:30	172		179		
5:45	150	551	67	189	740	17:45	167	767	202	770	1537
6:00	123		42			18:00	185		159		
6:15	122		52			18:15	141		142		
6:30	153		61			18:30	141		144		
6:45	186	584	77	232	816	18:45	150	617	123	568	1185
7:00	158		87			19:00	131		121		
7:15	163		127			19:15	117		111		
7:30	189		151			19:30	115		86		
7:45	223	733	124	489	1222	19:45	101	464	104	422	886
8:00	182		113			20:00	88		87		
8:15	133		83			20:15	95		74		
8:30	139		106			20:30	82		68		
8:45	148	602	110	412	1014	20:45	67	332	64	293	625
9:00	135		121			21:00	46		64		
9:15	122		121			21:15	77		85		
9:30	137		100			21:30	65		94		
9:45	134	528	105	447	975	21:45	43	231	63	306	537
10:00	115		100			22:00	53		104		
10:15	130		93			22:15	51		89		
10:30	132		101			22:30	36		75		
10:45	108	485	95	389	874	22:45	37	177	71	339	516
11:00	132		120			23:00	37		54		
11:15	121		122			23:15	41		68		
11:30	170		107			23:30	30		66		
11:45	147	570	121	470	1040	23:45	32	140	75	263	403
Total Vol.		4851		3026	7877			6303		6084	12387

Daily Totals	EB	WB	Combined
	11154	9110	20264

	AM			PM		
Split %	61.6%	38.4%	38.9%	50.9%	49.1%	61.1%
Peak Hour	7:15	7:15	7:15	16:30	17:00	16:30
Volume	757	515	1272	896	770	1643
P.H.F.	0.85	0.85	0.92	0.89	0.94	0.97

cs@aimtd.com Tell. 714 253 7888

APPENDIX C

INTERSECTION ANALYSIS
WORKSHEETS

Intersection	
Intersection Delay, s/veh	12.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	237	127	45	195	73	82	37	32	105	54	62
Future Vol, veh/h	28	237	127	45	195	73	82	37	32	105	54	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	258	138	49	212	79	89	40	35	114	59	67
Number of Lanes	0	2	1	0	2	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	12.4	12.3	13.2	13.9
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	69%	0%	26%	0%	0%	41%	0%	0%	66%	0%
Vol Thru, %	31%	0%	74%	100%	0%	59%	100%	0%	34%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	119	32	107	158	127	110	130	73	159	62
LT Vol	82	0	28	0	0	45	0	0	105	0
Through Vol	37	0	79	158	0	65	130	0	54	0
RT Vol	0	32	0	0	127	0	0	73	0	62
Lane Flow Rate	129	35	116	172	138	120	141	79	173	67
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.289	0.068	0.235	0.34	0.246	0.249	0.286	0.145	0.375	0.127
Departure Headway (Hd)	8.04	6.987	7.262	7.128	6.414	7.506	7.298	6.583	7.807	6.77
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	446	512	494	505	559	478	492	544	461	529
Service Time	5.792	4.738	5.006	4.873	4.159	5.254	5.045	4.33	5.555	4.518
HCM Lane V/C Ratio	0.289	0.068	0.235	0.341	0.247	0.251	0.287	0.145	0.375	0.127
HCM Control Delay	14	10.3	12.2	13.5	11.3	12.7	13	10.5	15.2	10.5
HCM Lane LOS	B	B	B	B	B	B	B	B	C	B
HCM 95th-tile Q	1.2	0.2	0.9	1.5	1	1	1.2	0.5	1.7	0.4

Intersection	
Intersection Delay, s/veh	16.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	326	32	19	272	70	19	52	11	83	178	23
Future Vol, veh/h	14	326	32	19	272	70	19	52	11	83	178	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	354	35	21	296	76	21	57	12	90	193	25
Number of Lanes	1	2	0	1	2	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	3	3
HCM Control Delay	15.3	14.3	12.8	23.1
HCM LOS	C	B	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	27%	0%	100%	0%	0%	100%	0%	0%	29%
Vol Thru, %	73%	0%	0%	100%	77%	0%	100%	56%	63%
Vol Right, %	0%	100%	0%	0%	23%	0%	0%	44%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	71	11	14	217	141	19	181	161	284
LT Vol	19	0	14	0	0	19	0	0	83
Through Vol	52	0	0	217	109	0	181	91	178
RT Vol	0	11	0	0	32	0	0	70	23
Lane Flow Rate	77	12	15	236	153	21	197	175	309
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.181	0.025	0.033	0.486	0.308	0.046	0.408	0.346	0.646
Departure Headway (Hd)	8.434	7.583	7.919	7.406	7.242	7.961	7.448	7.135	7.534
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	424	470	452	487	495	449	483	503	478
Service Time	6.208	5.357	5.675	5.161	4.998	5.718	5.204	4.89	5.287
HCM Lane V/C Ratio	0.182	0.026	0.033	0.485	0.309	0.047	0.408	0.348	0.646
HCM Control Delay	13.1	10.6	10.9	17	13.2	11.1	15.3	13.6	23.1
HCM Lane LOS	B	B	B	C	B	B	C	B	C
HCM 95th-tile Q	0.7	0.1	0.1	2.6	1.3	0.1	2	1.5	4.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	203	107	301	231	73	55	383	135	88	679	84
Future Volume (veh/h)	77	203	107	301	231	73	55	383	135	88	679	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	81	214	113	317	243	77	58	403	142	93	715	88
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	339	172	376	777	240	108	1269	566	136	1188	146
Arrive On Green	0.07	0.15	0.15	0.21	0.29	0.29	0.06	0.36	0.36	0.08	0.37	0.37
Sat Flow, veh/h	1781	2281	1158	1781	2672	826	1781	3554	1585	1781	3185	392
Grp Volume(v), veh/h	81	165	162	317	160	160	58	403	142	93	399	404
Grp Sat Flow(s),veh/h/ln	1781	1777	1662	1781	1777	1722	1781	1777	1585	1781	1777	1800
Q Serve(g_s), s	3.9	7.6	8.0	14.9	6.1	6.3	2.8	7.2	5.5	4.4	15.8	15.8
Cycle Q Clear(g_c), s	3.9	7.6	8.0	14.9	6.1	6.3	2.8	7.2	5.5	4.4	15.8	15.8
Prop In Lane	1.00		0.70	1.00		0.48	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	123	264	247	376	517	501	108	1269	566	136	663	671
V/C Ratio(X)	0.66	0.62	0.66	0.84	0.31	0.32	0.54	0.32	0.25	0.68	0.60	0.60
Avail Cap(c_a), veh/h	247	775	725	501	1028	996	143	1269	566	174	663	671
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	34.8	35.0	33.0	24.1	24.2	39.7	20.3	19.8	39.2	22.1	22.1
Incr Delay (d2), s/veh	5.9	2.4	3.0	9.6	0.3	0.4	4.1	0.7	1.1	7.3	4.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	3.4	3.3	7.2	2.5	2.5	1.3	2.9	2.1	2.1	6.8	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.4	37.2	38.0	42.5	24.4	24.5	43.8	21.0	20.8	46.5	26.1	26.1
LnGrp LOS	D	D	D	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		408			637			603			896	
Approach Delay, s/veh		39.1			33.5			23.1			28.2	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	35.6	22.9	17.4	9.8	37.0	10.5	29.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.5	31.0	24.5	38.0	7.0	32.5	12.1	50.4
Max Q Clear Time (g_c+I1), s	7.4	10.2	17.9	11.0	5.8	18.8	6.9	9.3
Green Ext Time (p_c), s	0.0	2.9	0.5	1.9	0.0	4.0	0.1	2.0

Intersection Summary	
HCM 6th Ctrl Delay	30.1
HCM 6th LOS	C



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	3	4	620	8	15	1100
Future Volume (veh/h)	3	4	620	8	15	1100
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	4	674	9	16	1196
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	9	12	3763	50	49	4237
Arrive On Green	0.01	0.01	0.72	0.72	0.03	0.83
Sat Flow, veh/h	633	843	5361	69	1781	5274
Grp Volume(v), veh/h	8	0	442	241	16	1196
Grp Sat Flow(s),veh/h/ln	1687	0	1702	1858	1781	1702
Q Serve(g_s), s	0.3	0.0	2.4	2.4	0.5	3.0
Cycle Q Clear(g_c), s	0.3	0.0	2.4	2.4	0.5	3.0
Prop In Lane	0.37	0.50		0.04	1.00	
Lane Grp Cap(c), veh/h	25	0	2467	1346	49	4237
V/C Ratio(X)	0.32	0.00	0.18	0.18	0.33	0.28
Avail Cap(c_a), veh/h	962	0	2467	1346	323	4237
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.2	0.0	2.5	2.5	27.6	1.1
Incr Delay (d2), s/veh	7.4	0.0	0.2	0.3	3.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.3	0.4	0.3	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	35.6	0.0	2.7	2.8	31.4	1.3
LnGrp LOS	D	A	A	A	C	A
Approach Vol, veh/h	8		683			1212
Approach Delay, s/veh	35.6		2.7			1.7
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.1	46.4			52.5	5.3
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	10.5	33.0			48.0	33.0
Max Q Clear Time (g_c+I1), s	3.5	5.4			6.0	3.3
Green Ext Time (p_c), s	0.0	4.3			10.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	2.2
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

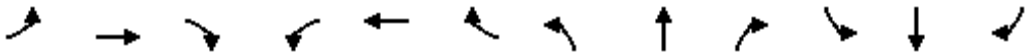
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	917	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	917	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	3	45	25	2	31	42	591	29	110	922	73
Future Volume (veh/h)	24	3	45	25	2	31	42	591	29	110	922	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	3	49	27	2	34	46	642	32	120	1002	79
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	355	13	213	340	13	214	462	3110	154	622	3013	237
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.62	0.62	0.62	0.62	0.62	0.62
Sat Flow, veh/h	1372	92	1507	1352	89	1510	522	4983	247	764	4826	380
Grp Volume(v), veh/h	26	0	52	27	0	36	46	438	236	120	706	375
Grp Sat Flow(s),veh/h/ln	1372	0	1599	1352	0	1599	522	1702	1826	764	1702	1802
Q Serve(g_s), s	0.7	0.0	1.1	0.7	0.0	0.8	1.8	2.1	2.1	3.1	3.8	3.8
Cycle Q Clear(g_c), s	1.4	0.0	1.1	1.8	0.0	0.8	5.6	2.1	2.1	5.2	3.8	3.8
Prop In Lane	1.00		0.94	1.00		0.94	1.00		0.14	1.00		0.21
Lane Grp Cap(c), veh/h	355	0	227	340	0	226	462	2125	1140	622	2125	1125
V/C Ratio(X)	0.07	0.00	0.23	0.08	0.00	0.16	0.10	0.21	0.21	0.19	0.33	0.33
Avail Cap(c_a), veh/h	3265	0	3619	3209	0	3617	462	2125	1140	622	2125	1125
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	0.0	14.6	15.4	0.0	14.5	4.7	3.1	3.1	4.2	3.4	3.4
Incr Delay (d2), s/veh	0.1	0.0	0.5	0.1	0.0	0.3	0.4	0.2	0.4	0.7	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.4	0.2	0.0	0.3	0.1	0.2	0.3	0.3	0.4	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.2	0.0	15.1	15.5	0.0	14.8	5.2	3.3	3.5	4.9	3.8	4.2
LnGrp LOS	B	A	B	B	A	B	A	A	A	A	A	A
Approach Vol, veh/h		78			63			720			1201	
Approach Delay, s/veh		15.2			15.1			3.5			4.1	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.5		9.9		28.5		9.9				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		24.0		87.0		24.0		87.0				
Max Q Clear Time (g_c+I1), s		8.6		4.4		8.2		4.8				
Green Ext Time (p_c), s		4.1		0.4		6.9		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			4.6									
HCM 6th LOS			A									

Notes

User approved pedestrian interval to be less than phase max green.

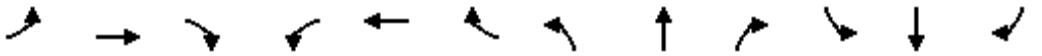
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1022	-	-	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	580	0	6	453	56	1	0	2	175	0	49
Future Volume (veh/h)	20	580	0	6	453	56	1	0	2	175	0	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	630	0	7	492	61	1	0	2	190	0	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	906	404	172	906	404	861	0	990	979	0	990
Arrive On Green	0.25	0.25	0.00	0.25	0.25	0.25	0.62	0.00	0.62	0.62	0.00	0.62
Sat Flow, veh/h	855	3554	1585	796	3554	1585	1351	0	1585	1414	0	1585
Grp Volume(v), veh/h	22	630	0	7	492	61	1	0	2	190	0	53
Grp Sat Flow(s),veh/h/ln	855	1777	1585	796	1777	1585	1351	0	1585	1414	0	1585
Q Serve(g_s), s	1.7	12.0	0.0	0.6	8.9	2.2	0.0	0.0	0.0	4.3	0.0	1.0
Cycle Q Clear(g_c), s	10.6	12.0	0.0	12.6	8.9	2.2	4.4	0.0	0.0	4.4	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	906	404	172	906	404	861	0	990	979	0	990
V/C Ratio(X)	0.10	0.70	0.00	0.04	0.54	0.15	0.00	0.00	0.00	0.19	0.00	0.05
Avail Cap(c_a), veh/h	390	1646	734	338	1646	734	861	0	990	979	0	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.6	25.1	0.0	30.8	24.0	21.5	7.0	0.0	5.3	6.1	0.0	5.4
Incr Delay (d2), s/veh	0.2	1.0	0.0	0.1	0.5	0.2	0.0	0.0	0.0	0.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.7	0.0	0.1	3.5	0.8	0.0	0.0	0.0	1.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.8	26.1	0.0	30.9	24.5	21.7	7.0	0.0	5.3	6.5	0.0	5.5
LnGrp LOS	C	C	A	C	C	C	A	A	A	A	A	A
Approach Vol, veh/h		652			560			3			243	
Approach Delay, s/veh		26.2			24.3			5.9			6.3	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		51.0		23.5		51.0		23.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		46.5		34.5		46.5		34.5				
Max Q Clear Time (g_c+I1), s		7.4		15.0		7.4		15.6				
Green Ext Time (p_c), s		0.0		4.0		1.2		3.1				

Intersection Summary												
HCM 6th Ctrl Delay			22.1									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	738	0	2	504	3	0	0	0	3	0	7
Future Volume (veh/h)	10	738	0	2	504	3	0	0	0	3	0	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	802	0	2	548	3	0	0	0	3	0	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	235	1420	0	207	988	441	109	1094	0	281	36	660
Arrive On Green	0.28	0.28	0.00	0.28	0.28	0.28	0.00	0.00	0.00	0.59	0.00	0.59
Sat Flow, veh/h	857	5274	0	678	3554	1585	1407	1870	0	361	62	1129
Grp Volume(v), veh/h	11	802	0	2	548	3	0	0	0	11	0	0
Grp Sat Flow(s),veh/h/ln	857	1702	0	678	1777	1585	1407	1870	0	1552	0	0
Q Serve(g_s), s	0.7	8.9	0.0	0.2	8.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	9.4	8.9	0.0	9.0	8.7	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.00	0.27		0.73
Lane Grp Cap(c), veh/h	235	1420	0	207	988	441	109	1094	0	978	0	0
V/C Ratio(X)	0.05	0.56	0.00	0.01	0.55	0.01	0.00	0.00	0.00	0.01	0.00	0.00
Avail Cap(c_a), veh/h	550	3298	0	456	2296	1024	109	1094	0	978	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.3	20.3	0.0	24.2	20.3	17.2	0.0	0.0	0.0	5.7	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.4	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	3.2	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.4	20.7	0.0	24.2	20.8	17.2	0.0	0.0	0.0	5.7	0.0	0.0
LnGrp LOS	C	C	A	C	C	B	A	A	A	A	A	A
Approach Vol, veh/h		813			553			0			11	
Approach Delay, s/veh		20.7			20.8			0.0			5.7	
Approach LOS		C			C						A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	43.0	22.8	43.0	22.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	42.5	38.5	42.5
Max Q Clear Time (g_c+I1), s	0.0	12.4	3.2	12.0
Green Ext Time (p_c), s	0.0	5.9	0.0	3.7

Intersection Summary	
HCM 6th Ctrl Delay	20.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	196	512	147	141	34	333	570	108	44	954	25
Future Volume (veh/h)	31	196	512	147	141	34	333	570	108	44	954	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	204	533	153	147	35	347	594	112	46	994	26
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	529	1381	616	347	1381	616	586	2139	397	400	2529	66
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	1202	3554	1585	721	3554	1585	1072	4327	803	742	5117	134
Grp Volume(v), veh/h	32	204	533	153	147	35	347	465	241	46	661	359
Grp Sat Flow(s),veh/h/ln	1202	1777	1585	721	1777	1585	536	1702	1726	742	1702	1846
Q Serve(g_s), s	1.3	2.9	23.8	13.4	2.0	1.1	23.1	6.2	6.3	3.0	9.4	9.4
Cycle Q Clear(g_c), s	3.4	2.9	23.8	16.3	2.0	1.1	32.5	6.2	6.3	9.3	9.4	9.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.47	1.00		0.07
Lane Grp Cap(c), veh/h	529	1381	616	347	1381	616	586	1682	853	400	1682	913
V/C Ratio(X)	0.06	0.15	0.87	0.44	0.11	0.06	0.59	0.28	0.28	0.12	0.39	0.39
Avail Cap(c_a), veh/h	734	1987	886	470	1987	886	586	1682	853	400	1682	913
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	15.2	21.6	20.5	15.0	14.7	22.4	11.4	11.4	14.2	12.2	12.2
Incr Delay (d2), s/veh	0.0	0.0	6.4	0.9	0.0	0.0	4.3	0.4	0.8	0.6	0.7	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.1	8.9	2.1	0.8	0.4	2.9	2.1	2.3	0.5	3.2	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.1	15.3	28.0	21.4	15.0	14.7	26.7	11.8	12.3	14.7	12.9	13.5
LnGrp LOS	B	B	C	C	B	B	C	B	B	B	B	B
Approach Vol, veh/h		769			335			1053			1066	
Approach Delay, s/veh		24.1			17.9			16.8			13.2	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	42.5	34.4	42.5	34.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.0	43.0	38.0	43.0
Max Q Clear Time (g_c+I1), s	35.5	26.8	12.4	19.3
Green Ext Time (p_c), s	1.7	3.1	7.3	2.1

Intersection Summary	
HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	458	1	379	142	622	0	0	1094	517
Future Volume (veh/h)	0	0	0	458	1	379	142	622	0	0	1094	517
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				588	0	258	145	635	0	0	1116	528
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				834	0	371	532	3288	0	0	4144	1021
Arrive On Green				0.23	0.00	0.23	0.64	0.64	0.00	0.00	0.64	0.64
Sat Flow, veh/h				3563	0	1585	591	5274	0	0	6696	1585
Grp Volume(v), veh/h				588	0	258	145	635	0	0	1116	528
Grp Sat Flow(s),veh/h/ln				1781	0	1585	295	1702	0	0	1609	1585
Q Serve(g_s), s				11.2	0.0	11.0	10.3	3.7	0.0	0.0	5.5	13.1
Cycle Q Clear(g_c), s				11.2	0.0	11.0	15.8	3.7	0.0	0.0	5.5	13.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				834	0	371	532	3288	0	0	4144	1021
V/C Ratio(X)				0.71	0.00	0.70	0.27	0.19	0.00	0.00	0.27	0.52
Avail Cap(c_a), veh/h				1618	0	720	532	3288	0	0	4144	1021
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				25.9	0.0	25.8	9.1	5.3	0.0	0.0	5.7	7.0
Incr Delay (d2), s/veh				1.1	0.0	2.4	1.3	0.1	0.0	0.0	0.2	1.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.6	0.0	4.2	0.6	1.0	0.0	0.0	1.4	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				27.0	0.0	28.2	10.3	5.5	0.0	0.0	5.8	8.9
LnGrp LOS				C	A	C	B	A	A	A	A	A
Approach Vol, veh/h					846			780			1644	
Approach Delay, s/veh					27.4			6.4			6.8	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	52.0		52.0		21.8			
Change Period (Y+Rc), s	4.5		4.5		4.5			
Max Green Setting (Gmax), s	47.5		47.5		33.5			
Max Q Clear Time (g_c+I1), s	18.8		16.1		14.2			
Green Ext Time (p_c), s	8.9		11.9		3.1			

Intersection Summary	
HCM 6th Ctrl Delay	12.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	0	243	0	0	0	0	548	348	456	1096	0
Future Volume (veh/h)	216	0	243	0	0	0	0	548	348	456	1096	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	308	0	164				0	571	362	475	1142	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	521	0	232				0	2543	1184	953	2655	0
Arrive On Green	0.15	0.00	0.15				0.00	0.75	0.75	0.75	0.75	0.00
Sat Flow, veh/h	3563	0	1585				0	3572	1585	1164	3647	0
Grp Volume(v), veh/h	308	0	164				0	571	362	475	1142	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	582	1777	0
Q Serve(g_s), s	6.8	0.0	8.3				0.0	4.3	6.3	19.0	10.1	0.0
Cycle Q Clear(g_c), s	6.8	0.0	8.3				0.0	4.3	6.3	25.3	10.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	521	0	232				0	2543	1184	953	2655	0
V/C Ratio(X)	0.59	0.00	0.71				0.00	0.22	0.31	0.50	0.43	0.00
Avail Cap(c_a), veh/h	766	0	341				0	2543	1184	953	2655	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.6	0.0	34.2				0.0	3.2	3.5	7.6	4.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	4.0				0.0	0.2	0.7	1.9	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	3.4				0.0	1.0	1.4	2.0	2.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.7	0.0	38.2				0.0	3.4	4.2	9.5	4.5	0.0
LnGrp LOS	C	A	D				A	A	A	A	A	A
Approach Vol, veh/h		472						933			1617	
Approach Delay, s/veh		35.9						3.7			6.0	
Approach LOS		D						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	67.4	16.8	67.4
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	62.9	18.1	62.9
Max Q Clear Time (g_c+I1), s	9.3	11.3	28.3
Green Ext Time (p_c), s	7.3	1.0	18.1

Intersection Summary	
HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	341	26	34	329	31	26	54	21	23	46	10
Future Vol, veh/h	17	341	26	34	329	31	26	54	21	23	46	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	371	28	37	358	34	28	59	23	25	50	11
Number of Lanes	0	2	1	0	2	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	12.6	12.4	11.2	11.2
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	33%	0%	13%	0%	0%	24%	0%	0%	33%	0%
Vol Thru, %	68%	0%	87%	100%	0%	76%	100%	0%	67%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	80	21	131	227	26	144	219	31	69	10
LT Vol	26	0	17	0	0	34	0	0	23	0
Through Vol	54	0	114	227	0	110	219	0	46	0
RT Vol	0	21	0	0	26	0	0	31	0	10
Lane Flow Rate	87	23	142	247	28	156	238	34	75	11
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.177	0.041	0.252	0.433	0.044	0.278	0.417	0.052	0.154	0.02
Departure Headway (Hd)	7.325	6.46	6.375	6.309	5.603	6.412	6.292	5.585	7.398	6.527
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	488	551	561	568	636	559	570	639	482	545
Service Time	5.103	4.237	4.135	4.069	3.362	4.17	4.05	3.343	5.179	4.308
HCM Lane V/C Ratio	0.178	0.042	0.253	0.435	0.044	0.279	0.418	0.053	0.156	0.02
HCM Control Delay	11.7	9.5	11.3	13.8	8.6	11.6	13.5	8.7	11.5	9.4
HCM Lane LOS	B	A	B	B	A	B	B	A	B	A
HCM 95th-tile Q	0.6	0.1	1	2.2	0.1	1.1	2	0.2	0.5	0.1

Intersection	
Intersection Delay, s/veh	21.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	350	24	8	343	84	22	150	29	85	146	21
Future Vol, veh/h	17	350	24	8	343	84	22	150	29	85	146	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	380	26	9	373	91	24	163	32	92	159	23
Number of Lanes	1	2	0	1	2	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	3	3
HCM Control Delay	20	20.1	18.5	27.3
HCM LOS	C	C	C	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	13%	0%	100%	0%	0%	100%	0%	0%	34%
Vol Thru, %	87%	0%	0%	100%	83%	0%	100%	58%	58%
Vol Right, %	0%	100%	0%	0%	17%	0%	0%	42%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	172	29	17	233	141	8	229	198	252
LT Vol	22	0	17	0	0	8	0	0	85
Through Vol	150	0	0	233	117	0	229	114	146
RT Vol	0	29	0	0	24	0	0	84	21
Lane Flow Rate	187	32	18	254	153	9	249	216	274
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.471	0.073	0.046	0.597	0.355	0.021	0.578	0.483	0.665
Departure Headway (Hd)	9.079	8.294	8.995	8.476	8.351	8.895	8.376	8.068	8.738
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	396	431	398	426	430	402	430	446	414
Service Time	6.842	6.056	6.753	6.233	6.109	6.653	6.134	5.826	6.492
HCM Lane V/C Ratio	0.472	0.074	0.045	0.596	0.356	0.022	0.579	0.484	0.662
HCM Control Delay	19.7	11.7	12.2	23.1	15.7	11.8	22.1	18.2	27.3
HCM Lane LOS	C	B	B	C	C	B	C	C	D
HCM 95th-tile Q	2.4	0.2	0.1	3.8	1.6	0.1	3.5	2.6	4.7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	342	100	262	223	71	165	773	440	71	539	49
Future Volume (veh/h)	131	342	100	262	223	71	165	773	440	71	539	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	135	353	103	270	230	73	170	797	454	73	556	51
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	498	143	322	694	215	219	1368	610	112	1069	98
Arrive On Green	0.10	0.18	0.18	0.18	0.26	0.26	0.12	0.39	0.39	0.06	0.32	0.32
Sat Flow, veh/h	1781	2723	783	1781	2672	827	1781	3554	1585	1781	3292	301
Grp Volume(v), veh/h	135	229	227	270	151	152	170	797	454	73	300	307
Grp Sat Flow(s),veh/h/ln	1781	1777	1729	1781	1777	1722	1781	1777	1585	1781	1777	1816
Q Serve(g_s), s	7.0	11.5	11.8	14.0	6.6	6.8	8.8	17.0	23.6	3.8	13.1	13.1
Cycle Q Clear(g_c), s	7.0	11.5	11.8	14.0	6.6	6.8	8.8	17.0	23.6	3.8	13.1	13.1
Prop In Lane	1.00		0.45	1.00		0.48	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	185	325	317	322	462	447	219	1368	610	112	577	590
V/C Ratio(X)	0.73	0.70	0.72	0.84	0.33	0.34	0.78	0.58	0.74	0.65	0.52	0.52
Avail Cap(c_a), veh/h	323	708	689	383	767	743	233	1368	610	142	577	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	36.5	36.7	37.8	28.6	28.7	40.6	23.3	25.3	43.7	26.2	26.2
Incr Delay (d2), s/veh	5.5	2.8	3.1	13.3	0.4	0.4	14.4	1.8	8.0	6.9	3.3	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	5.1	5.1	7.1	2.8	2.8	4.6	7.0	9.7	1.9	5.8	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.9	39.3	39.7	51.1	29.0	29.1	54.9	25.1	33.3	50.6	29.5	29.4
LnGrp LOS	D	D	D	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		591			573			1421			680	
Approach Delay, s/veh		41.2			39.4			31.3			31.7	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	41.2	21.7	22.0	16.2	35.5	14.4	29.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.6	35.9	20.5	38.0	12.5	31.0	17.3	41.2
Max Q Clear Time (g_c+I1), s	5.8	26.6	17.0	14.8	11.8	16.1	10.0	9.8
Green Ext Time (p_c), s	0.0	4.6	0.3	2.7	0.0	3.0	0.2	1.8

Intersection Summary	
HCM 6th Ctrl Delay	34.6
HCM 6th LOS	C



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	11	12	1482	2	4	1007
Future Volume (veh/h)	11	12	1482	2	4	1007
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	13	1560	2	4	1060
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	32	35	3814	5	13	4123
Arrive On Green	0.04	0.04	0.72	0.72	0.01	0.81
Sat Flow, veh/h	776	840	5435	7	1781	5274
Grp Volume(v), veh/h	26	0	1008	554	4	1060
Grp Sat Flow(s),veh/h/ln	1680	0	1702	1869	1781	1702
Q Serve(g_s), s	0.9	0.0	6.9	6.9	0.1	3.0
Cycle Q Clear(g_c), s	0.9	0.0	6.9	6.9	0.1	3.0
Prop In Lane	0.46	0.50		0.00	1.00	
Lane Grp Cap(c), veh/h	69	0	2465	1354	13	4123
V/C Ratio(X)	0.38	0.00	0.41	0.41	0.30	0.26
Avail Cap(c_a), veh/h	933	0	2465	1354	210	4123
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	0.0	3.2	3.2	29.3	1.4
Incr Delay (d2), s/veh	3.4	0.0	0.5	0.9	11.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	1.0	1.3	0.1	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.1	0.0	3.7	4.1	41.2	1.5
LnGrp LOS	C	A	A	A	D	A
Approach Vol, veh/h	26		1562			1064
Approach Delay, s/veh	31.1		3.9			1.7
Approach LOS	C		A			A

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	4.9	47.6				52.5	6.9
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	7.0	36.5				48.0	33.0
Max Q Clear Time (g_c+I1), s	3.1	9.9				6.0	3.9
Green Ext Time (p_c), s	0.0	12.1				8.8	0.0

Intersection Summary	
HCM 6th Ctrl Delay	3.3
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

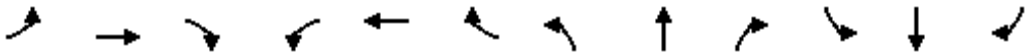
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	917	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	917	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	6	42	52	13	117	82	1304	54	129	756	91
Future Volume (veh/h)	99	6	42	52	13	117	82	1304	54	129	756	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	103	6	44	54	14	122	85	1358	56	134	788	95
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	366	44	325	445	38	330	464	2821	116	320	2592	311
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.56	0.56	0.56	0.56	0.56	0.56
Sat Flow, veh/h	1253	194	1421	1355	166	1445	629	5030	207	380	4621	554
Grp Volume(v), veh/h	103	0	50	54	0	136	85	919	495	134	579	304
Grp Sat Flow(s),veh/h/ln	1253	0	1615	1355	0	1610	629	1702	1833	380	1702	1771
Q Serve(g_s), s	3.2	0.0	1.1	1.4	0.0	3.0	3.5	6.9	6.9	14.0	3.9	3.9
Cycle Q Clear(g_c), s	6.3	0.0	1.1	2.5	0.0	3.0	7.4	6.9	6.9	21.0	3.9	3.9
Prop In Lane	1.00		0.88	1.00		0.90	1.00		0.11	1.00		0.31
Lane Grp Cap(c), veh/h	366	0	369	445	0	368	464	1910	1028	320	1910	993
V/C Ratio(X)	0.28	0.00	0.14	0.12	0.00	0.37	0.18	0.48	0.48	0.42	0.30	0.31
Avail Cap(c_a), veh/h	2628	0	3283	2890	0	3275	464	1910	1028	320	1910	993
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	0.0	13.1	14.1	0.0	13.9	6.9	5.6	5.6	12.0	5.0	5.0
Incr Delay (d2), s/veh	0.4	0.0	0.2	0.1	0.0	0.6	0.9	0.9	1.6	4.0	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.3	0.4	0.0	1.0	0.4	1.4	1.7	1.1	0.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.0	0.0	13.3	14.2	0.0	14.5	7.8	6.5	7.3	16.0	5.4	5.8
LnGrp LOS	B	A	B	B	A	B	A	A	A	B	A	A
Approach Vol, veh/h		153			190			1499			1017	
Approach Delay, s/veh		15.8			14.4			6.8			6.9	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.5		14.3		28.5		14.3				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		24.0		87.0		24.0		87.0				
Max Q Clear Time (g_c+I1), s		10.4		9.3		24.0		6.0				
Green Ext Time (p_c), s		8.0		0.7		0.0		1.1				

Intersection Summary												
HCM 6th Ctrl Delay			7.8									
HCM 6th LOS			A									

Notes

User approved pedestrian interval to be less than phase max green.

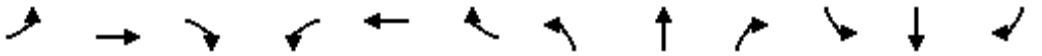
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1022	-	-	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	729	5	6	611	130	3	1	12	154	1	26
Future Volume (veh/h)	50	729	5	6	611	130	3	1	12	154	1	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	752	5	6	630	134	3	1	12	159	1	27
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	214	1130	504	189	1130	504	792	70	837	876	5	896
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.57	0.57	0.57	0.57	0.57	0.57
Sat Flow, veh/h	703	3554	1585	708	3554	1585	1382	123	1480	1386	9	1585
Grp Volume(v), veh/h	52	752	5	6	630	134	3	0	13	160	0	27
Grp Sat Flow(s),veh/h/ln	703	1777	1585	708	1777	1585	1382	0	1604	1395	0	1585
Q Serve(g_s), s	5.1	14.1	0.2	0.6	11.3	4.8	0.1	0.0	0.3	4.3	0.0	0.6
Cycle Q Clear(g_c), s	16.4	14.1	0.2	14.7	11.3	4.8	4.7	0.0	0.3	4.6	0.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.92	0.99		1.00
Lane Grp Cap(c), veh/h	214	1130	504	189	1130	504	792	0	906	882	0	896
V/C Ratio(X)	0.24	0.67	0.01	0.03	0.56	0.27	0.00	0.00	0.01	0.18	0.00	0.03
Avail Cap(c_a), veh/h	333	1731	772	309	1731	772	792	0	906	882	0	896
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.6	22.7	18.0	29.1	21.8	19.6	9.4	0.0	7.3	8.3	0.0	7.4
Incr Delay (d2), s/veh	0.6	0.7	0.0	0.1	0.4	0.3	0.0	0.0	0.0	0.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	5.5	0.1	0.1	4.4	1.7	0.0	0.0	0.1	1.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.1	23.4	18.0	29.1	22.2	19.8	9.4	0.0	7.4	8.8	0.0	7.5
LnGrp LOS	C	C	B	C	C	B	A	A	A	A	A	A
Approach Vol, veh/h		809			770			16			187	
Approach Delay, s/veh		23.7			21.8			7.8			8.6	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		48.0		29.0		48.0		29.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		43.5		37.5		43.5		37.5				
Max Q Clear Time (g_c+I1), s		7.7		19.4		7.6		17.7				
Green Ext Time (p_c), s		0.0		5.1		0.9		4.4				

Intersection Summary												
HCM 6th Ctrl Delay			21.2									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	843	0	22	726	10	1	0	0	7	0	18
Future Volume (veh/h)	42	843	0	22	726	10	1	0	0	7	0	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	44	878	0	23	756	10	1	0	0	7	0	19
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	1818	0	238	1266	564	828	976	0	247	33	592
Arrive On Green	0.36	0.36	0.00	0.36	0.36	0.36	0.52	0.00	0.00	0.52	0.00	0.52
Sat Flow, veh/h	702	5274	0	632	3554	1585	1393	1870	0	355	63	1135
Grp Volume(v), veh/h	44	878	0	23	756	10	1	0	0	26	0	0
Grp Sat Flow(s),veh/h/ln	702	1702	0	632	1777	1585	1393	1870	0	1553	0	0
Q Serve(g_s), s	4.0	9.9	0.0	2.2	12.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	16.9	9.9	0.0	12.0	12.8	0.3	0.0	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.00	0.27		0.73
Lane Grp Cap(c), veh/h	225	1818	0	238	1266	564	828	976	0	872	0	0
V/C Ratio(X)	0.20	0.48	0.00	0.10	0.60	0.02	0.00	0.00	0.00	0.03	0.00	0.00
Avail Cap(c_a), veh/h	380	2942	0	377	2047	913	828	976	0	872	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.3	18.5	0.0	23.1	19.4	15.4	8.4	0.0	0.0	8.6	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.2	0.0	0.2	0.5	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.5	0.0	0.3	4.8	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.7	18.7	0.0	23.3	19.9	15.4	8.4	0.0	0.0	8.6	0.0	0.0
LnGrp LOS	C	B	A	C	B	B	A	A	A	A	A	A
Approach Vol, veh/h		922			789			1			26	
Approach Delay, s/veh		19.1			19.9			8.4			8.6	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	43.0	30.8	43.0	30.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	42.5	38.5	42.5
Max Q Clear Time (g_c+I1), s	3.0	19.9	3.6	15.8
Green Ext Time (p_c), s	0.0	6.4	0.1	5.6

Intersection Summary	
HCM 6th Ctrl Delay	19.3
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	366	422	152	308	120	401	1202	178	104	734	59
Future Volume (veh/h)	88	366	422	152	308	120	401	1202	178	104	734	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	381	440	158	321	125	418	1252	185	108	765	61
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	393	1342	598	297	1342	598	717	2260	334	211	2427	193
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	944	3554	1585	666	3554	1585	1287	4491	664	372	4823	383
Grp Volume(v), veh/h	92	381	440	158	321	125	418	949	488	108	539	287
Grp Sat Flow(s),veh/h/ln	944	1777	1585	666	1777	1585	643	1702	1751	372	1702	1801
Q Serve(g_s), s	5.6	5.6	18.1	16.4	4.7	4.0	21.5	14.5	14.5	21.3	7.1	7.1
Cycle Q Clear(g_c), s	10.2	5.6	18.1	22.0	4.7	4.0	28.6	14.5	14.5	35.8	7.1	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.38	1.00		0.21
Lane Grp Cap(c), veh/h	393	1342	598	297	1342	598	717	1713	881	211	1713	907
V/C Ratio(X)	0.23	0.28	0.74	0.53	0.24	0.21	0.58	0.55	0.55	0.51	0.31	0.32
Avail Cap(c_a), veh/h	575	2024	903	425	2024	903	717	1713	881	211	1713	907
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	16.4	20.2	24.1	16.1	15.9	19.5	12.9	12.9	25.2	11.1	11.1
Incr Delay (d2), s/veh	0.3	0.1	1.8	1.5	0.1	0.2	3.4	1.3	2.5	8.6	0.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.1	6.2	2.5	1.7	1.3	3.1	5.0	5.4	2.2	2.4	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.9	16.5	22.0	25.5	16.2	16.1	23.0	14.2	15.4	33.8	11.5	12.0
LnGrp LOS	B	B	C	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		913			604			1855			934	
Approach Delay, s/veh		19.5			18.6			16.5			14.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	42.5	33.0	42.5	33.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.0	43.0	38.0	43.0
Max Q Clear Time (g_c+I1), s	31.6	21.1	38.8	25.0
Green Ext Time (p_c), s	5.3	4.5	0.0	3.5

Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	339	4	418	283	1305	0	0	870	393
Future Volume (veh/h)	0	0	0	339	4	418	283	1305	0	0	870	393
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				508	0	281	298	1374	0	0	916	414
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				831	0	370	657	3342	0	0	4211	1037
Arrive On Green				0.23	0.00	0.23	0.65	0.65	0.00	0.00	0.65	0.65
Sat Flow, veh/h				3563	0	1585	799	5274	0	0	6696	1585
Grp Volume(v), veh/h				508	0	281	298	1374	0	0	916	414
Grp Sat Flow(s),veh/h/ln				1781	0	1585	400	1702	0	0	1609	1585
Q Serve(g_s), s				10.2	0.0	13.3	19.2	10.2	0.0	0.0	4.6	9.8
Cycle Q Clear(g_c), s				10.2	0.0	13.3	23.8	10.2	0.0	0.0	4.6	9.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				831	0	370	657	3342	0	0	4211	1037
V/C Ratio(X)				0.61	0.00	0.76	0.45	0.41	0.00	0.00	0.22	0.40
Avail Cap(c_a), veh/h				1266	0	563	657	3342	0	0	4211	1037
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				27.5	0.0	28.7	10.4	6.6	0.0	0.0	5.6	6.5
Incr Delay (d2), s/veh				0.7	0.0	3.2	2.3	0.4	0.0	0.0	0.1	1.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.3	0.0	5.2	1.5	2.9	0.0	0.0	1.2	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				28.2	0.0	31.9	12.6	6.9	0.0	0.0	5.7	7.6
LnGrp LOS				C	A	C	B	A	A	A	A	A
Approach Vol, veh/h					789			1672			1330	
Approach Delay, s/veh					29.5			7.9			6.3	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	57.0		57.0		23.2	
Change Period (Y+Rc), s	4.5		4.5		4.5	
Max Green Setting (Gmax), s	52.5		52.5		28.5	
Max Q Clear Time (g_c+I1), s	26.8		12.8		16.3	
Green Ext Time (p_c), s	16.5		9.4		2.5	

Intersection Summary		
HCM 6th Ctrl Delay		11.9
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	520	0	305	0	0	0	0	1073	438	345	864	0
Future Volume (veh/h)	520	0	305	0	0	0	0	1073	438	345	864	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	647	0	214				0	1129	461	363	909	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	713	0	317				0	2492	1017	509	2488	0
Arrive On Green	0.20	0.00	0.20				0.00	0.70	0.70	0.70	0.70	0.00
Sat Flow, veh/h	3563	0	1585				0	3729	1452	622	3647	0
Grp Volume(v), veh/h	647	0	214				0	1079	511	363	909	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1609	311	1777	0
Q Serve(g_s), s	16.0	0.0	11.2				0.0	12.5	12.6	50.4	9.3	0.0
Cycle Q Clear(g_c), s	16.0	0.0	11.2				0.0	12.5	12.6	63.0	9.3	0.0
Prop In Lane	1.00		1.00				0.00		0.90	1.00		0.00
Lane Grp Cap(c), veh/h	713	0	317				0	2383	1126	509	2488	0
V/C Ratio(X)	0.91	0.00	0.68				0.00	0.45	0.45	0.71	0.37	0.00
Avail Cap(c_a), veh/h	713	0	317				0	2383	1126	509	2488	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	35.2	0.0	33.3				0.0	5.9	5.9	20.8	5.4	0.0
Incr Delay (d2), s/veh	15.5	0.0	5.6				0.0	0.6	1.3	8.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	0.0	4.7				0.0	3.5	3.5	3.9	2.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.7	0.0	38.9				0.0	6.6	7.3	29.0	5.9	0.0
LnGrp LOS	D	A	D				A	A	A	C	A	A
Approach Vol, veh/h		861						1590			1272	
Approach Delay, s/veh		47.8						6.8			12.5	
Approach LOS		D						A			B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	67.5	22.5	67.5
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	63.0	18.0	63.0
Max Q Clear Time (g_c+I1), s	15.6	19.0	66.0
Green Ext Time (p_c), s	16.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	13.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	246	130	46	201	74	84	38	33	107	55	63
Future Vol, veh/h	29	246	130	46	201	74	84	38	33	107	55	63
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	267	141	50	218	80	91	41	36	116	60	68
Number of Lanes	0	2	1	0	2	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	12.7	12.6	13.5	14.2
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	69%	0%	26%	0%	0%	41%	0%	0%	66%	0%
Vol Thru, %	31%	0%	74%	100%	0%	59%	100%	0%	34%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	122	33	111	164	130	113	134	74	162	63
LT Vol	84	0	29	0	0	46	0	0	107	0
Through Vol	38	0	82	164	0	67	134	0	55	0
RT Vol	0	33	0	0	130	0	0	74	0	63
Lane Flow Rate	133	36	121	178	141	123	146	80	176	68
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.3	0.071	0.246	0.357	0.255	0.259	0.299	0.149	0.387	0.131
Departure Headway (Hd)	8.152	7.098	7.35	7.217	6.502	7.605	7.397	6.682	7.917	6.879
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	440	504	489	499	553	472	485	536	454	521
Service Time	5.905	4.85	5.096	4.963	4.248	5.354	5.146	4.431	5.665	4.626
HCM Lane V/C Ratio	0.302	0.071	0.247	0.357	0.255	0.261	0.301	0.149	0.388	0.131
HCM Control Delay	14.4	10.4	12.5	13.9	11.5	13	13.3	10.6	15.6	10.7
HCM Lane LOS	B	B	B	B	B	B	B	B	C	B
HCM 95th-tile Q	1.2	0.2	1	1.6	1	1	1.2	0.5	1.8	0.4

Intersection	
Intersection Delay, s/veh	17.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	337	33	19	279	71	19	53	11	85	182	23
Future Vol, veh/h	14	337	33	19	279	71	19	53	11	85	182	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	366	36	21	303	77	21	58	12	92	198	25
Number of Lanes	1	2	0	1	2	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	3	3
HCM Control Delay	16	14.8	13	24.5
HCM LOS	C	B	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	26%	0%	100%	0%	0%	100%	0%	0%	29%
Vol Thru, %	74%	0%	0%	100%	77%	0%	100%	57%	63%
Vol Right, %	0%	100%	0%	0%	23%	0%	0%	43%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	72	11	14	225	145	19	186	164	290
LT Vol	19	0	14	0	0	19	0	0	85
Through Vol	53	0	0	225	112	0	186	93	182
RT Vol	0	11	0	0	33	0	0	71	23
Lane Flow Rate	78	12	15	244	158	21	202	178	315
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.186	0.026	0.034	0.508	0.322	0.046	0.424	0.358	0.668
Departure Headway (Hd)	8.566	7.716	8.01	7.496	7.333	8.062	7.548	7.236	7.628
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	418	462	446	481	490	443	475	496	473
Service Time	6.346	5.495	5.771	5.257	5.093	5.825	5.31	4.998	5.385
HCM Lane V/C Ratio	0.187	0.026	0.034	0.507	0.322	0.047	0.425	0.359	0.666
HCM Control Delay	13.3	10.7	11.1	17.8	13.6	11.2	15.8	14	24.5
HCM Lane LOS	B	B	B	C	B	B	C	B	C
HCM 95th-tile Q	0.7	0.1	0.1	2.8	1.4	0.1	2.1	1.6	4.8



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	211	109	307	238	74	56	393	138	90	699	86
Future Volume (veh/h)	79	211	109	307	238	74	56	393	138	90	699	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	83	222	115	323	251	78	59	414	145	95	736	91
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	124	347	173	381	794	241	108	1252	558	139	1176	145
Arrive On Green	0.07	0.15	0.15	0.21	0.30	0.30	0.06	0.35	0.35	0.08	0.37	0.37
Sat Flow, veh/h	1781	2295	1146	1781	2685	815	1781	3554	1585	1781	3183	393
Grp Volume(v), veh/h	83	170	167	323	164	165	59	414	145	95	411	416
Grp Sat Flow(s),veh/h/ln	1781	1777	1664	1781	1777	1724	1781	1777	1585	1781	1777	1800
Q Serve(g_s), s	4.0	7.9	8.3	15.3	6.3	6.6	2.8	7.5	5.7	4.6	16.7	16.7
Cycle Q Clear(g_c), s	4.0	7.9	8.3	15.3	6.3	6.6	2.8	7.5	5.7	4.6	16.7	16.7
Prop In Lane	1.00		0.69	1.00		0.47	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	124	269	252	381	525	510	108	1252	558	139	656	665
V/C Ratio(X)	0.67	0.63	0.66	0.85	0.31	0.32	0.55	0.33	0.26	0.69	0.63	0.63
Avail Cap(c_a), veh/h	247	767	719	496	1016	985	142	1252	558	172	656	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	35.0	35.2	33.2	24.1	24.1	40.1	20.9	20.3	39.5	22.8	22.8
Incr Delay (d2), s/veh	6.1	2.5	3.0	10.3	0.3	0.4	4.2	0.7	1.1	8.0	4.5	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	3.5	3.5	7.4	2.6	2.6	1.3	3.0	2.2	2.2	7.3	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.0	37.5	38.2	43.5	24.4	24.5	44.4	21.6	21.4	47.5	27.2	27.2
LnGrp LOS	D	D	D	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		420			652			618			922	
Approach Delay, s/veh		39.5			33.9			23.7			29.3	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	35.5	23.3	17.8	9.8	37.0	10.6	30.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.5	31.0	24.5	38.0	7.0	32.5	12.2	50.3
Max Q Clear Time (g_c+I1), s	7.6	10.5	18.3	11.3	5.8	19.7	7.0	9.6
Green Ext Time (p_c), s	0.0	2.9	0.5	2.0	0.0	4.0	0.1	2.0

Intersection Summary	
HCM 6th Ctrl Delay	30.8
HCM 6th LOS	C



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	3	4	634	8	15	1128
Future Volume (veh/h)	3	4	634	8	15	1128
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	4	689	9	16	1226
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	9	12	3764	49	49	4237
Arrive On Green	0.01	0.01	0.72	0.72	0.03	0.83
Sat Flow, veh/h	633	843	5363	68	1781	5274
Grp Volume(v), veh/h	8	0	451	247	16	1226
Grp Sat Flow(s),veh/h/ln	1687	0	1702	1858	1781	1702
Q Serve(g_s), s	0.3	0.0	2.4	2.4	0.5	3.1
Cycle Q Clear(g_c), s	0.3	0.0	2.4	2.4	0.5	3.1
Prop In Lane	0.37	0.50		0.04	1.00	
Lane Grp Cap(c), veh/h	25	0	2467	1346	49	4237
V/C Ratio(X)	0.32	0.00	0.18	0.18	0.33	0.29
Avail Cap(c_a), veh/h	962	0	2467	1346	293	4237
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.2	0.0	2.5	2.5	27.6	1.1
Incr Delay (d2), s/veh	7.4	0.0	0.2	0.3	3.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.3	0.4	0.3	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	35.6	0.0	2.7	2.8	31.4	1.3
LnGrp LOS	D	A	A	A	C	A
Approach Vol, veh/h	8		698			1242
Approach Delay, s/veh	35.6		2.7			1.7
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.1	46.4			52.5	5.3
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	9.5	34.0			48.0	33.0
Max Q Clear Time (g_c+I1), s	3.5	5.4			6.1	3.3
Green Ext Time (p_c), s	0.0	4.5			10.8	0.0

Intersection Summary	
HCM 6th Ctrl Delay	2.2
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

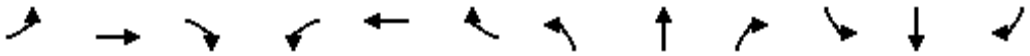
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	2	6	0
Future Vol, veh/h	0	0	0	2	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	2	7	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	4	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	913	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	913	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	3	46	26	2	32	43	605	30	112	946	74
Future Volume (veh/h)	24	3	46	26	2	32	43	605	30	112	946	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	3	50	28	2	35	47	658	33	122	1028	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	335	12	207	321	12	208	454	3208	160	619	3111	242
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.64	0.64	0.64	0.64	0.64	0.64
Sat Flow, veh/h	1371	91	1508	1351	86	1512	509	4981	249	752	4831	375
Grp Volume(v), veh/h	26	0	53	28	0	37	47	449	242	122	724	384
Grp Sat Flow(s),veh/h/ln	1371	0	1599	1351	0	1598	509	1702	1826	752	1702	1803
Q Serve(g_s), s	0.7	0.0	1.2	0.8	0.0	0.8	1.9	2.2	2.2	3.3	4.0	4.0
Cycle Q Clear(g_c), s	1.5	0.0	1.2	2.0	0.0	0.8	5.9	2.2	2.2	5.5	4.0	4.0
Prop In Lane	1.00		0.94	1.00		0.95	1.00		0.14	1.00		0.21
Lane Grp Cap(c), veh/h	335	0	220	321	0	219	454	2192	1176	619	2192	1161
V/C Ratio(X)	0.08	0.00	0.24	0.09	0.00	0.17	0.10	0.20	0.21	0.20	0.33	0.33
Avail Cap(c_a), veh/h	3295	0	3672	3238	0	3670	454	2192	1176	619	2192	1161
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.4	0.0	15.8	16.7	0.0	15.7	4.6	3.0	3.0	4.1	3.3	3.3
Incr Delay (d2), s/veh	0.1	0.0	0.6	0.1	0.0	0.4	0.5	0.2	0.4	0.7	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.4	0.2	0.0	0.3	0.2	0.3	0.3	0.3	0.5	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.5	0.0	16.4	16.8	0.0	16.0	5.1	3.2	3.4	4.9	3.7	4.1
LnGrp LOS	B	A	B	B	A	B	A	A	A	A	A	A
Approach Vol, veh/h		79			65			738			1230	
Approach Delay, s/veh		16.4			16.4			3.4			3.9	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.0		10.2		31.0		10.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		26.5		94.5		26.5		94.5				
Max Q Clear Time (g_c+I1), s		8.9		4.5		8.5		5.0				
Green Ext Time (p_c), s		4.4		0.4		7.6		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			4.6									
HCM 6th LOS			A									

Notes

User approved pedestrian interval to be less than phase max green.

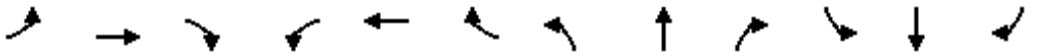
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1022	-	-	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	592	0	6	463	57	1	0	2	179	0	50
Future Volume (veh/h)	20	592	0	6	463	57	1	0	2	179	0	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	643	0	7	503	62	1	0	2	195	0	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	211	919	410	171	919	410	852	0	985	974	0	985
Arrive On Green	0.26	0.26	0.00	0.26	0.26	0.26	0.62	0.00	0.62	0.62	0.00	0.62
Sat Flow, veh/h	846	3554	1585	787	3554	1585	1350	0	1585	1414	0	1585
Grp Volume(v), veh/h	22	643	0	7	503	62	1	0	2	195	0	54
Grp Sat Flow(s),veh/h/ln	846	1777	1585	787	1777	1585	1350	0	1585	1414	0	1585
Q Serve(g_s), s	1.7	12.3	0.0	0.6	9.2	2.3	0.0	0.0	0.0	4.5	0.0	1.0
Cycle Q Clear(g_c), s	10.9	12.3	0.0	12.9	9.2	2.3	4.6	0.0	0.0	4.6	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	211	919	410	171	919	410	852	0	985	974	0	985
V/C Ratio(X)	0.10	0.70	0.00	0.04	0.55	0.15	0.00	0.00	0.00	0.20	0.00	0.05
Avail Cap(c_a), veh/h	383	1638	731	330	1638	731	852	0	985	974	0	985
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.7	25.1	0.0	30.9	24.0	21.4	7.2	0.0	5.4	6.2	0.0	5.6
Incr Delay (d2), s/veh	0.2	1.0	0.0	0.1	0.5	0.2	0.0	0.0	0.0	0.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.9	0.0	0.1	3.6	0.8	0.0	0.0	0.0	1.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.9	26.1	0.0	31.0	24.5	21.6	7.3	0.0	5.4	6.7	0.0	5.7
LnGrp LOS	C	C	A	C	C	C	A	A	A	A	A	A
Approach Vol, veh/h		665			572			3			249	
Approach Delay, s/veh		26.2			24.2			6.0			6.5	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		51.0		23.9		51.0		23.9				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		46.5		34.5		46.5		34.5				
Max Q Clear Time (g_c+I1), s		7.6		15.3		7.6		15.9				
Green Ext Time (p_c), s		0.0		4.1		1.2		3.2				

Intersection Summary												
HCM 6th Ctrl Delay			22.1									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	753	0	2	515	3	0	0	0	3	0	7
Future Volume (veh/h)	10	753	0	2	515	3	0	0	0	3	0	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	818	0	2	560	3	0	0	0	3	0	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	234	1440	0	206	1002	447	109	1088	0	279	36	657
Arrive On Green	0.28	0.28	0.00	0.28	0.28	0.28	0.00	0.00	0.00	0.58	0.00	0.58
Sat Flow, veh/h	847	5274	0	668	3554	1585	1407	1870	0	361	62	1129
Grp Volume(v), veh/h	11	818	0	2	560	3	0	0	0	11	0	0
Grp Sat Flow(s),veh/h/ln	847	1702	0	668	1777	1585	1407	1870	0	1552	0	0
Q Serve(g_s), s	0.7	9.1	0.0	0.2	8.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	9.6	9.1	0.0	9.2	8.9	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.00	0.27		0.73
Lane Grp Cap(c), veh/h	234	1440	0	206	1002	447	109	1088	0	972	0	0
V/C Ratio(X)	0.05	0.57	0.00	0.01	0.56	0.01	0.00	0.00	0.00	0.01	0.00	0.00
Avail Cap(c_a), veh/h	539	3280	0	447	2283	1018	109	1088	0	972	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.3	20.3	0.0	24.2	20.2	17.1	0.0	0.0	0.0	5.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.4	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	3.2	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.4	20.7	0.0	24.3	20.7	17.1	0.0	0.0	0.0	5.8	0.0	0.0
LnGrp LOS	C	C	A	C	C	B	A	A	A	A	A	A
Approach Vol, veh/h		829			565			0			11	
Approach Delay, s/veh		20.7			20.7			0.0			5.8	
Approach LOS		C			C						A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	43.0	23.2	43.0	23.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	42.5	38.5	42.5
Max Q Clear Time (g_c+I1), s	0.0	12.6	3.2	12.2
Green Ext Time (p_c), s	0.0	6.0	0.0	3.8

Intersection Summary	
HCM 6th Ctrl Delay	20.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	200	522	150	145	35	340	583	110	45	979	26
Future Volume (veh/h)	32	200	522	150	145	35	340	583	110	45	979	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	208	544	156	151	36	354	607	115	47	1020	27
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	533	1403	626	347	1403	626	564	2115	395	388	2503	66
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	1196	3554	1585	711	3554	1585	1045	4323	806	731	5115	135
Grp Volume(v), veh/h	33	208	544	156	151	36	354	476	246	47	679	368
Grp Sat Flow(s),veh/h/ln	1196	1777	1585	711	1777	1585	523	1702	1725	731	1702	1846
Q Serve(g_s), s	1.4	2.9	24.6	14.0	2.1	1.1	25.4	6.4	6.6	3.2	9.9	9.9
Cycle Q Clear(g_c), s	3.5	2.9	24.6	17.0	2.1	1.1	35.3	6.4	6.6	9.8	9.9	9.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.47	1.00		0.07
Lane Grp Cap(c), veh/h	533	1403	626	347	1403	626	564	1666	844	388	1666	903
V/C Ratio(X)	0.06	0.15	0.87	0.45	0.11	0.06	0.63	0.29	0.29	0.12	0.41	0.41
Avail Cap(c_a), veh/h	723	1968	878	460	1968	878	564	1666	844	388	1666	903
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.0	15.1	21.7	20.6	14.9	14.6	23.9	11.8	11.8	14.7	12.6	12.7
Incr Delay (d2), s/veh	0.0	0.0	6.9	0.9	0.0	0.0	5.2	0.4	0.9	0.6	0.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.1	9.3	2.2	0.8	0.4	3.2	2.2	2.4	0.5	3.4	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.0	15.2	28.6	21.5	14.9	14.6	29.1	12.2	12.7	15.4	13.4	14.0
LnGrp LOS	B	B	C	C	B	B	C	B	B	B	B	B
Approach Vol, veh/h		785			343			1076			1094	
Approach Delay, s/veh		24.5			17.9			17.9			13.7	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	42.5	35.2	42.5	35.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.0	43.0	38.0	43.0
Max Q Clear Time (g_c+I1), s	38.3	27.6	12.9	20.0
Green Ext Time (p_c), s	0.0	3.1	7.6	2.2

Intersection Summary	
HCM 6th Ctrl Delay	18.1
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	469	1	388	145	635	0	0	1119	530
Future Volume (veh/h)	0	0	0	469	1	388	145	635	0	0	1119	530
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				603	0	264	148	648	0	0	1142	541
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				849	0	378	514	3270	0	0	4120	1015
Arrive On Green				0.24	0.00	0.24	0.64	0.64	0.00	0.00	0.64	0.64
Sat Flow, veh/h				3563	0	1585	569	5274	0	0	6696	1585
Grp Volume(v), veh/h				603	0	264	148	648	0	0	1142	541
Grp Sat Flow(s),veh/h/ln				1781	0	1585	284	1702	0	0	1609	1585
Q Serve(g_s), s				11.5	0.0	11.3	11.4	3.9	0.0	0.0	5.8	13.8
Cycle Q Clear(g_c), s				11.5	0.0	11.3	17.2	3.9	0.0	0.0	5.8	13.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				849	0	378	514	3270	0	0	4120	1015
V/C Ratio(X)				0.71	0.00	0.70	0.29	0.20	0.00	0.00	0.28	0.53
Avail Cap(c_a), veh/h				1609	0	716	514	3270	0	0	4120	1015
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				25.9	0.0	25.8	9.6	5.5	0.0	0.0	5.8	7.3
Incr Delay (d2), s/veh				1.1	0.0	2.3	1.4	0.1	0.0	0.0	0.2	2.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.8	0.0	4.3	0.7	1.0	0.0	0.0	1.5	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				27.0	0.0	28.2	11.0	5.6	0.0	0.0	6.0	9.3
LnGrp LOS				C	A	C	B	A	A	A	A	A
Approach Vol, veh/h					867			796			1683	
Approach Delay, s/veh					27.4			6.6			7.1	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	52.0		52.0		22.2	
Change Period (Y+Rc), s	4.5		4.5		4.5	
Max Green Setting (Gmax), s	47.5		47.5		33.5	
Max Q Clear Time (g_c+I1), s	20.2		16.8		14.5	
Green Ext Time (p_c), s	9.2		12.2		3.2	

Intersection Summary		
HCM 6th Ctrl Delay	12.2	
HCM 6th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	221	0	250	0	0	0	0	559	355	468	1120	0
Future Volume (veh/h)	221	0	250	0	0	0	0	559	355	468	1120	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	316	0	168				0	582	370	488	1167	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	529	0	235				0	2536	1181	933	2647	0
Arrive On Green	0.15	0.00	0.15				0.00	0.74	0.74	0.74	0.74	0.00
Sat Flow, veh/h	3563	0	1585				0	3572	1585	1143	3647	0
Grp Volume(v), veh/h	316	0	168				0	582	370	488	1167	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	572	1777	0
Q Serve(g_s), s	7.0	0.0	8.5				0.0	4.4	6.6	20.9	10.5	0.0
Cycle Q Clear(g_c), s	7.0	0.0	8.5				0.0	4.4	6.6	27.5	10.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	529	0	235				0	2536	1181	933	2647	0
V/C Ratio(X)	0.60	0.00	0.71				0.00	0.23	0.31	0.52	0.44	0.00
Avail Cap(c_a), veh/h	764	0	340				0	2536	1181	933	2647	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.6	0.0	34.2				0.0	3.3	3.6	8.2	4.1	0.0
Incr Delay (d2), s/veh	1.1	0.0	4.0				0.0	0.2	0.7	2.1	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	3.5				0.0	1.0	1.5	2.2	2.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.7	0.0	38.2				0.0	3.5	4.3	10.2	4.6	0.0
LnGrp LOS	C	A	D				A	A	A	B	A	A
Approach Vol, veh/h		484						952			1655	
Approach Delay, s/veh		35.9						3.8			6.3	
Approach LOS		D						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	67.4	17.0	67.4
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	62.9	18.1	62.9
Max Q Clear Time (g_c+I1), s	9.6	11.5	30.5
Green Ext Time (p_c), s	7.5	1.0	18.1

Intersection Summary	
HCM 6th Ctrl Delay	10.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	351	27	35	341	32	27	55	21	23	47	10
Future Vol, veh/h	17	351	27	35	341	32	27	55	21	23	47	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	382	29	38	371	35	29	60	23	25	51	11
Number of Lanes	0	2	1	0	2	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	13	12.8	11.4	11.4
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	33%	0%	13%	0%	0%	24%	0%	0%	33%	0%
Vol Thru, %	67%	0%	87%	100%	0%	76%	100%	0%	67%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	82	21	134	234	27	149	227	32	70	10
LT Vol	27	0	17	0	0	35	0	0	23	0
Through Vol	55	0	117	234	0	114	227	0	47	0
RT Vol	0	21	0	0	27	0	0	32	0	10
Lane Flow Rate	89	23	146	254	29	162	247	35	76	11
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.184	0.041	0.26	0.45	0.046	0.29	0.436	0.054	0.158	0.02
Departure Headway (Hd)	7.413	6.544	6.434	6.369	5.662	6.464	6.345	5.638	7.487	6.619
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	481	544	556	565	629	554	566	632	476	537
Service Time	5.194	4.325	4.196	4.132	3.425	4.226	4.107	3.399	5.271	4.402
HCM Lane V/C Ratio	0.185	0.042	0.263	0.45	0.046	0.292	0.436	0.055	0.16	0.02
HCM Control Delay	11.9	9.6	11.5	14.3	8.7	11.9	14	8.7	11.7	9.5
HCM Lane LOS	B	A	B	B	A	B	B	A	B	A
HCM 95th-tile Q	0.7	0.1	1	2.3	0.1	1.2	2.2	0.2	0.6	0.1

Intersection	
Intersection Delay, s/veh	22.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	360	24	8	355	86	22	153	30	87	149	21
Future Vol, veh/h	17	360	24	8	355	86	22	153	30	87	149	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	391	26	9	386	93	24	166	33	95	162	23
Number of Lanes	1	2	0	1	2	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	3	3
HCM Control Delay	21.2	21.5	19.3	29.4
HCM LOS	C	C	C	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	13%	0%	100%	0%	0%	100%	0%	0%	34%
Vol Thru, %	87%	0%	0%	100%	83%	0%	100%	58%	58%
Vol Right, %	0%	100%	0%	0%	17%	0%	0%	42%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	175	30	17	240	144	8	237	204	257
LT Vol	22	0	17	0	0	8	0	0	87
Through Vol	153	0	0	240	120	0	237	118	149
RT Vol	0	30	0	0	24	0	0	86	21
Lane Flow Rate	190	33	18	261	157	9	257	222	279
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.489	0.077	0.047	0.626	0.37	0.022	0.609	0.507	0.691
Departure Headway (Hd)	9.263	8.478	9.156	8.636	8.514	9.046	8.526	8.219	8.9
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	388	422	391	417	423	395	422	438	405
Service Time	7.034	6.248	6.922	6.401	6.279	6.811	6.29	5.984	6.662
HCM Lane V/C Ratio	0.49	0.078	0.046	0.626	0.371	0.023	0.609	0.507	0.689
HCM Control Delay	20.6	12	12.4	24.9	16.2	12	23.8	19.2	29.4
HCM Lane LOS	C	B	B	C	C	B	C	C	D
HCM 95th-tile Q	2.6	0.2	0.1	4.1	1.7	0.1	3.9	2.8	5.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	352	102	267	232	72	168	795	449	72	554	50
Future Volume (veh/h)	134	352	102	267	232	72	168	795	449	72	554	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	138	363	105	275	239	74	173	820	463	74	571	52
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	186	503	144	322	701	212	188	1395	622	110	1148	104
Arrive On Green	0.10	0.18	0.18	0.18	0.26	0.26	0.11	0.39	0.39	0.06	0.35	0.35
Sat Flow, veh/h	1781	2728	779	1781	2688	813	1781	3554	1585	1781	3294	299
Grp Volume(v), veh/h	138	235	233	275	156	157	173	820	463	74	307	316
Grp Sat Flow(s),veh/h/ln	1781	1777	1730	1781	1777	1724	1781	1777	1585	1781	1777	1816
Q Serve(g_s), s	7.5	12.4	12.6	14.9	7.1	7.4	9.6	18.1	25.0	4.0	13.6	13.6
Cycle Q Clear(g_c), s	7.5	12.4	12.6	14.9	7.1	7.4	9.6	18.1	25.0	4.0	13.6	13.6
Prop In Lane	1.00		0.45	1.00		0.47	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	186	328	319	322	463	449	188	1395	622	110	619	633
V/C Ratio(X)	0.74	0.72	0.73	0.86	0.34	0.35	0.92	0.59	0.74	0.67	0.50	0.50
Avail Cap(c_a), veh/h	283	678	661	336	732	710	188	1395	622	134	619	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.3	38.1	38.3	39.5	29.8	29.9	44.1	23.9	26.0	45.7	25.5	25.6
Incr Delay (d2), s/veh	5.7	2.9	3.2	18.4	0.4	0.5	43.7	1.8	7.9	9.4	2.8	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	5.5	5.5	8.0	3.0	3.0	6.4	7.5	10.3	2.0	5.9	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.0	41.1	41.5	57.9	30.3	30.4	87.8	25.7	33.8	55.1	28.4	28.3
LnGrp LOS	D	D	D	E	C	C	F	C	C	E	C	C
Approach Vol, veh/h		606			588			1456			697	
Approach Delay, s/veh		43.0			43.2			35.7			31.2	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	43.6	22.5	22.9	15.0	39.2	14.9	30.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.5	37.7	18.8	38.0	10.5	34.7	15.8	41.0
Max Q Clear Time (g_c+I1), s	17.0	28.0	17.9	15.6	12.6	16.6	10.5	10.4
Green Ext Time (p_c), s	0.0	4.9	0.1	2.7	0.0	3.3	0.1	1.8

Intersection Summary	
HCM 6th Ctrl Delay	37.4
HCM 6th LOS	D



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	11	12	1519	2	4	1031
Future Volume (veh/h)	11	12	1519	2	4	1031
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	13	1599	2	4	1085
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	32	35	3814	5	13	4123
Arrive On Green	0.04	0.04	0.72	0.72	0.01	0.81
Sat Flow, veh/h	776	840	5435	7	1781	5274
Grp Volume(v), veh/h	26	0	1033	568	4	1085
Grp Sat Flow(s),veh/h/ln	1680	0	1702	1869	1781	1702
Q Serve(g_s), s	0.9	0.0	7.1	7.1	0.1	3.1
Cycle Q Clear(g_c), s	0.9	0.0	7.1	7.1	0.1	3.1
Prop In Lane	0.46	0.50		0.00	1.00	
Lane Grp Cap(c), veh/h	69	0	2465	1354	13	4123
V/C Ratio(X)	0.38	0.00	0.42	0.42	0.30	0.26
Avail Cap(c_a), veh/h	933	0	2465	1354	210	4123
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	0.0	3.2	3.2	29.3	1.4
Incr Delay (d2), s/veh	3.4	0.0	0.5	1.0	11.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	1.1	1.3	0.1	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.1	0.0	3.8	4.2	41.2	1.6
LnGrp LOS	C	A	A	A	D	A
Approach Vol, veh/h	26		1601			1089
Approach Delay, s/veh	31.1		3.9			1.7
Approach LOS	C		A			A

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	4.9	47.6				52.5	6.9
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	7.0	36.5				48.0	33.0
Max Q Clear Time (g_c+I1), s	3.1	10.1				6.1	3.9
Green Ext Time (p_c), s	0.0	12.4				9.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	3.3
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

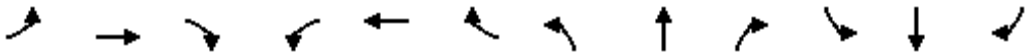
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	7	4	0
Future Vol, veh/h	0	0	0	7	4	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	8	4	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	2	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	916	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	916	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	6	43	53	13	119	84	1337	55	132	775	93
Future Volume (veh/h)	101	6	43	53	13	119	84	1337	55	132	775	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	105	6	45	55	14	124	88	1393	57	138	807	97
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	367	44	330	447	38	335	454	2812	115	311	2584	309
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.56	0.56	0.56	0.56	0.56	0.56
Sat Flow, veh/h	1251	190	1424	1354	163	1447	617	5031	206	367	4623	552
Grp Volume(v), veh/h	105	0	51	55	0	138	88	942	508	138	593	311
Grp Sat Flow(s),veh/h/ln	1251	0	1614	1354	0	1610	617	1702	1833	367	1702	1771
Q Serve(g_s), s	3.3	0.0	1.1	1.4	0.0	3.1	3.8	7.3	7.3	15.8	4.0	4.0
Cycle Q Clear(g_c), s	6.4	0.0	1.1	2.5	0.0	3.1	7.9	7.3	7.3	23.0	4.0	4.0
Prop In Lane	1.00		0.88	1.00		0.90	1.00		0.11	1.00		0.31
Lane Grp Cap(c), veh/h	367	0	374	447	0	373	454	1903	1025	311	1903	990
V/C Ratio(X)	0.29	0.00	0.14	0.12	0.00	0.37	0.19	0.50	0.50	0.44	0.31	0.31
Avail Cap(c_a), veh/h	2612	0	3270	2876	0	3262	454	1903	1025	311	1903	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.6	0.0	13.1	14.1	0.0	13.9	7.2	5.8	5.8	12.8	5.1	5.1
Incr Delay (d2), s/veh	0.4	0.0	0.2	0.1	0.0	0.6	0.9	0.9	1.7	4.5	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.3	0.4	0.0	1.0	0.4	1.5	1.8	1.3	0.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.0	0.0	13.3	14.2	0.0	14.5	8.1	6.7	7.5	17.3	5.5	5.9
LnGrp LOS	B	A	B	B	A	B	A	A	A	B	A	A
Approach Vol, veh/h		156			193			1538			1042	
Approach Delay, s/veh		15.8			14.4			7.0			7.2	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	28.5	14.4	28.5	14.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	24.0	87.0	24.0	87.0
Max Q Clear Time (g_c+I1), s	10.9	9.4	26.0	6.1
Green Ext Time (p_c), s	8.0	0.7	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	8.0
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

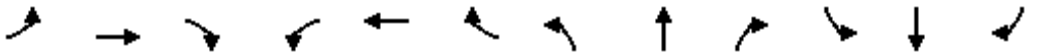
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1022	-	-	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	745	5	6	624	133	3	1	12	157	1	27
Future Volume (veh/h)	51	745	5	6	624	133	3	1	12	157	1	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	53	768	5	6	643	137	3	1	12	162	1	28
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	217	1158	516	192	1158	516	777	69	824	865	5	882
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.56	0.56	0.56	0.56	0.56	0.56
Sat Flow, veh/h	693	3554	1585	697	3554	1585	1381	123	1480	1385	9	1585
Grp Volume(v), veh/h	53	768	5	6	643	137	3	0	13	163	0	28
Grp Sat Flow(s),veh/h/ln	693	1777	1585	697	1777	1585	1381	0	1604	1395	0	1585
Q Serve(g_s), s	5.2	14.2	0.2	0.6	11.4	4.9	0.1	0.0	0.3	4.5	0.0	0.6
Cycle Q Clear(g_c), s	16.6	14.2	0.2	14.8	11.4	4.9	4.8	0.0	0.3	4.7	0.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.92	0.99		1.00
Lane Grp Cap(c), veh/h	217	1158	516	192	1158	516	777	0	892	870	0	882
V/C Ratio(X)	0.24	0.66	0.01	0.03	0.56	0.27	0.00	0.00	0.01	0.19	0.00	0.03
Avail Cap(c_a), veh/h	340	1791	799	316	1791	799	777	0	892	870	0	882
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.0	22.1	17.4	28.5	21.2	19.0	9.8	0.0	7.6	8.6	0.0	7.6
Incr Delay (d2), s/veh	0.6	0.7	0.0	0.1	0.4	0.3	0.0	0.0	0.0	0.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	5.5	0.1	0.1	4.4	1.7	0.0	0.0	0.1	1.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	22.8	17.4	28.6	21.6	19.3	9.8	0.0	7.6	9.1	0.0	7.7
LnGrp LOS	C	C	B	C	C	B	A	A	A	A	A	A
Approach Vol, veh/h		826			786			16			191	
Approach Delay, s/veh		23.1			21.3			8.0			8.9	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		47.0		29.4		47.0		29.4				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		42.5		38.5		42.5		38.5				
Max Q Clear Time (g_c+I1), s		7.8		19.6		7.7		17.8				
Green Ext Time (p_c), s		0.0		5.3		0.9		4.6				

Intersection Summary												
HCM 6th Ctrl Delay			20.7									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	861	0	22	742	10	1	0	0	7	0	18
Future Volume (veh/h)	43	861	0	22	742	10	1	0	0	7	0	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	45	897	0	23	773	10	1	0	0	7	0	19
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	224	1848	0	237	1286	574	820	967	0	245	32	587
Arrive On Green	0.36	0.36	0.00	0.36	0.36	0.36	0.52	0.00	0.00	0.52	0.00	0.52
Sat Flow, veh/h	691	5274	0	621	3554	1585	1393	1870	0	355	63	1135
Grp Volume(v), veh/h	45	897	0	23	773	10	1	0	0	26	0	0
Grp Sat Flow(s),veh/h/ln	691	1702	0	621	1777	1585	1393	1870	0	1553	0	0
Q Serve(g_s), s	4.2	10.1	0.0	2.2	13.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	17.4	10.1	0.0	12.3	13.2	0.3	0.0	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.00	0.27		0.73
Lane Grp Cap(c), veh/h	224	1848	0	237	1286	574	820	967	0	864	0	0
V/C Ratio(X)	0.20	0.49	0.00	0.10	0.60	0.02	0.00	0.00	0.00	0.03	0.00	0.00
Avail Cap(c_a), veh/h	368	2915	0	367	2029	905	820	967	0	864	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.5	18.4	0.0	23.2	19.4	15.3	8.7	0.0	0.0	8.8	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.2	0.0	0.2	0.5	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.6	0.0	0.3	4.9	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.9	18.6	0.0	23.3	19.8	15.3	8.7	0.0	0.0	8.9	0.0	0.0
LnGrp LOS	C	B	A	C	B	B	A	A	A	A	A	A
Approach Vol, veh/h		942			806			1			26	
Approach Delay, s/veh		19.0			19.9			8.7			8.9	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	43.0	31.4	43.0	31.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	42.5	38.5	42.5
Max Q Clear Time (g_c+I1), s	3.0	20.4	3.6	16.2
Green Ext Time (p_c), s	0.0	6.5	0.1	5.7

Intersection Summary	
HCM 6th Ctrl Delay	19.2
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	374	430	155	315	122	409	1233	182	106	753	60
Future Volume (veh/h)	90	374	430	155	315	122	409	1233	182	106	753	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	94	390	448	161	328	127	426	1284	190	110	784	62
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	397	1370	611	297	1370	611	692	2230	330	200	2397	189
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	936	3554	1585	656	3554	1585	1263	4490	664	359	4826	380
Grp Volume(v), veh/h	94	390	448	161	328	127	426	973	501	110	552	294
Grp Sat Flow(s),veh/h/ln	936	1777	1585	656	1777	1585	632	1702	1751	359	1702	1802
Q Serve(g_s), s	5.8	5.8	18.5	17.2	4.8	4.1	23.4	15.4	15.4	22.6	7.5	7.5
Cycle Q Clear(g_c), s	10.6	5.8	18.5	23.0	4.8	4.1	30.9	15.4	15.4	38.0	7.5	7.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.38	1.00		0.21
Lane Grp Cap(c), veh/h	397	1370	611	297	1370	611	692	1691	870	200	1691	895
V/C Ratio(X)	0.24	0.28	0.73	0.54	0.24	0.21	0.62	0.58	0.58	0.55	0.33	0.33
Avail Cap(c_a), veh/h	562	1997	891	413	1997	891	692	1691	870	200	1691	895
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	16.2	20.1	24.1	15.9	15.7	20.9	13.6	13.6	27.4	11.6	11.6
Incr Delay (d2), s/veh	0.3	0.1	1.8	1.5	0.1	0.2	4.1	1.4	2.8	10.5	0.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.2	6.4	2.5	1.8	1.4	3.4	5.4	5.8	2.4	2.5	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.8	16.3	21.9	25.7	16.0	15.9	25.0	15.0	16.3	37.8	12.1	12.6
LnGrp LOS	B	B	C	C	B	B	C	B	B	D	B	B
Approach Vol, veh/h		932			616			1900			956	
Approach Delay, s/veh		19.3			18.5			17.6			15.2	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	42.5	34.0	42.5	34.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.0	43.0	38.0	43.0
Max Q Clear Time (g_c+I1), s	33.9	21.5	41.0	26.0
Green Ext Time (p_c), s	3.5	4.6	0.0	3.5

Intersection Summary	
HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	347	4	430	291	1335	0	0	889	403
Future Volume (veh/h)	0	0	0	347	4	430	291	1335	0	0	889	403
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				521	0	289	306	1405	0	0	936	424
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				841	0	374	638	3339	0	0	4207	1036
Arrive On Green				0.24	0.00	0.24	0.65	0.65	0.00	0.00	0.65	0.65
Sat Flow, veh/h				3563	0	1585	776	5274	0	0	6696	1585
Grp Volume(v), veh/h				521	0	289	306	1405	0	0	936	424
Grp Sat Flow(s),veh/h/ln				1781	0	1585	388	1702	0	0	1609	1585
Q Serve(g_s), s				10.7	0.0	13.9	21.6	10.7	0.0	0.0	4.8	10.3
Cycle Q Clear(g_c), s				10.7	0.0	13.9	26.4	10.7	0.0	0.0	4.8	10.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				841	0	374	638	3339	0	0	4207	1036
V/C Ratio(X)				0.62	0.00	0.77	0.48	0.42	0.00	0.00	0.22	0.41
Avail Cap(c_a), veh/h				1197	0	533	638	3339	0	0	4207	1036
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				28.0	0.0	29.2	11.1	6.8	0.0	0.0	5.7	6.7
Incr Delay (d2), s/veh				0.7	0.0	4.4	2.6	0.4	0.0	0.0	0.1	1.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.5	0.0	5.6	1.7	3.0	0.0	0.0	1.3	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				28.7	0.0	33.6	13.6	7.2	0.0	0.0	5.9	7.9
LnGrp LOS				C	A	C	B	A	A	A	A	A
Approach Vol, veh/h					810			1711			1360	
Approach Delay, s/veh					30.5			8.3			6.5	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	58.0		58.0		23.8	
Change Period (Y+Rc), s	4.5		4.5		4.5	
Max Green Setting (Gmax), s	53.5		53.5		27.5	
Max Q Clear Time (g_c+I1), s	29.4		13.3		16.9	
Green Ext Time (p_c), s	16.3		9.7		2.4	

Intersection Summary		
HCM 6th Ctrl Delay		12.3
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	534	0	312	0	0	0	0	1096	449	354	882	0
Future Volume (veh/h)	534	0	312	0	0	0	0	1096	449	354	882	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	664	0	219				0	1154	473	373	928	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	713	0	317				0	2490	1019	494	2488	0
Arrive On Green	0.20	0.00	0.20				0.00	0.70	0.70	0.70	0.70	0.00
Sat Flow, veh/h	3563	0	1585				0	3725	1455	601	3647	0
Grp Volume(v), veh/h	664	0	219				0	1104	523	373	928	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1608	300	1777	0
Q Serve(g_s), s	16.5	0.0	11.5				0.0	13.0	13.0	50.0	9.5	0.0
Cycle Q Clear(g_c), s	16.5	0.0	11.5				0.0	13.0	13.0	63.0	9.5	0.0
Prop In Lane	1.00		1.00				0.00		0.90	1.00		0.00
Lane Grp Cap(c), veh/h	713	0	317				0	2383	1126	494	2488	0
V/C Ratio(X)	0.93	0.00	0.69				0.00	0.46	0.46	0.76	0.37	0.00
Avail Cap(c_a), veh/h	713	0	317				0	2383	1126	494	2488	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	35.4	0.0	33.4				0.0	6.0	6.0	22.6	5.5	0.0
Incr Delay (d2), s/veh	19.0	0.0	6.3				0.0	0.7	1.4	10.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	0.0	4.9				0.0	3.6	3.6	4.5	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.4	0.0	39.7				0.0	6.6	7.4	32.9	5.9	0.0
LnGrp LOS	D	A	D				A	A	A	C	A	A
Approach Vol, veh/h		883						1627			1301	
Approach Delay, s/veh		50.8						6.9			13.7	
Approach LOS		D						A			B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	67.5	22.5	67.5
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	63.0	18.0	63.0
Max Q Clear Time (g_c+I1), s	16.0	19.5	66.0
Green Ext Time (p_c), s	16.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	19.4
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	263	130	46	208	79	84	38	33	117	55	63
Future Vol, veh/h	29	263	130	46	208	79	84	38	33	117	55	63
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	286	141	50	226	86	91	41	36	127	60	68
Number of Lanes	0	2	1	0	2	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	13.3	12.9	13.9	15
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	69%	0%	25%	0%	0%	40%	0%	0%	68%	0%
Vol Thru, %	31%	0%	75%	100%	0%	60%	100%	0%	32%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	122	33	117	175	130	115	139	79	172	63
LT Vol	84	0	29	0	0	46	0	0	117	0
Through Vol	38	0	88	175	0	69	139	0	55	0
RT Vol	0	33	0	0	130	0	0	79	0	63
Lane Flow Rate	133	36	127	191	141	125	151	86	187	68
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.307	0.072	0.263	0.388	0.26	0.269	0.315	0.163	0.418	0.133
Departure Headway (Hd)	8.323	7.268	7.463	7.336	6.621	7.735	7.531	6.815	8.055	7.007
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	431	492	481	490	541	464	476	526	447	511
Service Time	6.085	5.029	5.217	5.09	4.375	5.492	5.288	4.572	5.813	4.764
HCM Lane V/C Ratio	0.309	0.073	0.264	0.39	0.261	0.269	0.317	0.163	0.418	0.133
HCM Control Delay	14.8	10.6	12.9	14.7	11.7	13.3	13.7	10.9	16.5	10.8
HCM Lane LOS	B	B	B	B	B	B	B	B	C	B
HCM 95th-tile Q	1.3	0.2	1	1.8	1	1.1	1.3	0.6	2	0.5

Intersection	
Intersection Delay, s/veh	19.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	364	33	19	291	71	19	58	11	85	192	23
Future Vol, veh/h	14	364	33	19	291	71	19	58	11	85	192	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	396	36	21	316	77	21	63	12	92	209	25
Number of Lanes	1	2	0	1	2	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	3	3
HCM Control Delay	17.5	15.7	13.5	27.6
HCM LOS	C	C	B	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	25%	0%	100%	0%	0%	100%	0%	0%	28%
Vol Thru, %	75%	0%	0%	100%	79%	0%	100%	58%	64%
Vol Right, %	0%	100%	0%	0%	21%	0%	0%	42%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	77	11	14	243	154	19	194	168	300
LT Vol	19	0	14	0	0	19	0	0	85
Through Vol	58	0	0	243	121	0	194	97	192
RT Vol	0	11	0	0	33	0	0	71	23
Lane Flow Rate	84	12	15	264	168	21	211	183	326
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.205	0.027	0.035	0.562	0.351	0.048	0.455	0.379	0.709
Departure Headway (Hd)	8.825	7.981	8.191	7.676	7.522	8.283	7.768	7.463	7.826
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	405	446	436	470	476	431	462	480	460
Service Time	6.623	5.779	5.969	5.453	5.299	6.061	5.545	5.24	5.598
HCM Lane V/C Ratio	0.207	0.027	0.034	0.562	0.353	0.049	0.457	0.381	0.709
HCM Control Delay	13.9	11	11.3	19.9	14.4	11.5	16.9	14.8	27.6
HCM Lane LOS	B	B	B	C	B	B	C	B	D
HCM 95th-tile Q	0.8	0.1	0.1	3.4	1.6	0.2	2.3	1.7	5.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	211	136	324	238	74	68	402	145	90	719	86
Future Volume (veh/h)	79	211	136	324	238	74	68	402	145	90	719	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	83	222	143	341	251	78	72	423	153	95	757	91
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	124	338	209	396	840	255	115	1219	544	138	1138	137
Arrive On Green	0.07	0.16	0.16	0.22	0.31	0.31	0.06	0.34	0.34	0.08	0.36	0.36
Sat Flow, veh/h	1781	2110	1303	1781	2685	815	1781	3554	1585	1781	3194	384
Grp Volume(v), veh/h	83	185	180	341	164	165	72	423	153	95	421	427
Grp Sat Flow(s),veh/h/ln	1781	1777	1636	1781	1777	1724	1781	1777	1585	1781	1777	1801
Q Serve(g_s), s	4.2	8.9	9.4	16.8	6.4	6.6	3.6	8.1	6.4	4.7	18.2	18.3
Cycle Q Clear(g_c), s	4.2	8.9	9.4	16.8	6.4	6.6	3.6	8.1	6.4	4.7	18.2	18.3
Prop In Lane	1.00		0.80	1.00		0.47	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	124	284	262	396	556	539	115	1219	544	138	633	642
V/C Ratio(X)	0.67	0.65	0.69	0.86	0.30	0.31	0.63	0.35	0.28	0.69	0.67	0.67
Avail Cap(c_a), veh/h	238	740	681	478	979	950	137	1219	544	166	633	642
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	35.9	36.2	34.1	23.7	23.8	41.6	22.3	21.8	41.0	24.8	24.8
Incr Delay (d2), s/veh	6.2	2.5	3.2	12.9	0.3	0.3	6.6	0.8	1.3	9.0	5.5	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	4.0	3.9	8.4	2.6	2.7	1.7	3.3	2.5	2.4	8.1	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.6	38.5	39.3	47.1	24.0	24.1	48.2	23.1	23.1	50.0	30.2	30.2
LnGrp LOS	D	D	D	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		448			670			648			943	
Approach Delay, s/veh		40.5			35.8			25.9			32.2	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.6	35.8	24.8	19.1	10.4	37.0	10.8	33.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	8.5	31.0	24.5	38.0	7.0	32.5	12.2	50.3
Max Q Clear Time (g_c+I1), s	7.7	11.1	19.8	12.4	6.6	21.3	7.2	9.6
Green Ext Time (p_c), s	0.0	3.0	0.5	2.2	0.0	3.8	0.1	2.0

Intersection Summary	
HCM 6th Ctrl Delay	33.0
HCM 6th LOS	C



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	3	4	629	8	15	1165
Future Volume (veh/h)	3	4	629	8	15	1165
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	4	684	9	16	1266
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	9	12	3763	49	49	4237
Arrive On Green	0.01	0.01	0.72	0.72	0.03	0.83
Sat Flow, veh/h	633	843	5362	68	1781	5274
Grp Volume(v), veh/h	8	0	448	245	16	1266
Grp Sat Flow(s),veh/h/ln	1687	0	1702	1858	1781	1702
Q Serve(g_s), s	0.3	0.0	2.4	2.4	0.5	3.2
Cycle Q Clear(g_c), s	0.3	0.0	2.4	2.4	0.5	3.2
Prop In Lane	0.37	0.50		0.04	1.00	
Lane Grp Cap(c), veh/h	25	0	2467	1346	49	4237
V/C Ratio(X)	0.32	0.00	0.18	0.18	0.33	0.30
Avail Cap(c_a), veh/h	962	0	2467	1346	293	4237
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.2	0.0	2.5	2.5	27.6	1.1
Incr Delay (d2), s/veh	7.4	0.0	0.2	0.3	3.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.3	0.4	0.3	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	35.6	0.0	2.7	2.8	31.4	1.3
LnGrp LOS	D	A	A	A	C	A
Approach Vol, veh/h	8		693			1282
Approach Delay, s/veh	35.6		2.7			1.7
Approach LOS	D		A			A

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	6.1	46.4				52.5	5.3
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	9.5	34.0				48.0	33.0
Max Q Clear Time (g_c+I1), s	3.5	5.4				6.2	3.3
Green Ext Time (p_c), s	0.0	4.4				11.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	2.2
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

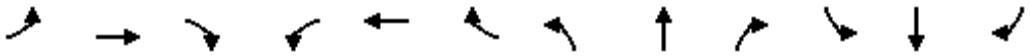
Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	31	0	44	26	36
Future Vol, veh/h	0	31	0	44	26	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	34	0	48	28	39

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	34	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	874	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	874	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	874	-	-
HCM Lane V/C Ratio	-	0.039	-	-
HCM Control Delay (s)	-	9.3	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	3	62	26	2	32	139	621	30	112	980	92
Future Volume (veh/h)	42	3	62	26	2	32	139	621	30	112	980	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	3	67	28	2	35	151	675	33	122	1065	100
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	347	10	225	317	13	223	429	3175	155	602	3022	283
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.64	0.64	0.64	0.64	0.64	0.64
Sat Flow, veh/h	1371	68	1527	1331	86	1512	482	4988	243	741	4749	445
Grp Volume(v), veh/h	46	0	70	28	0	37	151	460	248	122	763	402
Grp Sat Flow(s),veh/h/ln	1371	0	1595	1331	0	1598	482	1702	1827	741	1702	1790
Q Serve(g_s), s	1.3	0.0	1.6	0.8	0.0	0.8	8.9	2.4	2.4	3.5	4.4	4.4
Cycle Q Clear(g_c), s	2.1	0.0	1.6	2.4	0.0	0.8	13.3	2.4	2.4	5.8	4.4	4.4
Prop In Lane	1.00		0.96	1.00		0.95	1.00		0.13	1.00		0.25
Lane Grp Cap(c), veh/h	347	0	235	317	0	236	429	2167	1163	602	2167	1139
V/C Ratio(X)	0.13	0.00	0.30	0.09	0.00	0.16	0.35	0.21	0.21	0.20	0.35	0.35
Avail Cap(c_a), veh/h	3257	0	3621	3141	0	3627	429	2167	1163	602	2167	1139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.4	0.0	15.8	16.9	0.0	15.5	6.7	3.2	3.2	4.4	3.5	3.5
Incr Delay (d2), s/veh	0.2	0.0	0.7	0.1	0.0	0.3	2.3	0.2	0.4	0.8	0.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.6	0.2	0.0	0.3	0.7	0.3	0.4	0.4	0.6	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.6	0.0	16.5	17.0	0.0	15.8	8.9	3.4	3.6	5.2	4.0	4.4
LnGrp LOS	B	A	B	B	A	B	A	A	A	A	A	A
Approach Vol, veh/h		116			65			859			1287	
Approach Delay, s/veh		16.5			16.3			4.4			4.2	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.0		10.6		31.0		10.6				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		26.5		94.5		26.5		94.5				
Max Q Clear Time (g_c+I1), s		16.3		5.1		8.8		5.4				
Green Ext Time (p_c), s		4.3		0.6		7.9		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			5.3									
HCM 6th LOS			A									

Notes

User approved pedestrian interval to be less than phase max green.

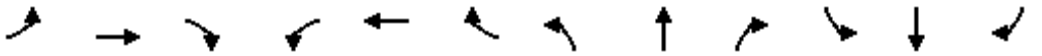
Intersection	
Int Delay, s/veh	4.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	5	0	13	10	0
Future Vol, veh/h	6	5	0	13	10	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	5	0	14	11	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	29	7	0	0	14	0
Stage 1	7	-	-	-	-	-
Stage 2	22	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	986	1075	-	-	1604	-
Stage 1	1016	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	979	1075	-	-	1604	-
Mov Cap-2 Maneuver	979	-	-	-	-	-
Stage 1	1016	-	-	-	-	-
Stage 2	994	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	7.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1020	1604	-
HCM Lane V/C Ratio	-	-	0.012	0.007	-
HCM Control Delay (s)	-	-	8.6	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	596	0	6	465	57	1	0	2	179	0	56
Future Volume (veh/h)	33	596	0	6	465	57	1	0	2	179	0	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	648	0	7	505	62	1	0	2	195	0	61
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	213	927	414	171	927	414	844	0	982	971	0	982
Arrive On Green	0.26	0.26	0.00	0.26	0.26	0.26	0.62	0.00	0.62	0.62	0.00	0.62
Sat Flow, veh/h	844	3554	1585	783	3554	1585	1341	0	1585	1414	0	1585
Grp Volume(v), veh/h	36	648	0	7	505	62	1	0	2	195	0	61
Grp Sat Flow(s),veh/h/ln	844	1777	1585	783	1777	1585	1341	0	1585	1414	0	1585
Q Serve(g_s), s	2.9	12.4	0.0	0.6	9.2	2.3	0.0	0.0	0.0	4.6	0.0	1.1
Cycle Q Clear(g_c), s	12.1	12.4	0.0	13.0	9.2	2.3	4.6	0.0	0.0	4.6	0.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	213	927	414	171	927	414	844	0	982	971	0	982
V/C Ratio(X)	0.17	0.70	0.00	0.04	0.54	0.15	0.00	0.00	0.00	0.20	0.00	0.06
Avail Cap(c_a), veh/h	380	1633	728	327	1633	728	844	0	982	971	0	982
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.1	25.1	0.0	31.0	23.9	21.3	7.3	0.0	5.5	6.3	0.0	5.7
Incr Delay (d2), s/veh	0.4	1.0	0.0	0.1	0.5	0.2	0.0	0.0	0.0	0.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.9	0.0	0.1	3.6	0.8	0.0	0.0	0.0	1.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.5	26.1	0.0	31.1	24.4	21.5	7.3	0.0	5.5	6.8	0.0	5.8
LnGrp LOS	C	C	A	C	C	C	A	A	A	A	A	A
Approach Vol, veh/h		684			574			3			256	
Approach Delay, s/veh		26.2			24.2			6.1			6.6	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		51.0		24.1		51.0		24.1				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		46.5		34.5		46.5		34.5				
Max Q Clear Time (g_c+I1), s		7.6		15.4		7.6		16.0				
Green Ext Time (p_c), s		0.0		4.2		1.2		3.2				

Intersection Summary												
HCM 6th Ctrl Delay			22.1									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	757	0	2	517	3	0	0	0	3	0	7
Future Volume (veh/h)	10	757	0	2	517	3	0	0	0	3	0	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	823	0	2	562	3	0	0	0	3	0	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	234	1445	0	205	1005	448	109	1087	0	279	36	656
Arrive On Green	0.28	0.28	0.00	0.28	0.28	0.28	0.00	0.00	0.00	0.58	0.00	0.58
Sat Flow, veh/h	846	5274	0	665	3554	1585	1407	1870	0	361	62	1129
Grp Volume(v), veh/h	11	823	0	2	562	3	0	0	0	11	0	0
Grp Sat Flow(s),veh/h/ln	846	1702	0	665	1777	1585	1407	1870	0	1552	0	0
Q Serve(g_s), s	0.7	9.1	0.0	0.2	8.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	9.7	9.1	0.0	9.3	8.9	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.00	0.27		0.73
Lane Grp Cap(c), veh/h	234	1445	0	205	1005	448	109	1087	0	971	0	0
V/C Ratio(X)	0.05	0.57	0.00	0.01	0.56	0.01	0.00	0.00	0.00	0.01	0.00	0.00
Avail Cap(c_a), veh/h	537	3276	0	444	2280	1017	109	1087	0	971	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.3	20.3	0.0	24.3	20.2	17.1	0.0	0.0	0.0	5.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.4	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	3.3	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.4	20.7	0.0	24.3	20.7	17.1	0.0	0.0	0.0	5.9	0.0	0.0
LnGrp LOS	C	C	A	C	C	B	A	A	A	A	A	A
Approach Vol, veh/h		834			567			0			11	
Approach Delay, s/veh		20.7			20.7			0.0			5.9	
Approach LOS		C			C						A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	43.0	23.2	43.0	23.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	42.5	38.5	42.5
Max Q Clear Time (g_c+I1), s	0.0	12.7	3.2	12.3
Green Ext Time (p_c), s	0.0	6.1	0.0	3.8

Intersection Summary	
HCM 6th Ctrl Delay	20.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	200	522	150	145	52	340	674	110	52	1022	28
Future Volume (veh/h)	36	200	522	150	145	52	340	674	110	52	1022	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	38	208	544	156	151	54	354	702	115	54	1065	29
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	526	1404	626	347	1404	626	540	2166	351	355	2500	68
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	1177	3554	1585	711	3554	1585	1000	4427	718	669	5110	139
Grp Volume(v), veh/h	38	208	544	156	151	54	354	538	279	54	709	385
Grp Sat Flow(s),veh/h/ln	1177	1777	1585	711	1777	1585	500	1702	1741	669	1702	1845
Q Serve(g_s), s	1.6	2.9	24.6	14.0	2.1	1.7	27.5	7.4	7.6	4.1	10.4	10.5
Cycle Q Clear(g_c), s	3.7	2.9	24.6	17.0	2.1	1.7	37.9	7.4	7.6	11.7	10.4	10.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.41	1.00		0.08
Lane Grp Cap(c), veh/h	526	1404	626	347	1404	626	540	1665	852	355	1665	903
V/C Ratio(X)	0.07	0.15	0.87	0.45	0.11	0.09	0.66	0.32	0.33	0.15	0.43	0.43
Avail Cap(c_a), veh/h	713	1967	877	459	1967	877	540	1665	852	355	1665	903
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.0	15.1	21.6	20.6	14.8	14.7	25.0	12.0	12.1	15.6	12.8	12.8
Incr Delay (d2), s/veh	0.1	0.0	6.9	0.9	0.0	0.1	6.1	0.5	1.0	0.9	0.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.1	9.3	2.2	0.8	0.6	3.4	2.6	2.8	0.7	3.6	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.1	15.2	28.5	21.5	14.9	14.8	31.1	12.6	13.1	16.5	13.6	14.3
LnGrp LOS	B	B	C	C	B	B	C	B	B	B	B	B
Approach Vol, veh/h		790			361			1171			1148	
Approach Delay, s/veh		24.4			17.7			18.3			14.0	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	42.5	35.2	42.5	35.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.0	43.0	38.0	43.0
Max Q Clear Time (g_c+I1), s	40.9	27.6	14.7	20.0
Green Ext Time (p_c), s	0.0	3.1	7.9	2.3

Intersection Summary	
HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	469	1	425	145	689	0	0	1144	548
Future Volume (veh/h)	0	0	0	469	1	425	145	689	0	0	1144	548
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				614	0	290	148	703	0	0	1167	559
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				894	0	398	490	3216	0	0	4052	998
Arrive On Green				0.25	0.00	0.25	0.63	0.63	0.00	0.00	0.63	0.63
Sat Flow, veh/h				3563	0	1585	546	5274	0	0	6696	1585
Grp Volume(v), veh/h				614	0	290	148	703	0	0	1167	559
Grp Sat Flow(s),veh/h/ln				1781	0	1585	273	1702	0	0	1609	1585
Q Serve(g_s), s				11.8	0.0	12.7	12.7	4.5	0.0	0.0	6.2	15.2
Cycle Q Clear(g_c), s				11.8	0.0	12.7	18.9	4.5	0.0	0.0	6.2	15.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				894	0	398	490	3216	0	0	4052	998
V/C Ratio(X)				0.69	0.00	0.73	0.30	0.22	0.00	0.00	0.29	0.56
Avail Cap(c_a), veh/h				1582	0	704	490	3216	0	0	4052	998
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				25.6	0.0	25.9	10.6	6.0	0.0	0.0	6.3	8.0
Incr Delay (d2), s/veh				0.9	0.0	2.6	1.6	0.2	0.0	0.0	0.2	2.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.9	0.0	4.8	0.7	1.2	0.0	0.0	1.6	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				26.5	0.0	28.5	12.2	6.2	0.0	0.0	6.5	10.3
LnGrp LOS				C	A	C	B	A	A	A	A	B
Approach Vol, veh/h					904			851			1726	
Approach Delay, s/veh					27.1			7.2			7.7	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	52.0		52.0		23.4	
Change Period (Y+Rc), s	4.5		4.5		4.5	
Max Green Setting (Gmax), s	47.5		47.5		33.5	
Max Q Clear Time (g_c+I1), s	21.9		18.2		15.7	
Green Ext Time (p_c), s	9.6		12.4		3.3	

Intersection Summary		
HCM 6th Ctrl Delay	12.6	
HCM 6th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	258	0	250	0	0	0	0	576	355	486	1127	0
Future Volume (veh/h)	258	0	250	0	0	0	0	576	355	486	1127	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	350	0	173				0	600	370	506	1174	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	542	0	241				0	2525	1176	915	2636	0
Arrive On Green	0.15	0.00	0.15				0.00	0.74	0.74	0.74	0.74	0.00
Sat Flow, veh/h	3563	0	1585				0	3572	1585	1124	3647	0
Grp Volume(v), veh/h	350	0	173				0	600	370	506	1174	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	562	1777	0
Q Serve(g_s), s	7.8	0.0	8.8				0.0	4.7	6.7	23.4	10.8	0.0
Cycle Q Clear(g_c), s	7.8	0.0	8.8				0.0	4.7	6.7	30.0	10.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	542	0	241				0	2525	1176	915	2636	0
V/C Ratio(X)	0.65	0.00	0.72				0.00	0.24	0.31	0.55	0.45	0.00
Avail Cap(c_a), veh/h	760	0	338				0	2525	1176	915	2636	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.8	0.0	34.2				0.0	3.4	3.7	8.7	4.2	0.0
Incr Delay (d2), s/veh	1.3	0.0	4.3				0.0	0.2	0.7	2.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	3.6				0.0	1.1	1.6	2.4	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.1	0.0	38.5				0.0	3.7	4.4	11.1	4.8	0.0
LnGrp LOS	D	A	D				A	A	A	B	A	A
Approach Vol, veh/h		523						970			1680	
Approach Delay, s/veh		36.2						3.9			6.7	
Approach LOS		D						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	67.4	17.4	67.4
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	62.9	18.1	62.9
Max Q Clear Time (g_c+I1), s	9.7	11.8	33.0
Green Ext Time (p_c), s	7.7	1.1	17.8

Intersection Summary	
HCM 6th Ctrl Delay	10.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	13.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	374	27	35	370	49	27	55	21	37	47	10
Future Vol, veh/h	17	374	27	35	370	49	27	55	21	37	47	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	407	29	38	402	53	29	60	23	40	51	11
Number of Lanes	0	2	1	0	2	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	14	13.7	11.9	12.2
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	33%	0%	12%	0%	0%	22%	0%	0%	44%	0%
Vol Thru, %	67%	0%	88%	100%	0%	78%	100%	0%	56%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	82	21	142	249	27	158	247	49	84	10
LT Vol	27	0	17	0	0	35	0	0	37	0
Through Vol	55	0	125	249	0	123	247	0	47	0
RT Vol	0	21	0	0	27	0	0	49	0	10
Lane Flow Rate	89	23	154	271	29	172	268	53	91	11
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.193	0.044	0.284	0.495	0.048	0.317	0.485	0.086	0.2	0.021
Departure Headway (Hd)	7.798	6.928	6.641	6.58	5.872	6.63	6.518	5.81	7.879	6.952
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	463	520	537	545	604	539	550	611	458	518
Service Time	5.504	4.633	4.432	4.372	3.663	4.42	4.308	3.6	5.584	4.657
HCM Lane V/C Ratio	0.192	0.044	0.287	0.497	0.048	0.319	0.487	0.087	0.199	0.021
HCM Control Delay	12.4	10	12.1	15.7	9	12.5	15.4	9.2	12.5	9.8
HCM Lane LOS	B	A	B	C	A	B	C	A	B	A
HCM 95th-tile Q	0.7	0.1	1.2	2.7	0.2	1.4	2.6	0.3	0.7	0.1

Intersection	
Intersection Delay, s/veh	30.2
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	397	24	8	401	86	22	170	30	87	163	21
Future Vol, veh/h	17	397	24	8	401	86	22	170	30	87	163	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	432	26	9	436	93	24	185	33	95	177	23
Number of Lanes	1	2	0	1	2	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	3	3
HCM Control Delay	28.4	29.3	24	39.9
HCM LOS	D	D	C	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	11%	0%	100%	0%	0%	100%	0%	0%	32%
Vol Thru, %	89%	0%	0%	100%	85%	0%	100%	61%	60%
Vol Right, %	0%	100%	0%	0%	15%	0%	0%	39%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	192	30	17	265	156	8	267	220	271
LT Vol	22	0	17	0	0	8	0	0	87
Through Vol	170	0	0	265	132	0	267	134	163
RT Vol	0	30	0	0	24	0	0	86	21
Lane Flow Rate	209	33	18	288	170	9	291	239	295
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.581	0.084	0.051	0.746	0.435	0.023	0.743	0.591	0.786
Departure Headway (Hd)	10.022	9.236	9.863	9.338	9.226	9.724	9.2	8.913	9.609
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	361	388	364	388	391	369	395	406	377
Service Time	7.779	6.993	7.6	7.075	6.962	7.461	6.936	6.649	7.347
HCM Lane V/C Ratio	0.579	0.085	0.049	0.742	0.435	0.024	0.737	0.589	0.782
HCM Control Delay	25.8	12.8	13.1	35	18.9	12.7	34.3	23.8	39.9
HCM Lane LOS	D	B	B	D	C	B	D	C	E
HCM 95th-tile Q	3.5	0.3	0.2	5.9	2.1	0.1	5.9	3.7	6.6



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	352	139	290	232	72	214	830	478	72	582	50
Future Volume (veh/h)	134	352	139	290	232	72	214	830	478	72	582	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	138	363	143	299	239	74	221	856	493	74	600	52
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	186	493	191	328	744	225	253	1354	604	110	995	86
Arrive On Green	0.10	0.20	0.20	0.18	0.28	0.28	0.14	0.38	0.38	0.06	0.30	0.30
Sat Flow, veh/h	1781	2502	971	1781	2688	813	1781	3554	1585	1781	3309	286
Grp Volume(v), veh/h	138	256	250	299	156	157	221	856	493	74	322	330
Grp Sat Flow(s),veh/h/ln	1781	1777	1696	1781	1777	1724	1781	1777	1585	1781	1777	1819
Q Serve(g_s), s	7.7	13.8	14.2	16.8	7.1	7.4	12.4	20.1	28.5	4.2	15.8	15.8
Cycle Q Clear(g_c), s	7.7	13.8	14.2	16.8	7.1	7.4	12.4	20.1	28.5	4.2	15.8	15.8
Prop In Lane	1.00		0.57	1.00		0.47	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	186	350	334	328	492	477	253	1354	604	110	534	547
V/C Ratio(X)	0.74	0.73	0.75	0.91	0.32	0.33	0.87	0.63	0.82	0.68	0.60	0.60
Avail Cap(c_a), veh/h	311	661	631	328	679	659	253	1354	604	134	534	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.4	38.5	38.6	40.8	29.3	29.4	42.9	25.8	28.4	46.9	30.5	30.5
Incr Delay (d2), s/veh	5.8	3.0	3.4	28.4	0.4	0.4	26.8	2.3	11.6	9.5	5.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	6.2	6.1	9.8	3.0	3.1	7.2	8.4	12.3	2.1	7.2	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.2	41.4	42.0	69.3	29.6	29.8	69.7	28.0	40.0	56.4	35.5	35.4
LnGrp LOS	D	D	D	E	C	C	E	C	D	E	D	D
Approach Vol, veh/h		644			612			1570			726	
Approach Delay, s/veh		43.5			49.0			37.6			37.6	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	43.4	23.3	24.6	19.0	35.2	15.1	32.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.7	37.5	18.8	38.0	14.5	30.7	17.8	39.0
Max Q Clear Time (g_c+I1), s	17.2	31.5	19.8	17.2	15.4	18.8	10.7	10.4
Green Ext Time (p_c), s	0.0	3.6	0.0	2.9	0.0	2.9	0.2	1.8

Intersection Summary	
HCM 6th Ctrl Delay	40.7
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	0	61	11	0	12	68	1525	2	4	1076	43
Future Volume (veh/h)	102	0	61	11	0	12	68	1525	2	4	1076	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	0	66	12	0	13	74	1605	2	4	1133	47
Peak Hour Factor	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95	0.95	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	0	82	30	0	32	354	3206	4	13	3372	140
Arrive On Green	0.13	0.00	0.13	0.04	0.00	0.04	0.61	0.61	0.61	0.01	0.67	0.67
Sat Flow, veh/h	1068	0	635	803	0	870	475	5267	7	1781	5028	208
Grp Volume(v), veh/h	177	0	0	25	0	0	74	1037	570	4	767	413
Grp Sat Flow(s),veh/h/ln	1703	0	0	1674	0	0	475	1702	1869	1781	1702	1833
Q Serve(g_s), s	8.4	0.0	0.0	1.2	0.0	0.0	6.7	14.2	14.2	0.2	7.9	7.9
Cycle Q Clear(g_c), s	8.4	0.0	0.0	1.2	0.0	0.0	10.5	14.2	14.2	0.2	7.9	7.9
Prop In Lane	0.63		0.37	0.48		0.52	1.00		0.00	1.00		0.11
Lane Grp Cap(c), veh/h	220	0	0	62	0	0	354	2072	1138	13	2283	1229
V/C Ratio(X)	0.80	0.00	0.00	0.40	0.00	0.00	0.21	0.50	0.50	0.30	0.34	0.34
Avail Cap(c_a), veh/h	370	0	0	667	0	0	354	2072	1138	151	2283	1229
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	0.0	39.0	0.0	0.0	9.4	9.1	9.1	40.9	5.8	5.8
Incr Delay (d2), s/veh	6.7	0.0	0.0	4.2	0.0	0.0	1.3	0.9	1.6	12.2	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	0.0	0.6	0.0	0.0	0.7	4.5	5.1	0.1	2.2	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.7	0.0	0.0	43.2	0.0	0.0	10.7	10.0	10.7	53.1	6.2	6.5
LnGrp LOS	D	A	A	D	A	A	B	A	B	D	A	A
Approach Vol, veh/h		177			25			1681			1184	
Approach Delay, s/veh		41.7			43.2			10.2			6.5	
Approach LOS		D			D			B			A	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	5.1	54.9		15.2		60.0		7.6				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	7.0	44.0		18.0		55.5		33.0				
Max Q Clear Time (g_c+I1), s	3.2	17.2		10.4		10.9		4.2				
Green Ext Time (p_c), s	0.0	13.8		0.5		9.5		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	10.9
HCM 6th LOS	B

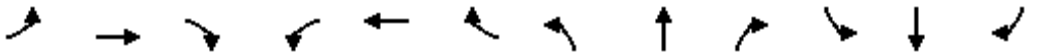
Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	114	0	81	54	50
Future Vol, veh/h	0	114	0	81	54	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	124	0	88	59	54

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	57	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	846	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	846	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	846	-	-
HCM Lane V/C Ratio	-	0.146	-	-
HCM Control Delay (s)	-	10	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	6	106	53	13	119	236	1347	55	132	912	120
Future Volume (veh/h)	168	6	106	53	13	119	236	1347	55	132	912	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	175	6	110	55	14	124	246	1403	57	138	950	125
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	436	24	438	455	47	418	360	2587	105	276	2348	308
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	1251	83	1515	1276	163	1447	525	5033	204	364	4567	599
Grp Volume(v), veh/h	175	0	116	55	0	138	246	949	511	138	707	368
Grp Sat Flow(s),veh/h/ln	1251	0	1598	1276	0	1610	525	1702	1834	364	1702	1763
Q Serve(g_s), s	5.8	0.0	2.5	1.6	0.0	3.0	17.6	8.6	8.6	14.9	5.8	5.9
Cycle Q Clear(g_c), s	8.8	0.0	2.5	4.1	0.0	3.0	23.5	8.6	8.6	23.5	5.8	5.9
Prop In Lane	1.00		0.95	1.00		0.90	1.00		0.11	1.00		0.34
Lane Grp Cap(c), veh/h	436	0	462	455	0	465	360	1750	943	276	1750	906
V/C Ratio(X)	0.40	0.00	0.25	0.12	0.00	0.30	0.68	0.54	0.54	0.50	0.40	0.41
Avail Cap(c_a), veh/h	2469	0	3058	2529	0	3082	360	1750	943	276	1750	906
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	0.0	12.5	14.0	0.0	12.6	15.6	7.5	7.5	16.4	6.8	6.8
Incr Delay (d2), s/veh	0.6	0.0	0.3	0.1	0.0	0.4	10.1	1.2	2.2	6.3	0.7	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.8	0.4	0.0	1.0	3.1	2.2	2.6	1.6	1.4	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.7	0.0	12.7	14.2	0.0	13.0	25.7	8.7	9.7	22.8	7.5	8.2
LnGrp LOS	B	A	B	B	A	B	C	A	A	C	A	A
Approach Vol, veh/h		291			193			1706			1213	
Approach Delay, s/veh		15.1			13.3			11.4			9.4	
Approach LOS		B			B			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.0		17.7		28.0		17.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		23.5		87.5		23.5		87.5				
Max Q Clear Time (g_c+I1), s		26.5		11.8		26.5		7.1				
Green Ext Time (p_c), s		0.0		1.4		0.0		1.1				

Intersection Summary												
HCM 6th Ctrl Delay			11.2									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.

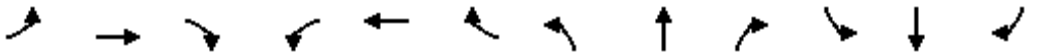
Intersection	
Int Delay, s/veh	6.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	17	0	17	14	0
Future Vol, veh/h	22	17	0	17	14	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	18	0	18	15	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	39	9	0	0	18	0
Stage 1	9	-	-	-	-	-
Stage 2	30	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	973	1073	-	-	1599	-
Stage 1	1014	-	-	-	-	-
Stage 2	993	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	964	1073	-	-	1599	-
Mov Cap-2 Maneuver	964	-	-	-	-	-
Stage 1	1014	-	-	-	-	-
Stage 2	984	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	7.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1009	1599	-
HCM Lane V/C Ratio	-	-	0.042	0.01	-
HCM Control Delay (s)	-	-	8.7	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	751	5	6	631	133	3	1	12	157	1	49
Future Volume (veh/h)	68	751	5	6	631	133	3	1	12	157	1	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	774	5	6	651	137	3	1	12	162	1	51
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	1209	539	199	1209	539	744	67	809	847	5	867
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.55	0.55	0.55	0.55	0.55	0.55
Sat Flow, veh/h	687	3554	1585	693	3554	1585	1352	123	1480	1385	9	1585
Grp Volume(v), veh/h	70	774	5	6	651	137	3	0	13	163	0	51
Grp Sat Flow(s),veh/h/ln	687	1777	1585	693	1777	1585	1352	0	1604	1394	0	1585
Q Serve(g_s), s	7.3	14.6	0.2	0.6	11.8	5.0	0.1	0.0	0.3	4.8	0.0	1.2
Cycle Q Clear(g_c), s	19.1	14.6	0.2	15.2	11.8	5.0	5.1	0.0	0.3	5.1	0.0	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.92	0.99		1.00
Lane Grp Cap(c), veh/h	223	1209	539	199	1209	539	744	0	877	852	0	867
V/C Ratio(X)	0.31	0.64	0.01	0.03	0.54	0.25	0.00	0.00	0.01	0.19	0.00	0.06
Avail Cap(c_a), veh/h	313	1675	747	290	1675	747	744	0	877	852	0	867
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.9	22.1	17.4	28.6	21.2	19.0	10.7	0.0	8.2	9.4	0.0	8.4
Incr Delay (d2), s/veh	0.8	0.6	0.0	0.1	0.4	0.2	0.0	0.0	0.0	0.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	5.7	0.1	0.1	4.5	1.7	0.0	0.0	0.1	1.3	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.7	22.7	17.4	28.6	21.6	19.2	10.7	0.0	8.3	9.9	0.0	8.6
LnGrp LOS	C	C	B	C	C	B	B	A	A	A	A	A
Approach Vol, veh/h		849			794			16			214	
Approach Delay, s/veh		23.3			21.2			8.7			9.6	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		48.0		31.6		48.0		31.6				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		43.5		37.5		43.5		37.5				
Max Q Clear Time (g_c+I1), s		8.1		22.1		8.1		18.2				
Green Ext Time (p_c), s		0.0		5.0		1.0		4.5				

Intersection Summary												
HCM 6th Ctrl Delay			20.7									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	867	0	22	749	10	1	0	0	7	0	18
Future Volume (veh/h)	43	867	0	22	749	10	1	0	0	7	0	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	45	903	0	23	780	10	1	0	0	7	0	19
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	1858	0	237	1293	577	818	964	0	244	32	585
Arrive On Green	0.36	0.36	0.00	0.36	0.36	0.36	0.52	0.00	0.00	0.52	0.00	0.52
Sat Flow, veh/h	686	5274	0	617	3554	1585	1393	1870	0	355	63	1135
Grp Volume(v), veh/h	45	903	0	23	780	10	1	0	0	26	0	0
Grp Sat Flow(s),veh/h/ln	686	1702	0	617	1777	1585	1393	1870	0	1553	0	0
Q Serve(g_s), s	4.3	10.2	0.0	2.2	13.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	17.6	10.2	0.0	12.4	13.4	0.3	0.0	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.00	0.27		0.73
Lane Grp Cap(c), veh/h	223	1858	0	237	1293	577	818	964	0	862	0	0
V/C Ratio(X)	0.20	0.49	0.00	0.10	0.60	0.02	0.00	0.00	0.00	0.03	0.00	0.00
Avail Cap(c_a), veh/h	364	2906	0	363	2023	902	818	964	0	862	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.5	18.4	0.0	23.2	19.4	15.2	8.8	0.0	0.0	8.9	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.2	0.0	0.2	0.5	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.6	0.0	0.3	5.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.0	18.6	0.0	23.3	19.8	15.2	8.8	0.0	0.0	9.0	0.0	0.0
LnGrp LOS	C	B	A	C	B	B	A	A	A	A	A	A
Approach Vol, veh/h		948			813			1			26	
Approach Delay, s/veh		19.0			19.9			8.8			9.0	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	43.0	31.7	43.0	31.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	42.5	38.5	42.5
Max Q Clear Time (g_c+I1), s	3.0	20.6	3.6	16.4
Green Ext Time (p_c), s	0.0	6.5	0.1	5.8

Intersection Summary	
HCM 6th Ctrl Delay	19.2
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	374	430	155	315	145	409	1367	182	135	916	67
Future Volume (veh/h)	96	374	430	155	315	145	409	1367	182	135	916	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	390	448	161	328	151	426	1424	190	141	954	70
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	391	1373	612	298	1373	612	586	2261	302	178	2409	176
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	916	3554	1585	656	3554	1585	1068	4557	608	313	4855	355
Grp Volume(v), veh/h	100	390	448	161	328	151	426	1063	551	141	668	356
Grp Sat Flow(s),veh/h/ln	916	1777	1585	656	1777	1585	534	1702	1761	313	1702	1806
Q Serve(g_s), s	6.3	5.8	18.5	17.2	4.8	4.9	28.5	17.5	17.5	20.5	9.4	9.5
Cycle Q Clear(g_c), s	11.1	5.8	18.5	23.0	4.8	4.9	38.0	17.5	17.5	38.0	9.4	9.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.35	1.00		0.20
Lane Grp Cap(c), veh/h	391	1373	612	298	1373	612	586	1689	874	178	1689	896
V/C Ratio(X)	0.26	0.28	0.73	0.54	0.24	0.25	0.73	0.63	0.63	0.79	0.40	0.40
Avail Cap(c_a), veh/h	551	1995	890	413	1995	890	586	1689	874	178	1689	896
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.7	16.2	20.1	24.1	15.9	15.9	25.0	14.1	14.1	32.2	12.1	12.1
Incr Delay (d2), s/veh	0.3	0.1	1.7	1.5	0.1	0.2	7.7	1.8	3.4	29.5	0.7	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.1	6.4	2.5	1.8	1.7	4.2	6.1	6.7	4.0	3.2	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.0	16.3	21.9	25.6	16.0	16.1	32.6	15.9	17.6	61.7	12.8	13.4
LnGrp LOS	B	B	C	C	B	B	C	B	B	E	B	B
Approach Vol, veh/h		938			640			2040			1165	
Approach Delay, s/veh		19.4			18.4			19.9			18.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	42.5	34.1	42.5	34.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.0	43.0	38.0	43.0
Max Q Clear Time (g_c+I1), s	41.0	21.5	41.0	26.0
Green Ext Time (p_c), s	0.0	4.6	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	19.3
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	347	4	486	291	1413	0	0	985	470
Future Volume (veh/h)	0	0	0	347	4	486	291	1413	0	0	985	470
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				549	0	318	306	1487	0	0	1037	495
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				892	0	397	549	3282	0	0	4136	1019
Arrive On Green				0.25	0.00	0.25	0.64	0.64	0.00	0.00	0.64	0.64
Sat Flow, veh/h				3563	0	1585	658	5274	0	0	6696	1585
Grp Volume(v), veh/h				549	0	318	306	1487	0	0	1037	495
Grp Sat Flow(s),veh/h/ln				1781	0	1585	329	1702	0	0	1609	1585
Q Serve(g_s), s				11.5	0.0	15.8	31.1	12.4	0.0	0.0	5.8	13.7
Cycle Q Clear(g_c), s				11.5	0.0	15.8	36.9	12.4	0.0	0.0	5.8	13.7
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				892	0	397	549	3282	0	0	4136	1019
V/C Ratio(X)				0.62	0.00	0.80	0.56	0.45	0.00	0.00	0.25	0.49
Avail Cap(c_a), veh/h				1139	0	507	549	3282	0	0	4136	1019
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				28.0	0.0	29.6	14.3	7.6	0.0	0.0	6.4	7.8
Incr Delay (d2), s/veh				0.7	0.0	7.1	4.0	0.5	0.0	0.0	0.1	1.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.8	0.0	6.6	2.2	3.6	0.0	0.0	1.6	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				28.7	0.0	36.7	18.3	8.0	0.0	0.0	6.5	9.5
LnGrp LOS				C	A	D	B	A	A	A	A	A
Approach Vol, veh/h					867			1793			1532	
Approach Delay, s/veh					31.6			9.8			7.5	
Approach LOS					C			A			A	

Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	58.6		58.6		25.6	
Change Period (Y+Rc), s	4.5		4.5		4.5	
Max Green Setting (Gmax), s	54.1		54.1		26.9	
Max Q Clear Time (g_c+I1), s	39.9		16.7		18.8	
Green Ext Time (p_c), s	11.5		11.3		2.2	

Intersection Summary		
HCM 6th Ctrl Delay	13.5	
HCM 6th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	590	0	312	0	0	0	0	1119	449	421	911	0
Future Volume (veh/h)	590	0	312	0	0	0	0	1119	449	421	911	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	723	0	219				0	1178	473	443	959	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	713	0	317				0	2507	1004	484	2488	0
Arrive On Green	0.20	0.00	0.20				0.00	0.70	0.70	0.70	0.70	0.00
Sat Flow, veh/h	3563	0	1585				0	3750	1435	587	3647	0
Grp Volume(v), veh/h	723	0	219				0	1120	531	443	959	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1612	293	1777	0
Q Serve(g_s), s	18.0	0.0	11.5				0.0	13.2	13.3	49.7	10.0	0.0
Cycle Q Clear(g_c), s	18.0	0.0	11.5				0.0	13.2	13.3	63.0	10.0	0.0
Prop In Lane	1.00		1.00				0.00		0.89	1.00		0.00
Lane Grp Cap(c), veh/h	713	0	317				0	2383	1128	484	2488	0
V/C Ratio(X)	1.01	0.00	0.69				0.00	0.47	0.47	0.91	0.39	0.00
Avail Cap(c_a), veh/h	713	0	317				0	2383	1128	484	2488	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	36.0	0.0	33.4				0.0	6.0	6.0	26.8	5.5	0.0
Incr Delay (d2), s/veh	37.4	0.0	6.3				0.0	0.7	1.4	24.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	0.0	4.9				0.0	3.7	3.7	6.4	2.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.4	0.0	39.7				0.0	6.7	7.5	51.2	6.0	0.0
LnGrp LOS	F	A	D				A	A	A	D	A	A
Approach Vol, veh/h		942						1651			1402	
Approach Delay, s/veh		65.6						6.9			20.3	
Approach LOS		E						A			C	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	67.5	22.5	67.5
Change Period (Y+Rc), s	4.5	4.5	4.5
Max Green Setting (Gmax), s	63.0	18.0	63.0
Max Q Clear Time (g_c+I1), s	16.3	21.0	66.0
Green Ext Time (p_c), s	16.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	25.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	299	289	267	145	635	1116	528
v/c Ratio	0.65	0.64	0.46	0.30	0.20	0.29	0.45
Control Delay	31.6	27.0	7.5	11.6	8.1	8.4	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Total Delay	31.6	27.0	7.5	11.6	8.1	8.4	2.6
Queue Length 50th (ft)	134	113	14	15	44	66	0
Queue Length 95th (ft)	213	194	69	45	89	122	46
Internal Link Dist (ft)		685			265	350	
Turn Bay Length (ft)				150			
Base Capacity (vph)	723	690	776	478	3104	3912	1172
Starvation Cap Reductn	0	0	0	0	0	0	193
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.42	0.34	0.30	0.20	0.29	0.54

Intersection Summary



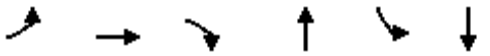
Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	166	160	152	934	475	1142
v/c Ratio	0.62	0.51	0.44	0.26	0.62	0.44
Control Delay	43.8	22.0	13.1	2.6	10.7	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.1
Total Delay	43.8	22.0	13.1	2.6	10.7	6.5
Queue Length 50th (ft)	88	39	12	28	54	108
Queue Length 95th (ft)	154	103	66	48	120	167
Internal Link Dist (ft)		657		520		265
Turn Bay Length (ft)						
Base Capacity (vph)	355	386	417	3615	770	2600
Starvation Cap Reductn	0	0	0	0	0	1121
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.41	0.36	0.26	0.62	0.77

Intersection Summary



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	278	268	255	298	1374	916	414
v/c Ratio	0.67	0.66	0.63	0.46	0.42	0.22	0.36
Control Delay	35.8	30.8	29.1	11.8	8.5	7.0	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.6	0.0	0.3
Total Delay	35.8	30.8	29.1	11.8	9.0	7.0	2.1
Queue Length 50th (ft)	134	112	100	36	115	52	0
Queue Length 95th (ft)	216	197	177	84	184	85	36
Internal Link Dist (ft)		685			265	350	
Turn Bay Length (ft)				150			
Base Capacity (vph)	586	551	554	650	3265	4115	1164
Starvation Cap Reductn	0	0	0	0	1332	0	272
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.49	0.46	0.46	0.71	0.22	0.46

Intersection Summary



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	301	297	270	1590	363	909
v/c Ratio	0.91	0.91	0.59	0.45	1.12	0.37
Control Delay	68.5	66.8	15.7	5.1	103.5	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.9
Total Delay	68.5	66.8	15.7	5.1	103.5	6.8
Queue Length 50th (ft)	176	171	35	98	~123	94
Queue Length 95th (ft)	#334	#337	117	123	#115	122
Internal Link Dist (ft)		657		520		265
Turn Bay Length (ft)						
Base Capacity (vph)	337	332	461	3502	325	2488
Starvation Cap Reductn	0	0	0	0	0	1209
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.89	0.59	0.45	1.12	0.71

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	307	296	273	148	648	1142	541
v/c Ratio	0.66	0.64	0.48	0.32	0.21	0.29	0.46
Control Delay	31.9	27.3	8.3	12.1	8.2	8.6	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Total Delay	31.9	27.3	8.3	12.1	8.2	8.6	2.7
Queue Length 50th (ft)	138	117	21	16	46	69	0
Queue Length 95th (ft)	220	201	78	48	91	125	46
Internal Link Dist (ft)		685			265	350	
Turn Bay Length (ft)				150			
Base Capacity (vph)	721	688	770	459	3092	3897	1174
Starvation Cap Reductn	0	0	0	0	0	0	189
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.43	0.35	0.32	0.21	0.29	0.55

Intersection Summary



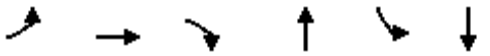
Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	170	164	156	952	488	1167
v/c Ratio	0.63	0.52	0.45	0.26	0.65	0.45
Control Delay	44.2	22.3	14.5	2.6	11.8	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.1
Total Delay	44.2	22.3	14.5	2.6	11.8	6.7
Queue Length 50th (ft)	90	40	17	30	59	113
Queue Length 95th (ft)	157	105	73	49	131	173
Internal Link Dist (ft)		657		520		265
Turn Bay Length (ft)						
Base Capacity (vph)	354	386	412	3612	752	2596
Starvation Cap Reductn	0	0	0	0	0	1107
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.42	0.38	0.26	0.65	0.78

Intersection Summary



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	285	274	263	306	1405	936	424
v/c Ratio	0.69	0.68	0.65	0.48	0.43	0.23	0.36
Control Delay	37.2	32.0	30.5	12.2	8.5	7.0	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.6	0.0	0.3
Total Delay	37.2	32.0	30.5	12.2	9.1	7.0	2.1
Queue Length 50th (ft)	142	117	106	39	121	54	0
Queue Length 95th (ft)	227	206	188	86	183	84	35
Internal Link Dist (ft)		685			265	350	
Turn Bay Length (ft)				150			
Base Capacity (vph)	557	527	529	636	3277	4129	1170
Starvation Cap Reductn	0	0	0	0	1345	0	279
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.52	0.50	0.48	0.73	0.23	0.48

Intersection Summary



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	309	305	276	1627	373	928
v/c Ratio	0.92	0.92	0.61	0.47	1.21	0.37
Control Delay	69.7	68.3	17.2	5.3	140.4	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.0
Total Delay	69.7	68.3	17.2	5.3	140.4	7.0
Queue Length 50th (ft)	183	178	43	102	~134	96
Queue Length 95th (ft)	#346	#350	128	128	#132	125
Internal Link Dist (ft)		657		520		265
Turn Bay Length (ft)						
Base Capacity (vph)	336	331	454	3485	308	2477
Starvation Cap Reductn	0	0	0	0	0	1200
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.92	0.61	0.47	1.21	0.73

Intersection Summary

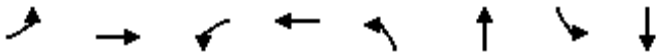
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	46	7	50	693	16	1295
v/c Ratio	0.15	0.02	0.16	0.16	0.07	0.30
Control Delay	2.6	0.2	9.0	4.4	25.0	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.6	0.2	9.0	4.4	25.0	2.9
Queue Length 50th (ft)	0	0	0	0	4	0
Queue Length 95th (ft)	7	0	42	92	23	122
Internal Link Dist (ft)	132	78		256		804
Turn Bay Length (ft)			150		115	
Base Capacity (vph)	1067	1016	310	4205	560	4373
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.01	0.16	0.16	0.03	0.30

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	46	70	28	37	151	708	122	1165
v/c Ratio	0.21	0.27	0.13	0.14	0.50	0.20	0.25	0.32
Control Delay	18.7	19.5	17.3	16.0	14.1	3.4	5.6	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	19.5	17.3	16.0	14.1	3.4	5.6	3.8
Queue Length 50th (ft)	10	16	6	7	17	21	11	39
Queue Length 95th (ft)	31	42	22	25	#97	36	33	64
Internal Link Dist (ft)		126		111		824		463
Turn Bay Length (ft)					230		115	
Base Capacity (vph)	1365	1595	1324	1598	305	3614	494	3593
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.04	0.02	0.02	0.50	0.20	0.25	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	316	307	291	148	703	1167	559
v/c Ratio	0.66	0.64	0.52	0.34	0.23	0.30	0.48
Control Delay	31.7	26.3	11.4	12.7	8.5	8.9	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Total Delay	31.7	26.3	11.4	12.7	8.5	8.9	2.8
Queue Length 50th (ft)	143	117	40	17	54	75	0
Queue Length 95th (ft)	227	204	106	48	99	128	47
Internal Link Dist (ft)		685			265	350	
Turn Bay Length (ft)				150			
Base Capacity (vph)	713	683	748	439	3059	3856	1175
Starvation Cap Reductn	0	0	0	0	0	0	183
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.45	0.39	0.34	0.23	0.30	0.56

Intersection Summary



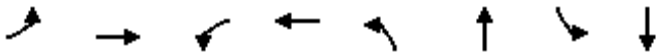
Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	183	177	169	970	506	1174
v/c Ratio	0.65	0.59	0.49	0.27	0.69	0.46
Control Delay	45.1	31.5	16.4	2.7	13.7	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.2
Total Delay	45.1	31.5	16.4	2.7	13.7	7.0
Queue Length 50th (ft)	98	68	25	32	68	118
Queue Length 95th (ft)	170	139	85	51	150	173
Internal Link Dist (ft)		657		520		265
Turn Bay Length (ft)						
Base Capacity (vph)	353	362	408	3596	729	2580
Starvation Cap Reductn	0	0	0	0	0	1097
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.49	0.41	0.27	0.69	0.79

Intersection Summary



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	177	25	74	1607	4	1180
v/c Ratio	0.72	0.11	0.27	0.48	0.03	0.34
Control Delay	34.1	0.9	14.2	10.1	40.0	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.1	0.9	14.2	10.1	40.0	6.9
Queue Length 50th (ft)	36	0	10	94	2	61
Queue Length 95th (ft)	117	0	68	315	13	155
Internal Link Dist (ft)	180	78		256		804
Turn Bay Length (ft)			150		115	
Base Capacity (vph)	310	745	279	3358	152	3464
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.03	0.27	0.48	0.03	0.34

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	175	116	55	138	246	1460	138	1075
v/c Ratio	0.58	0.30	0.18	0.35	0.96	0.50	0.91	0.37
Control Delay	24.5	16.9	15.7	17.8	66.0	7.5	74.2	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	16.9	15.7	17.8	66.0	7.5	74.2	6.5
Queue Length 50th (ft)	44	27	12	33	57	77	30	50
Queue Length 95th (ft)	93	59	34	69	#202	134	#94	90
Internal Link Dist (ft)		126		111		824		463
Turn Bay Length (ft)					230		115	
Base Capacity (vph)	1246	1598	1270	1611	257	2900	152	2873
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.07	0.04	0.09	0.96	0.50	0.91	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	307	292	282	306	1487	1037	495
v/c Ratio	0.72	0.73	0.69	0.55	0.46	0.25	0.42
Control Delay	39.2	35.8	33.7	14.5	8.9	7.3	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.8	0.0	0.3
Total Delay	39.2	35.8	33.7	14.5	9.7	7.3	2.3
Queue Length 50th (ft)	156	135	123	44	139	65	0
Queue Length 95th (ft)	248	231	211	95	194	92	37
Internal Link Dist (ft)		685			265	350	
Turn Bay Length (ft)				150			
Base Capacity (vph)	535	498	505	555	3258	4106	1192
Starvation Cap Reductn	0	0	0	0	1315	0	262
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.59	0.56	0.55	0.77	0.25	0.53

Intersection Summary



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	329	325	295	1651	443	959
v/c Ratio	0.98	0.97	0.66	0.47	1.49	0.39
Control Delay	82.2	78.9	21.1	5.4	255.6	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.1
Total Delay	82.2	78.9	21.1	5.4	255.6	7.2
Queue Length 50th (ft)	196	193	60	106	~93	101
Queue Length 95th (ft)	#374	#381	154	131	#189	131
Internal Link Dist (ft)		657		520		265
Turn Bay Length (ft)						
Base Capacity (vph)	336	334	445	3487	298	2477
Starvation Cap Reductn	0	0	0	0	0	1185
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.97	0.66	0.47	1.49	0.74

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX D

CUMULATIVE PROJECTS
INFORMATION

TOTAL CUMULATIVE PROJECTS TRAFFIC

AM Peak Hour

		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	San Bernardino Ave at Lilac Ave	0	0	0	0	0	0	0	4	0	0	2	0
2	San Bernardino Ave at Willow Ave	0	0	0	0	0	0	0	4	0	0	2	0
3	San Bernardino Ave at Riverside Ave	0	2	0	0	6	0	0	4	0	0	2	0
4	Riverside Ave at Senior Wy	0	2	0	0	6	0	0	0	0	0	0	0
5	Riverside Ave at Project Dwy	0	2	0	0	6	0	0	0	0	0	0	0
6	Riverside Ave at Gateway Plaza/Value Ctr	0	2	0	0	6	0	0	0	0	0	0	0
7	Willow Ave at Project Driveway	0	0	0	0	0	0	0	0	0	0	0	0
8	Valley Blvd at Willow Ave	0	0	0	0	0	0	0	0	0	0	1	0
9	Valley Blvd at Gateway Plaza/Value Ctr	0	0	0	0	0	0	0	0	0	0	1	0
10	Valley Blvd at Riverside Ave	0	2	0	0	6	0	0	0	0	0	1	0
11	Riverside Ave at I-10 WB Ramps	0	1	0	0	3	3	0	0	0	2	0	1
12	Riverside Ave at I-10 EB Ramps	0	0	0	3	2	0	1	0	2	0	0	0

PM Peak Hour

		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	San Bernardino Ave at Lilac Ave	0	0	0	0	0	0	0	3	0	0	5	0
2	San Bernardino Ave at Willow Ave	0	0	0	0	0	0	0	3	0	0	5	0
3	San Bernardino Ave at Riverside Ave	0	7	0	0	4	0	0	3	0	0	5	0
4	Riverside Ave at Senior Wy	0	7	0	0	4	0	0	0	0	0	0	0
5	Riverside Ave at Project Dwy	0	7	0	0	4	0	0	0	0	0	0	0
6	Riverside Ave at Gateway Plaza/Value Ctr	0	7	0	0	4	0	0	0	0	0	0	0
7	Willow Ave at Project Driveway	0	0	0	0	0	0	0	0	0	0	0	0
8	Valley Blvd at Willow Ave	0	0	0	0	0	0	0	1	0	0	1	0
9	Valley Blvd at Gateway Plaza/Value Ctr	0	0	0	0	0	0	0	1	0	0	1	0
10	Valley Blvd at Riverside Ave	0	7	0	0	4	0	0	1	0	0	1	0
11	Riverside Ave at I-10 WB Ramps	2	4	0	0	2	2	0	0	0	1	0	4
12	Riverside Ave at I-10 EB Ramps	0	2	2	2	1	0	4	0	1	0	0	0

Enter only in blue cells	Yellow cells calculate

Int. #:	1	San Bernardino Ave at Lilac Ave

Mirror distribution? Y Entire Intersection

Mirror distribution?

TOTAL CUMULATIVE PROJECTS TRAFFIC

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	0	0	0	0	0	0	0	0	0	2	0
AM Out		0	0	0	0	0	0	0	4	0	0	0	0
AM Tot		0	0	0	0	0	0	0	4	0	0	2	0
PM In		0	0	0	0	0	0	0	0	0	0	5	0
PM Out		0	0	0	0	0	0	0	3	0	0	0	0
PM Tot		0	0	0	0	0	0	0	3	0	0	5	0

Zone #	1	Warehousing/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	0%											
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	19	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	6	0	0	0	0	0	0	0	0	0	0	0	0
PM In	8	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	20	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	2	SF Detached Housing and Senior Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	23	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	64	0	0	0	0	0	0	0	0	0	0	0	0
PM In	73	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	44	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	3	SF Detached Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In											25%	
Y	0%	0%	0%	0%	0%	0%	0%	25%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	25%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	25%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	2	0
AM Out	17	0	0	0	0	0	0	0	4	0	0	0	0
PM In	18	0	0	0	0	0	0	0	0	0	0	5	0
PM Out	11	0	0	0	0	0	0	0	3	0	0	0	0

Zone #	4	Auto Sales/Service

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	2	0	0	0	0	0	0	0	0	0	0	0	0
PM In	5	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	7	0	0	0	0	0	0	0	0	0	0	0	0

Int. #:	1	San Bernardino Ave at Lilac Ave
Zone #	5	RV Service/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	6	RV Service/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Enter only in blue cells	Yellow cells calculate

Int. #:	2	San Bernardino Ave at Willow Ave

Y

TOTAL CUMULATIVE PROJECTS TRAFFIC													
Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	0	0	0	0	0	0	0	0	0	2	0
AM Out		0	0	0	0	0	0	0	4	0	0	0	0
AM Tot		0	0	0	0	0	0	0	4	0	0	2	0
PM In		0	0	0	0	0	0	0	0	0	0	5	0
PM Out		0	0	0	0	0	0	0	3	0	0	0	0
PM Tot		0	0	0	0	0	0	0	3	0	0	5	0

Zone #	1	Warehousing/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	0%											
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	19	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	6	0	0	0	0	0	0	0	0	0	0	0	0
PM In	8	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	20	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	2	SF Detached Housing and Senior Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	23	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	64	0	0	0	0	0	0	0	0	0	0	0	0
PM In	73	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	44	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	3	SF Detached Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In											25%	
Y	0%	0%	0%	0%	0%	0%	0%	25%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	25%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	25%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	2	0
AM Out	17	0	0	0	0	0	0	0	4	0	0	0	0
PM In	18	0	0	0	0	0	0	0	0	0	0	5	0
PM Out	11	0	0	0	0	0	0	0	3	0	0	0	0

Zone #	4	Auto Sales/Service

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	2	0	0	0	0	0	0	0	0	0	0	0	0
PM In	5	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	7	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	5	RV Service/Manufacturing

Int. #:	2	San Bernardino Ave at Willow Ave

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	6	RV Service/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Int. #:	3	San Bernardino Ave at Riverside Ave

Y

TOTAL CUMULATIVE PROJECTS TRAFFIC													
Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	2	0	0	0	0	0	0	0	0	2	0
AM Out		0	0	0	0	6	0	0	4	0	0	0	0
AM Tot		0	2	0	0	6	0	0	4	0	0	2	0
PM In		0	7	0	0	0	0	0	0	0	0	5	0
PM Out		0	0	0	0	4	0	0	3	0	0	0	0
PM Tot		0	7	0	0	4	0	0	3	0	0	5	0

Zone #	1	Warehousing/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	0%											
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	19	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	6	0	0	0	0	0	0	0	0	0	0	0	0
PM In	8	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	20	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	2	SF Detached Housing and Senior Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		10%										
Y	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	23	0	2	0	0	0	0	0	0	0	0	0	0
AM Out	64	0	0	0	0	6	0	0	0	0	0	0	0
PM In	73	0	7	0	0	0	0	0	0	0	0	0	0
PM Out	44	0	0	0	0	4	0	0	0	0	0	0	0

Zone #	3	SF Detached Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In											25%	
Y	0%	0%	0%	0%	0%	0%	0%	25%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	25%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	25%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	2	0
AM Out	17	0	0	0	0	0	0	0	4	0	0	0	0
PM In	18	0	0	0	0	0	0	0	0	0	0	5	0
PM Out	11	0	0	0	0	0	0	0	3	0	0	0	0

Zone #	4	Auto Sales/Service

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	2	0	0	0	0	0	0	0	0	0	0	0	0
PM In	5	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	7	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	5	RV Service/Manufacturing

Int. #:	3	San Bernardino Ave at Riverside Ave

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	6	RV Service/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Enter only in blue cells	Yellow cells calculate

Int. #:	4	Riverside Ave at Senior Wy

Y

TOTAL CUMULATIVE PROJECTS TRAFFIC

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	2	0	0	0	0	0	0	0	0	0	0
AM Out		0	0	0	0	6	0	0	0	0	0	0	0
AM Tot		0	2	0	0	6	0	0	0	0	0	0	0
PM In		0	7	0	0	0	0	0	0	0	0	0	0
PM Out		0	0	0	0	4	0	0	0	0	0	0	0
PM Tot		0	7	0	0	4	0	0	0	0	0	0	0

Zone #	1	Warehousing/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	0%											
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	19	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	6	0	0	0	0	0	0	0	0	0	0	0	0
PM In	8	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	20	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	2	SF Detached Housing and Senior Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		10%										
Y	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	23	0	2	0	0	0	0	0	0	0	0	0	0
AM Out	64	0	0	0	0	6	0	0	0	0	0	0	0
PM In	73	0	7	0	0	0	0	0	0	0	0	0	0
PM Out	44	0	0	0	0	4	0	0	0	0	0	0	0

Zone #	3	SF Detached Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	17	0	0	0	0	0	0	0	0	0	0	0	0
PM In	18	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	11	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	4	Auto Sales/Service

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	2	0	0	0	0	0	0	0	0	0	0	0	0
PM In	5	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	7	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	5	RV Service/Manufacturing

Int. #:	4	Riverside Ave at Senior Wy

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	6	RV Service/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Enter only in blue cells	Yellow cells calculate

Int. #:	5	Riverside Ave at Project Dwy

Y

TOTAL CUMULATIVE PROJECTS TRAFFIC													
Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	2	0	0	0	0	0	0	0	0	0	0
AM Out		0	0	0	0	6	0	0	0	0	0	0	0
AM Tot		0	2	0	0	6	0	0	0	0	0	0	0
PM In		0	7	0	0	0	0	0	0	0	0	0	0
PM Out		0	0	0	0	4	0	0	0	0	0	0	0
PM Tot		0	7	0	0	4	0	0	0	0	0	0	0

Zone #	1	Warehousing/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	0%											
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	19	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	6	0	0	0	0	0	0	0	0	0	0	0	0
PM In	8	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	20	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	2	SF Detached Housing and Senior Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		10%										
Y	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	23	0	2	0	0	0	0	0	0	0	0	0	0
AM Out	64	0	0	0	0	6	0	0	0	0	0	0	0
PM In	73	0	7	0	0	0	0	0	0	0	0	0	0
PM Out	44	0	0	0	0	4	0	0	0	0	0	0	0

Zone #	3	SF Detached Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	17	0	0	0	0	0	0	0	0	0	0	0	0
PM In	18	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	11	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	4	Auto Sales/Service

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	2	0	0	0	0	0	0	0	0	0	0	0	0
PM In	5	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	7	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	5	RV Service/Manufacturing

Int. #:	5	Riverside Ave at Project Dwy

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	6	RV Service/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Enter only in blue cells	Yellow cells calculate

Int. #:	6	Riverside Ave at Gateway Plaza/Value Ctr

Y

TOTAL CUMULATIVE PROJECTS TRAFFIC

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	2	0	0	0	0	0	0	0	0	0	0
AM Out		0	0	0	0	6	0	0	0	0	0	0	0
AM Tot		0	2	0	0	6	0	0	0	0	0	0	0
PM In		0	7	0	0	0	0	0	0	0	0	0	0
PM Out		0	0	0	0	4	0	0	0	0	0	0	0
PM Tot		0	7	0	0	4	0	0	0	0	0	0	0

Zone #	1	Warehousing/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	0%											
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	19	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	6	0	0	0	0	0	0	0	0	0	0	0	0
PM In	8	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	20	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	2	SF Detached Housing and Senior Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		10%										
Y	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	23	0	2	0	0	0	0	0	0	0	0	0	0
AM Out	64	0	0	0	0	6	0	0	0	0	0	0	0
PM In	73	0	7	0	0	0	0	0	0	0	0	0	0
PM Out	44	0	0	0	0	4	0	0	0	0	0	0	0

Zone #	3	SF Detached Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	17	0	0	0	0	0	0	0	0	0	0	0	0
PM In	18	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	11	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	4	Auto Sales/Service

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	2	0	0	0	0	0	0	0	0	0	0	0	0
PM In	5	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	7	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	5	RV Service/Manufacturing

Int. #:	6	Riverside Ave at Gateway Plaza/Value Ctr

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	6	RV Service/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Enter only in blue cells	Yellow cells calculate

Int. #:	7	Willow Ave at Project Driveway

Y

TOTAL CUMULATIVE PROJECTS TRAFFIC

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	0	0	0	0	0	0	0	0	0	0	0
AM Out		0	0	0	0	0	0	0	0	0	0	0	0
AM Tot		0	0	0	0	0	0	0	0	0	0	0	0
PM In		0	0	0	0	0	0	0	0	0	0	0	0
PM Out		0	0	0	0	0	0	0	0	0	0	0	0
PM Tot		0	0	0	0	0	0	0	0	0	0	0	0

Zone #	1	Warehousing/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	0%											
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	19	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	6	0	0	0	0	0	0	0	0	0	0	0	0
PM In	8	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	20	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	2	SF Detached Housing and Senior Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	23	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	64	0	0	0	0	0	0	0	0	0	0	0	0
PM In	73	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	44	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	3	SF Detached Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	17	0	0	0	0	0	0	0	0	0	0	0	0
PM In	18	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	11	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	4	Auto Sales/Service

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	2	0	0	0	0	0	0	0	0	0	0	0	0
PM In	5	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	7	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	5	RV Service/Manufacturing

Int. #:	7	Willow Ave at Project Driveway

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	6	RV Service/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Enter only in blue cells	Yellow cells calculate

Int. #:	8	Valley Blvd at Willow Ave

Y

TOTAL CUMULATIVE PROJECTS TRAFFIC

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	0	0	0	0	0	0	0	0	0	1	0
AM Out		0	0	0	0	0	0	0	0	0	0	0	0
AM Tot		0	0	0	0	0	0	0	0	0	0	1	0
PM In		0	0	0	0	0	0	0	0	0	0	1	0
PM Out		0	0	0	0	0	0	0	1	0	0	0	0
PM Tot		0	0	0	0	0	0	0	1	0	0	1	0

Zone #	1	Warehousing/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	0%											
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	19	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	6	0	0	0	0	0	0	0	0	0	0	0	0
PM In	8	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	20	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	2	SF Detached Housing and Senior Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	23	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	64	0	0	0	0	0	0	0	0	0	0	0	0
PM In	73	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	44	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	3	SF Detached Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	17	0	0	0	0	0	0	0	0	0	0	0	0
PM In	18	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	11	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	4	Auto Sales/Service

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In											10%	
Y	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	1	0
AM Out	2	0	0	0	0	0	0	0	0	0	0	0	0
PM In	5	0	0	0	0	0	0	0	0	0	0	1	0
PM Out	7	0	0	0	0	0	0	0	1	0	0	0	0

Zone #	5	RV Service/Manufacturing

Int. #:	8	Valley Blvd at Willow Ave

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	6	RV Service/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Enter only in blue cells	Yellow cells calculate

Int. #:	9	Valley Blvd at Gateway Plaza/Value Ctr

Y

TOTAL CUMULATIVE PROJECTS TRAFFIC

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	0	0	0	0	0	0	0	0	0	1	0
AM Out		0	0	0	0	0	0	0	0	0	0	0	0
AM Tot		0	0	0	0	0	0	0	0	0	0	1	0
PM In		0	0	0	0	0	0	0	0	0	0	1	0
PM Out		0	0	0	0	0	0	0	1	0	0	0	0
PM Tot		0	0	0	0	0	0	0	1	0	0	1	0

Zone #	1	Warehousing/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	0%											
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	19	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	6	0	0	0	0	0	0	0	0	0	0	0	0
PM In	8	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	20	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	2	SF Detached Housing and Senior Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	23	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	64	0	0	0	0	0	0	0	0	0	0	0	0
PM In	73	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	44	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	3	SF Detached Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	17	0	0	0	0	0	0	0	0	0	0	0	0
PM In	18	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	11	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	4	Auto Sales/Service

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In											10%	
Y	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	1	0
AM Out	2	0	0	0	0	0	0	0	0	0	0	0	0
PM In	5	0	0	0	0	0	0	0	0	0	0	1	0
PM Out	7	0	0	0	0	0	0	0	1	0	0	0	0

Zone #	5	RV Service/Manufacturing

Int. #:	9	Valley Blvd at Gateway Plaza/Value Ctr

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	6	RV Service/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Enter only in blue cells	Yellow cells calculate

Int. #:	10	Valley Blvd at Riverside Ave

Y

TOTAL CUMULATIVE PROJECTS TRAFFIC

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	2	0	0	0	0	0	0	0	0	1	0
AM Out		0	0	0	0	6	0	0	0	0	0	0	0
AM Tot		0	2	0	0	6	0	0	0	0	0	1	0
PM In		0	7	0	0	0	0	0	0	0	0	1	0
PM Out		0	0	0	0	4	0	0	1	0	0	0	0
PM Tot		0	7	0	0	4	0	0	1	0	0	1	0

Zone #	1	Warehousing/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	19	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	6	0	0	0	0	0	0	0	0	0	0	0	0
PM In	8	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	20	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	2	SF Detached Housing and Senior Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		10%										
Y	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	23	0	2	0	0	0	0	0	0	0	0	0	0
AM Out	64	0	0	0	0	6	0	0	0	0	0	0	0
PM In	73	0	7	0	0	0	0	0	0	0	0	0	0
PM Out	44	0	0	0	0	4	0	0	0	0	0	0	0

Zone #	3	SF Detached Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	17	0	0	0	0	0	0	0	0	0	0	0	0
PM In	18	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	11	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	4	Auto Sales/Service

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In											10%	
Y	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	1	0
AM Out	2	0	0	0	0	0	0	0	0	0	0	0	0
PM In	5	0	0	0	0	0	0	0	0	0	0	1	0
PM Out	7	0	0	0	0	0	0	0	1	0	0	0	0

Int. #:	10	Valley Blvd at Riverside Ave

Zone #	5	RV Service/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	6	RV Service/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Enter only in blue cells	Yellow cells calculate

Int. #:	11	Riverside Ave at I-10 WB Ramps

N

TOTAL CUMULATIVE PROJECTS TRAFFIC													
Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	1	0	0	0	0	0	0	0	2	0	1
AM Out		0	0	0	0	3	3	0	0	0	0	0	0
AM Tot		0	1	0	0	3	3	0	0	0	2	0	1
PM In		0	4	0	0	0	0	0	0	0	1	0	4
PM Out		2	0	0	0	2	2	0	0	0	0	0	0
PM Tot		2	4	0	0	2	2	0	0	0	1	0	4

Zone #	1	Warehousing/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	19	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	6	0	0	0	0	0	0	0	0	0	0	0	0
PM In	8	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	20	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	2	SF Detached Housing and Senior Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		5%										5%
N	0%	0%	0%	0%	5%	5%	0%	0%	0%	0%	0%	0%
AM Out					5%	5%						
PM In	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%
PM Out	0%	0%	0%	0%	5%	5%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	23	0	1	0	0	0	0	0	0	0	0	0	1
AM Out	64	0	0	0	0	3	3	0	0	0	0	0	0
PM In	73	0	4	0	0	0	0	0	0	0	0	0	4
PM Out	44	0	0	0	0	2	2	0	0	0	0	0	0

Zone #	3	SF Detached Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	17	0	0	0	0	0	0	0	0	0	0	0	0
PM In	18	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	11	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	4	Auto Sales/Service

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	2	0	0	0	0	0	0	0	0	0	0	0	0
PM In	5	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	7	0	0	0	0	0	0	0	0	0	0	0	0

Int. #:	11	Riverside Ave at I-10 WB Ramps

Zone #	5	RV Service/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In										5%		
N	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out	5%											
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%
PM Out	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	2	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	1	0	0
PM Out	31	2	0	0	0	0	0	0	0	0	0	0	0

Zone #	6	RV Service/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

Enter only in blue cells	Yellow cells calculate

Int. #:	12	Riverside Ave at I-10 EB Ramps

N

TOTAL CUMULATIVE PROJECTS TRAFFIC

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	0	0	0	2	0	1	0	2	0	0	0
AM Out		0	0	0	3	0	0	0	0	0	0	0	0
AM Tot		0	0	0	3	2	0	1	0	2	0	0	0
PM In		0	0	0	0	1	0	4	0	1	0	0	0
PM Out		0	2	2	2	0	0	0	0	0	0	0	0
PM Tot		0	2	2	2	1	0	4	0	1	0	0	0

Zone #	1	Warehousing/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	19	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	6	0	0	0	0	0	0	0	0	0	0	0	0
PM In	8	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	20	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	2	SF Detached Housing and Senior Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In							5%					
N	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out				5%								
PM In	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	23	0	0	0	0	0	0	1	0	0	0	0	0
AM Out	64	0	0	0	3	0	0	0	0	0	0	0	0
PM In	73	0	0	0	0	0	0	4	0	0	0	0	0
PM Out	44	0	0	0	2	0	0	0	0	0	0	0	0

Zone #	3	SF Detached Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	17	0	0	0	0	0	0	0	0	0	0	0	0
PM In	18	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	11	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	4	Auto Sales/Service

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	6	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	2	0	0	0	0	0	0	0	0	0	0	0	0
PM In	5	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	7	0	0	0	0	0	0	0	0	0	0	0	0

Int. #:	12	Riverside Ave at I-10 EB Ramps

Zone #	5	RV Service/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In					5%				5%			
N	0%	5%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out		5%	5%									
PM In	0%	0%	0%	0%	5%	0%	0%	0%	5%	0%	0%	0%
PM Out	0%	5%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	2	0	0	0	2	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	1	0	0	0	1	0	0	0
PM Out	31	0	2	2	0	0	0	0	0	0	0	0	0

Zone #	6	RV Service/Manufacturing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	30	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	8	0	0	0	0	0	0	0	0	0	0	0	0
PM In	14	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	31	0	0	0	0	0	0	0	0	0	0	0	0

RESOLUTION NO. 2022-XX

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF RIALTO, CALIFORNIA APPROVING CONDITIONAL DEVELOPMENT PERMIT NO. 2022-0029 ALLOWING THE DEVELOPMENT AND OPERATION OF AN 83,272 SQUARE FOOT COMMERCE CENTER ON 3.96 GROSS ACRES OF LAND ON A PORTION OF APN: 0132-161-13 AND 0132-202-06 LOCATED ON THE EAST SIDE OF WILLOW AVENUE SOUTH OF THE EXISTING WALMART CENTER, EAST OF THE FIRE STATION 205 AND CACTUS-RIALTO CHANNEL WITHIN THE INDUSTRIAL PARK (I-P) LAND USE DISTRICT OF THE GATEWAY SPECIFIC PLAN..

WHEREAS, the applicant, Kimley-Horn & Associates, proposes to develop and operate an 83,272 square foot commerce center ("Project") on land is a portion of (APNs: 0132-161-13 and 0132-202-06) located on the east side of Willow Avenue south of the existing Walmart Center, east of the Fire Station 205 and Cactus-Rialto Channel within the Industrial Park (I-P) land use district of the Gateway Specific Plan ("Site"); and

WHEREAS, the Project will consist of 2,500 square feet of office space on the ground floor, 2,500 square feet of office space on the second floor, and 83,272 square feet of distribution center space, twenty (20) dock-high loading doors, which will be located on the east side of the building, concrete screen walls, an abundant amount of landscaping, and full pedestrian and vehicle access; and

WHEREAS, pursuant to Section 18.112.040A of the Rialto Municipal Code, the Project requires a Conditional Development Permit, and the applicant has applied for Conditional Development Permit No. 2022-0029 ("CDP No. 2022-0029"); and

WHEREAS, in conjunction with the Project, the applicant has applied for Precise Plan of Design No. 2022-0052 ("PPD No. 2022-0052") to facilitate the development of an 83,272 square-foot commerce center and associated paving, landscaping, fencing, lighting, and drainage improvements on the Site; and

WHEREAS, on September 14, 2022, the Planning Commission of the City of Rialto conducted a duly noticed public hearing, as required by law, on CDP 2022-0029 and PPD No. 2022-0052, took testimony, at which time it received input from staff, the city attorney, and the

applicant; heard public testimony; discussed the proposed CDP 2022-0029 and PPD No. 2022-0052; and closed the public hearing; and

WHEREAS, all legal prerequisites to the adoption of this Resolution have occurred.

NOW, THEREFORE, BE IT RESOLVED by the Planning Commission of the City of Rialto as follows:

SECTION 1. The Planning Commission hereby specifically finds that all of the facts set forth in the recitals above of this Resolution are true and correct and incorporated herein.

SECTION 2. Based on substantial evidence presented to the Planning Commission during the public hearing conducted with regard to CDP No. 2022-0029, including written staff reports, verbal testimony, site plans, other documents, and the conditions of approval stated herein, the Planning Commission hereby determines that CDP No. 2022-0029 satisfies the requirements of Section 18.66.020 of the Rialto Municipal Code pertaining to the findings which must be made precedent to granting a conditional development permit, which findings are as follows:

1. The proposed use is deemed essential or desirable to provide a service or facility which will contribute to the convenience or general well-being of the neighborhood or community; and

This finding is supported by the following facts:

The Site is a relatively flat, square-shaped piece of land comprised of one (1) parcel that is 3.96 gross acres in size with approximate dimensions of 661.04 feet (north-south) by 328.21 feet (east-west). The project site is bound on the south by the Gateway Shopping Center, on the east by Rialto Village Shopping Center, on the west by the City of Rialto Fire Station No. 205, and on the north side of the project by the Rialto Marketplace Shopping Center. The property is entirely vacant and covered only by dirt, grasses, and shrubs.

Furthermore, the project site is located within the Industrial Park (I-P) of the Gateway Specific Plan. The I-P land use designation is intended to accommodate a mixture of professional office, light industrial, research, and development, business park, light manufacturing, assembly, and related storage and support services uses.

2. The proposed use will not be detrimental or injurious to health, safety, or general welfare of persons residing or working in the vicinity; and

This finding is supported by the following facts:

The development of a commerce center on the Site is consistent with the Industrial Park (I-P) zoning designation, which conditionally permits the development and operation of a commerce center. The site is bound on the south by the Gateway Shopping Center, on the east by Rialto Village Shopping Center, on the west by the City of Rialto Fire Station No. 205, and on the north side of the project by the Rialto Marketplace Shopping Center. The zoning designation of the Site and the properties to the north, south, and east is Retail Commercial (R-C), and the zoning designation of the property to the west is Industrial Park (I-P). The project is not expected to negatively impact any surrounding uses with the successful implementation of measures such as landscape buffering, the installation of solid screen walls, aesthetic building enhancements, and other traffic-related measures.

3. The site for the proposed use is adequate in size, shape, topography, accessibility and other physical characteristics to accommodate the proposed use in a manner compatible with existing land uses; and

This finding is supported by the following facts:

The Site contains 3.96 acres, is fairly level, and is adjacent to Fire station No. 205 to the west. Willow Avenue a public street is adjacent to Fire Station No. 205 to the west, which will be able to accommodate the proposed use. The Project will have one (1) point of access via Willow Avenue. The driveway on Willow Avenue will provide full access for both trucks and passenger vehicles. In addition, the building will have 68 parking spaces, which equals the amount required by Chapter 18.58 (Off-Street Parking) of the Rialto Municipal Code.

4. The site has adequate access to those utilities and other services required for the proposed use; and

This finding is supported by the following facts:

The Site will have adequate access to all utilities and services required through main water, electric, sewer, and other utility lines that will be hooked up to the Site.

5. The proposed use will be arranged, designed, constructed, and maintained so as it will not be injurious to property or improvements in the vicinity or otherwise be inharmonious with the General Plan and its objectives, the I-P zone, or any zoning ordinances, and

This finding is supported by the following facts:

As previously stated, the use is consistent with the Industrial Park (I-P) zoning designation. The building will be oriented such that none of the dock doors will front or face the public right-of-way, the building will have 68 parking spaces, all of which comply with the General Plan, the I-P zoning district, Chapter 18.104 (Indoor Storage Facilities) of the Rialto Municipal Code, and the City's Design Guidelines. Landscaping will be abundantly incorporated into the Site, as the landscape coverage for the project is 10.3 percent, which exceeds the minimum required amount of 10.0 percent.

6. Any potential adverse effects upon the surrounding properties will be minimized to every extent practical and any remaining adverse effects shall be outweighed by the benefits conferred upon the community or neighborhood as a whole.

This finding is supported by the following facts:

The Project's effects will be minimized through the implementation of the Conditions of Approval contained herein, and through the implementation of Conditions of Approval imposed by the Planning Commission on the Precise Plan of Design, such as extensive landscaping, solid screen walls, decorative paving, and enhanced architectural features. The development of a high-quality industrial development will provide additional employment opportunities for residents and visitors to the City. The Project will also serve to develop a piece of land, which has remained undeveloped. The Project is consistent with the Industrial Park (I-P) zoning district and the surrounding industrial uses. The project is not expected to negatively impact any surrounding uses with the successful implementation of measures such as landscape buffering, the installation of solid screen walls, aesthetic building enhancements, and other traffic related measures. Therefore, any potential adverse effects are outweighed by the benefits conferred upon the community and neighborhood as a whole.

SECTION 3. The Planning Commission adopted an Addendum to the Gateway Specific Plan Environmental Impact Report ("Addendum") on January 7, 2022, in accordance with the California Environmental Quality Act (CEQA). The Addendum analyzed the development of 83,272 square foot commerce center and the 93,773 square foot shopping center on the project within the Gateway Specific Plan area. No further review under CEQA is required for the project. The Planning Commission directs the Planning Division to file the necessary documentation with the Clerk of the Board of Supervisors for San Bernardino County.

SECTION 4. CDP No. 2022-0029 is granted to Kimley-Horn & Associates, in accordance with the plans and application on file with the Planning Division, subject to the following conditions:

1. The approval is granted allowing the development and operation of an 83,272 square foot commerce center on 3.96 gross acres of land is a portion of (APNs:0132-161-13 and 0132-202-06) located at the one driveway on Willow Avenue through the south side of the fire station property and adjacent to the Cactus-Rialto Channel within the Industrial Park (I-P) land use district of the Gateway Specific Plan, as shown on the plans attached as Exhibit A and as approved by the Planning Commission. If the Conditions of Approval specified herein are not satisfied or otherwise completed, the project shall be subject to revocation.

2. City inspectors shall have access to the site to reasonably inspect the site during normal working hours to assure compliance with these conditions and other codes.

3. The applicant shall indemnify, protect, defend, and hold harmless, the City of Rialto, and/or any of its officials, officers, employees, agents, departments, agencies, and instrumentalities thereof (collectively, the "City Parties"), from any and all claims, demands, law suits, writs of mandamus, and other actions and proceedings (whether legal, equitable, declaratory, administrative or adjudicatory in nature), and alternative dispute resolutions procedures (including, but not limited to arbitrations, mediations, and other such procedures), (collectively "Actions"), brought against the City, and/or any of its officials, officers, employees, agents, departments, agencies, and instrumentalities thereof, that challenge, attack, or seek to modify, set aside, void, or annul, the any action of, or any permit or approval issued by, the City and/or any of its officials, officers, employees, agents, departments, agencies, and instrumentalities thereof (including actions approved by the voters of the City), for or concerning the Project (collectively, the "Entitlements"), whether such Actions are brought under the California Environmental Quality Act, the Planning and Zoning Law, the Subdivision Map Act, Code of Civil Procedure Chapter 1085 or 1094.5, the California Public Records Act, or any other state, federal, or local statute, law, ordinance, rule, regulation, or any decision of a court of competent jurisdiction. This condition to indemnify, protect, defend, and hold the City harmless shall include, but not be limited to (i) damages, fees and/or costs awarded against the City, if any, and (ii) cost of suit, attorneys' fees and other costs, liabilities and expenses incurred in connection with such proceeding whether incurred by applicant, Property owner, or the City and/or other parties initiating or bringing such proceeding (collectively, subparts (i) and (ii) are the "Damages"). Notwithstanding anything to the contrary contained herein, the Applicant shall not be liable to the City Parties under this indemnity to the extent the Damages incurred by any of the City Parties in such Action(s) are a result of the City Parties' fraud, intentional misconduct or gross negligence in connection with issuing the Entitlements. The applicant shall execute an agreement to indemnify, protect, defend, and hold the City harmless as stated herein within five (5) days of approval of CDP No. 2022-0029.

4. In accordance with the provisions of Government Code Section 66020(d)(1), the imposition of fees, dedications, reservations, or exactions for this Project, if any, are subject to protest by the applicant at the time of approval or conditional approval of the Project or within 90 days after the date of the imposition of the fees, dedications, reservations, or exactions imposed on the Project.

5. The Project shall be limited to a maximum of 406 actual passenger car trips and 32 actual truck trips daily, in accordance with Table 2: Project Trip Generation Summary of the Traffic Impact Analysis Scoping Agreement prepared for the Project by Kimley-Horn Associates and dated December 2021, which is attached hereto as Exhibit B.

6. The applicant, landlord, operator(s) and/or tenant(s) shall ensure that all inbound truck traffic that requires temporary queuing or staging do so on-site. Inbound truck traffic shall

not queue or stage on any public street at any time. Activities on-site shall not operate in such a manner that would impact traffic lanes, cause back up (queuing or staging) of vehicles into the public-right-of-way, or create any unsafe conditions. Fire and Police access and passage around trucks queuing or staging on-site shall be feasible at all times and activities shall not block parking areas, access or passage for disabled persons or emergency response vehicles.

7. The applicant, landlord, operator(s) and/or tenant(s) shall only park or store trucks and trailers within designated truck and trailer parking spaces on-site. No trucks or trailers shall be parked or stored within any public street or within any on-site drive-aisles or passenger vehicle parking areas at any time.

8. The landlord and/or tenant(s) shall not store any product, goods, materials, etc. outside of the building at any time, except for trucks, trailers, and vehicles associated with the operation(s) conducted within the building, without prior approval of a separate Conditional Development Permit in accordance with Chapter 18.104 (Indoor Storage Uses) of the Rialto Municipal Code.

9. The privileges granted by the Planning Commission pursuant to approval of this Conditional Development Permit are valid for one (1) year from the effective date of approval. If the applicant fails to commence the project within one year of said effective date, this conditional development permit shall be null and void and any privileges granted hereunder shall terminate automatically. If the applicant or his or her successor in interest commence the project within one year of the effective date of approval, the privileges granted hereunder will continue inured to the property as long as the property is used for the purpose for which the conditional development permit was granted, and such use remains compatible with adjacent property uses.

10. Approval of CDP No. 2022-0029 will not become effective until the applicant has signed a statement acknowledging awareness and acceptance of the required conditions of approval contained herein.

11. In the event, that any operation on the Site is found to be objectionable or incompatible with the character of the City and its environs due to excessive noise, excessive traffic, loitering, criminal activity or other undesirable characteristics including, but not strictly limited to, uses which are or have become offensive to neighboring property or the goals and objectives of the Industrial Park (I-P) zoning district and/or the City's General Plan, the applicant shall address the issues within forty-eight (48) hours of being notified by the City.

12. If the applicant fails to comply with any of the conditions of approval placed upon CDP No. 2022-0029 or PPD No. 2022-0052, the Planning Commission may initiate proceedings to revoke the conditional development permit in accordance with the provisions of Sections 18.66.070 through 18.66.090, inclusive, of the Rialto Municipal Code. Conditional Development Permit No. 2022-0029 may be revoked, suspended or

modified in accordance with Section 18.66.070 of the Zoning Ordinance at the discretion of the Planning Commission if:

a) The use for which such approval was granted has ceased to exist, been subsequently modified, or has been suspended for six (6) months or more;

b) Any of the express conditions or terms of such permit are violated;

c) The use for which such approval was granted becomes or is found to be objectionable or incompatible with the character of the City and its environs due to excessive noise, excessive traffic, loitering, criminal activity or other undesirable characteristics including, but not strictly limited to uses which are or have become offensive to neighboring property or the goals and objectives of the Industrial Park (I-P) zoning district and/or the City's General Plan.

SECTION 5. The Chairman of the Planning Commission shall sign the passage and adoption of this resolution and thereupon the same shall take effect and be in force.

PASSED, APPROVED AND ADOPTED this 14th day of September, 2022.

_____
JERRY GUTIERREZ, CHAIR
CITY OF RIALTO PLANNING COMMISSION

STATE OF CALIFORNIA)
COUNTY OF SAN BERNARDINO) ss
CITY OF RIALTO)

I, Kim Dame, Administrative Analyst of the City of Rialto, do hereby certify that the foregoing Resolution No. ____ was duly passed and adopted at a regular meeting of the Planning Commission of the City of Rialto held on the ___th day of ____, 2022.

Upon motion of Planning Commissioner_____., seconded by Planning Commissioner ____, the foregoing Resolution No. ____was duly passed and adopted.

Vote on the motion:

AYES:

NOES:

ABSENT:

IN WITNESS WHEREOF, I have hereunto set my hand and the Official Seal of the City of Rialto this __th day of ___, 2022.

_____

KIM DAME, AMMINISTRATIVE ANALYST

Exhibit “A”

Project Plans

Exhibit “B”

Table 2: Project Trip Generation Summary
From the Traffic Impact Analysis, Scoping Agreement prepared for the Project by Kimley-Horn & Associates – Dated December, 2021

RESOLUTION NO. 2022-XX

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF RIALTO, CALIFORNIA PRECISE PLAN OF DESIGN NO. 2022-0052 ALLOWING THE DEVELOPMENT OF A 83,272 SQUARE FOOT COMMERCE CENTER ON 3.96 GROSS ACRES OF LAND IS A PORTION OF (APNS: 0132-161-13 AND 0132-202-06) LOCATED ON THE EAST SIDE OF WILLOW AVENUE SOUTH OF THE EXISTING WALMART CENTER, EAST OF THE FIRE STATION 205 AND CACTUS-RIALTO CHANNEL WITHIN THE INDUSTRIAL PARK (I-P) LAND USE DISTRICT OF THE GATEWAY SPECIFIC PLAN.

WHEREAS, the applicant, Kimley-Horn & Associates, proposes to develop and operate an 83,272 square foot commerce center ("Project") on land is a portion of (APNs: 0132-161-13 and 0132-202-06) located on the east side of Willow Avenue south of the existing Walmart Center, east of the Fire Station 205 and Cactus-Rialto Channel within the Industrial Park (I-P) land use district of the Gateway Specific Plan ("Site"); and

WHEREAS, APNS: 0132-161-13 AND 0132-202-06 contains a zoning designation of I-P within the Gateway Specific Plan; and

WHEREAS, in accordance with Section 18.06.020 of the Rialto Municipal Code, the Project shall comply with the requirements of the I-P zones in the areas of the Site that are zoned I-P and

WHEREAS, pursuant to Section 18.65.010 of the Rialto Municipal Code, the Project requires a Precise Plan of Design, and the applicant has agreed to apply for Precise Plan of Design No. 2022-0052 ("PPD No. 2022-0052"); and

WHEREAS, in conjunction with the Project, the applicant submitted Conditional Development Permit No. 2022-0029 ("CDP No. 2022-0029") to facilitate the development and operation of an 83,272 square foot distribution center on the Site, and CDP No. 2022-0029 is necessary to facilitate the Project; and

WHEREAS, the Project will consist of 2,500 square feet of office space on the ground floor, 2,500 square feet of office space on the second floor, and 83,272 square feet of distribution building space with twenty (20) dock-high loading doors, which will be located on the east side of the building; and

WHEREAS, on September 14, 2022, the Planning Commission of the City of Rialto conducted a duly noticed public hearing, as required by law, on CDP No. 2022-0029 and PPD No. 2022-0052, and took testimony, at which time it received input from staff, the city attorney, and the applicant; heard public testimony; discussed the proposed CDP No. 2022-0029 and PPD No. 2022-0052; and closed the public hearing; and

WHEREAS, all legal prerequisites to the adoption of this Resolution have occurred.

NOW, THEREFORE, BE IT RESOLVED by the Planning Commission of the City of Rialto as follows:

SECTION 1. The Planning Commission hereby specifically finds that all of the facts set forth in the recitals above of this Resolution are true and correct and incorporated herein.

SECTION 2. Based on substantial evidence presented to the Planning Commission during the public hearing conducted with regard to PPD No. 2022-0052, including written staff reports, verbal testimony, site plans, other documents, and the conditions of approval stated herein, the Planning Commission hereby determines that PPD No. 2022-0052 satisfies the requirements of Section 18.65.020e of the Rialto Municipal Code pertaining to the findings which must be made precedent to granting a Precise Plan of Design. The findings are as follows:

1. The proposed development is in compliance with all city ordinances and regulations, unless in accordance with an approved variance; and

This finding is supported by the following facts:

APNs: 0132-161-13 and 0132-202-06 have a zoning designation of Industrial Park (I-P) within the Gateway Specific Plan. In accordance with Section 18.06.020 of the Rialto Municipal Code, the Project, as conditioned herein, will comply with all City ordinances and regulations including those of the I-P zone in the areas of the Site containing the I-P zoning designations. The I-P zones allow for the development and operation of truck terminal warehouse buildings, as proposed by the Project. Additionally, the Project meets all the required development standards of the I-P zones including, but not limited to, required building setbacks, parking, landscaping, building height, floor area ratio, etc.

2. The site is physically suitable for the proposed development, and the proposed development will be arranged, designed, constructed, and maintained so that it will not be unreasonably detrimental or injurious to property, improvements, or the health, safety or general welfare of the general public in the vicinity, or otherwise be inharmonious with the city's general plan and its objectives, zoning ordinances or any applicable specific plan and its objectives; and

This finding is supported by the following facts:

The Site contains 3.96 gross acres, is a rectangular-shaped, fairly level relatively flat, piece of land comprised of a portion of (APNs: 0132-161-13 and 0132-202-06) located at the one driveway on Willow Avenue through the south side of the fire station property and adjacent to the Cactus-Rialto Channel. The project site is bound on the south by the Gateway Shopping Center, on the east by Rialto Village Shopping Center, on the west by the City of Rialto Fire Station No. 205, and on the north side of the project by the Rialto Marketplace Shopping Center. The property is entirely vacant and covered only by dirt, grass, and shrubs. The zoning of the project site and the properties to the north, south, east, and west is (I-P).

The Project is consistent with the I-P zone and the surrounding land uses. The nearest sensitive uses are the single-family residences to the west of the Site. The project is not expected to negatively impact any uses since measures, such as the installation of a solid screen wall and landscape buffering, will ensure that both noise and visual impacts remain at acceptable levels.

3. The proposed development will not unreasonably interfere with the use or enjoyment of neighboring property rights or endanger the peace, health, safety or welfare of the general public; and

This finding is supported by the following facts:

The Project's effects will be minimized through the implementation of the Conditions of Approval contained herein, such as extensive landscaping, concrete screen walls, decorative paving, and enhanced architectural features. The Site contains 3.96 gross acres, is a rectangular-shaped, fairly level relatively flat, piece of land comprised of a portion of (APNs: 0132-161-13 and 0132-202-06) located at the one driveway on Willow Avenue through the south side of the fire station property and adjacent to the Cactus-Rialto Channel. The project site is bound on the south by the Gateway Shopping Center, on the east by Rialto Village Shopping Center, on the west by the City of Rialto Fire Station No. 205, and on the north side of the project by the Rialto Marketplace Shopping Center. The Project is consistent with the I-P zone and the surrounding land uses. The nearest sensitive uses are the single-family residences to the east of the Site across Riverside Avenue. The project is not expected to negatively impact any uses since measures, such as the installation of a solid screen wall and landscape buffering, will ensure that both noise and visual impacts remain at acceptable levels.

4. The proposed development will not substantially interfere with the orderly or planned development of the City of Rialto.

This finding is supported by the following facts:

The Project is consistent with the I-P zone and is a logical addition to the existing developments are across Willow Avenue to the east of the Site and throughout most of the Gateway Specific Plan area. The design of the Project will ensure a continuation of the public improvements and aesthetics present in the surrounding area. The City staff have reviewed the design of the Project to ensure compliance with all health, safety, and design requirements to ensure the Project will enhance the infrastructure and aesthetics of the local community.

SECTION 3. Kimley-Horn & Associates, is hereby granted CDP No. 2022-0029 to allow the development and operation of an 83,272 square foot commerce center ("Project") on land is a portion of (APNs: 0132-161-13 and 0132-202-06) located at the driveway on Willow Avenue through the south side of the fire station property and adjacent to the Cactus-Rialto Channel within the Industrial Park (I-P) land use district of the Gateway Specific Plan.

SECTION 4. The Planning Commission adopted an Addendum to the Gateway Specific Plan Environmental Impact Report ("Addendum") on January 7, 2022, in accordance with the California Environmental Quality Act (CEQA). The Addendum analyzed the development of 83,272 square foot commerce center and the 93,773 square foot shopping center on the project within the Gateway Specific Plan area. No further review under CEQA is required for the project. The Planning Commission directs the Planning Division to file the necessary documentation with the Clerk of the Board of Supervisors for San Bernardino County.

SECTION 5. The Planning Commission hereby approves PPD No. 2022-0052, in conjunction with CDP No. 2022-0029, to allow the development of an 83,272 square foot commerce center ("Project") on land is a portion of (APNs: 0132-161-13 and 0132-202-06) located at the one driveway on Willow Avenue through the south side of the fire station property and adjacent to the Cactus-Rialto Channel within the Industrial Park (I-P) land use district of the Gateway Specific Plan, in accordance with the plans and application on file with the Planning Division, subject to the following Conditions of Approval:

1. PPD No. 2022-0052 is approved allowing the development of 83,272 square foot commerce center ("Project") on land is a portion of (APNs: 0132-161-13 and 0132-202-06) located at the one driveway on Willow Avenue through the south side of the fire station property and adjacent to the Cactus-Rialto Channel within the Industrial Park (I-P) land use district of the Gateway Specific Plan, as shown on the plans submitted to the

Planning Division on September 2, 2022, and as approved by the Planning Commission, subject to the Conditions of Approval as specified herein.

2. The approval of PPD No. 2022-0052 is granted for a one (1) year period from the date of approval. Approval of PPD No. 2022-0052 will not become effective until the applicant has signed a Statement of Acceptance acknowledging awareness and acceptance of the required Conditions of Approval contained herein. Any request for an extension shall be reviewed by the Community Development Director and shall be based on the progress that has taken place toward the development of the project.

3. The development associated with PPD No. 2022-0052 shall conform to the site plan, floor plans, exterior elevations, conceptual grading plan, and conceptual landscape plan attached hereto as Exhibit A, except as may be required to be modified based on the Conditions of Approval contained herein.

4. The development associated with PPD No. 2022-0052 shall comply with all Conditions of Approval contained within CDP No. 2022-0029.

5. The development associated with PPD No. 2022-0052 shall comply with all applicable sections of the Gateway Specific Plan, the Rialto Municipal Code, and all other applicable State and local laws and ordinances.

6. City inspectors shall have access to the site to reasonably inspect the site during normal working hours to assure compliance with these conditions and other codes.

7. The applicant shall indemnify, protect, defend, and hold harmless, the City of Rialto, and/or any of its officials, officers, employees, agents, departments, agencies, and instrumentalities thereof (collectively, the "City Parties"), from any and all claims, demands, law suits, writs of mandamus, and other actions and proceedings (whether legal, equitable, declaratory, administrative or adjudicatory in nature), and alternative dispute resolutions procedures (including, but not limited to arbitrations, mediations, and other such procedures), (collectively "Actions"), brought against the City, and/or any of its officials, officers, employees, agents, departments, agencies, and instrumentalities thereof, that challenge, attack, or seek to modify, set aside, void, or annul, the any action of, or any permit or approval issued by, the City and/or any of its officials, officers, employees, agents, departments, agencies, and instrumentalities thereof (including actions approved by the voters of the City), for or concerning the Project (collectively, the "Entitlements"), whether such Actions are brought under the California Environmental Quality Act, the Planning and Zoning Law, the Subdivision Map Act, Code of Civil Procedure Chapter 1085 or 1094.5, the California Public Records Act, or any other state, federal, or local statute, law, ordinance, rule, regulation, or any decision of a court of competent jurisdiction. This condition to indemnify, protect, defend, and hold the City harmless shall include, but not be limited to (i) damages, fees and/or costs awarded against the City, if any, and (ii) cost of suit, attorneys' fees and other costs, liabilities and expenses incurred in connection with such proceeding whether incurred by applicant, Property owner, or the City

and/or other parties initiating or bringing such proceeding (collectively, subparts (i) and (ii) are the "Damages"). Notwithstanding anything to the contrary contained herein, the Applicant shall not be liable to the City Parties under this indemnity to the extent the Damages incurred by any of the City Parties in such Action(s) are a result of the City Parties' fraud, intentional misconduct or gross negligence in connection with issuing the Entitlements. The applicant shall execute an agreement to indemnify, protect, defend, and hold the City harmless as stated herein within five (5) days of approval of PDP No. 2022-0052.

8. In accordance with the provisions of Government Code Section 66020(d)(1), the imposition of fees, dedications, reservations, or exactions for this Project, if any, are subject to protest by the applicant at the time of approval or conditional approval of the Project or within 90 days after the date of the imposition of the fees, dedications, reservations, or exactions imposed on the Project.

9. Approval of PPD No. 2022-0052 will not be valid until such time that the Planning Commission has approved CDP No. 2022-0029, which was prepared in conjunction with the Project.

10. The applicant shall install decorative pavement within each driveway connected to one driveway on Willow Avenue, in accordance with the conceptual landscape plan included within Exhibit A attached hereto. The location of the decorative pavement shall be identified on the Precise Grading Plan prior to the issuance of a grading permit. Additionally, the location and type of decorative pavement shall be identified on the formal Landscape Plan submittal, and other on-site improvement plans, prior to the issuance of building permits.

11. The Project is approved for commerce center uses only, which means the building shall be primarily used for the storage of goods and used for the sale or distribution of those goods to their direct customers or retailers. Commerce center uses do not include uses that combine small freight shipments from many shippers to form a truckload, commonly referred to as Less Than Truckload Shipping (LTL), or uses that receive, handle, sort, and/or deliver parcels and mail from numerous customers, commonly referred to as Parcel Delivery Terminals.

12. In order to provide enhanced building design in accordance with Chapter 18.61 (Design Guidelines) of the Rialto Municipal Code, the applicant shall route all drainage downspouts through the interior of the building. The internal downspouts shall be identified within the formal building plan check submittal prior to the issuance of building permits.

13. In order to provide enhanced building design in accordance with Chapter 18.61 (Design Guidelines) of the Rialto Municipal Code, the applicant shall construct parapet returns, at least three (3) feet in depth from the main wall plane, at all height variations on all four (4) sides of the building. The parapet returns shall be demonstrated on the roof

plans within the formal building plan check submittal prior to the issuance of building permits.

14. In order to provide enhanced building design in accordance with Chapter 18.61 (Design Guidelines) of the Rialto Municipal Code, the applicant shall provide internal roof access only for the building. The internal roof access shall be identified within the formal building plan check submittal prior to the issuance of building permits.

15. The applicant shall construct one (1) ADA accessible trash enclosure on the project site. The trash enclosure shall provide room for one (1) commercial waste container and one (1) commercial recycling container. The exterior of each trash enclosure shall match the material and base color of the building. Additionally, the trash enclosure shall contain solid steel doors and a flat solid cover. Corrugated metal and chain-link are not acceptable materials to use as a part of the trash enclosure. The location of the trash enclosure shall be identified on the site plan within the formal building plan check prior to the issuance of building permits. An elevation detail for the trash enclosure shall be provided within formal building plan check submittal prior to the issuance of building permits.

16. All light standards installed on site, shall have a maximum height of twenty-five (25) feet, as measured from the finished surface, including the base. Lighting shall be shielded and/or directed toward the site so as not to produce direct glare or "stray light" onto adjacent properties. All light standards shall be identified on the site plan and a note indicating the height restriction shall be included within the formal building plan check submittal prior to the issuance of building permits.

17. The applicant shall submit a formal Landscape Plan to the Planning Division prior to the issuance of building permits. The submittal shall include three (3) sets of planting and irrigation plans, a completed Landscape Plan Review application, and the applicable review fee.

18. The applicant shall plant one (1) tree every thirty (30) feet on-center within the on-site landscape setbacks along the perimeter. All trees within the landscape setback shall be a minimum of twenty-four (24) inch box in size, upon initial planting. Thereafter, the trees within the landscape setback shall be permanently irrigated and maintained by the property owner. At least fifty (50) percent of the trees within the setback shall consist of evergreen broadleaf trees, while the remaining percentage may consist of broadleaf deciduous trees and/or palm trees. The trees shall be identified on the formal Landscape Plan submittal prior to the issuance of a landscape permit.

19. The applicant shall plant shrubs that surround all ground mounted equipment and utility boxes, including transformers, fire-department connections, backflow devices, etc. for the purpose of providing screening of said equipment and utility boxes. All equipment and utility box screen shrubs shall be a minimum of five (5) gallons in size upon initial planting, and the shrubs shall be spaced no more than three (3) feet on-center. Thereafter, the equipment and utility box screen shrubs shall be permanently irrigated

and maintained into a continuous box-shape with a height of no less than three and one-half (3.5) feet above the finished grade. The shrubs shall be identified on the formal Landscape Plan submittal prior to the issuance of a landscape permit.

20. All planting and irrigation shall be installed on-site in accordance with the approved landscape plans and permit prior to the issuance of a Certificate of Occupancy. The installation of the planting and irrigation shall be certified in writing by the landscape architect responsible for preparing the landscape plans prior to the issuance of a Certificate of Occupancy.

21. Any tubular steel fencing and/or sliding gates shall be painted black prior to the issuance of a Certificate of Occupancy unless specified otherwise herein.

22. All non-glass doors shall be painted to match the color of the adjacent wall prior to the issuance of a Certificate of Occupancy.

23. All signage on the building shall comply with Chapter 18.102 (Regulation of Signs and Advertising Structures) of the Rialto Municipal Code.

24. The applicant shall comply with all conditions of approval for PPD No. 2022-0052 to the satisfaction of the City Engineer, prior to the issuance of a Certificate of Occupancy.

25. Project encompasses two parcels. A parcel merger shall be submitted and approved prior to building permit issuance. Parcel Merger shall be recorded prior to Certificate of Occupancy.

26. Access to Project requires traveling over adjacent parcels. An easement or reciprocal access agreement shall be recorded prior to Certificate of Occupancy.

27. Any dry utility improvement construction within the public right-of-way requires a City of Rialto Encroachment Permit.

28. The applicant shall pay all applicable development impact fees in accordance with the current City of Rialto fee ordinance, including any Transportation and Traffic Fair Share Contribution fees, prior to the issuance of any building permit related to the Project.

29. The applicant shall apply and complete the Special District Annexation for the public street lighting and the public landscape and irrigation, including applicable easement areas, parkway areas, and raised medians along the property frontage, as determined by the City Engineer, prior to the issuance of the Grading/On-site Construction Permit.

30. The applicant is responsible for requesting from the Public Works Department any addresses needed for any building(s) and/or any electrical single/dual irrigation meter pedestal(s). The main building address shall be included on Precise Grading Plans and

Building Plan set along with the PPD number. The electrical meter pedestal addresses (single or dual) shall be included in the public improvement plans.

31. The applicant shall submit street improvement plans by a registered California civil engineer to the Public Works Engineering Division for review. The plans shall be approved by the City Engineer prior to the issuance of building permits.

32. The applicant shall submit streetlight improvement plans by a registered California civil engineer to the Public Works Engineering Division for review. The plans shall be approved by the City Engineer prior to the issuance of building permits.

33. The applicant shall submit sewer improvement plans by a registered California civil engineer to the Public Works Engineering Division for review. The plans shall be approved by the City Engineer prior to the issuance of building permits.

34. The applicant shall submit traffic and signage improvement plans by a registered California civil engineer to the Public Works Engineering Division for review. The plans shall be approved by the City Engineer prior to the issuance of building permits.

35. The applicant shall submit copies of approved water improvement plans prepared by a registered California civil engineer to the Public Works Engineering Division for record purposes. The plans shall be approved by West Valley Water District, the water purveyor, prior to the issuance of building permits.

36. The applicant shall submit a Precise Grading/Paving Plan prepared by a California registered civil engineer to the Public Works Engineering Division for review and approval. The Grading Plan shall be approved by the City Engineer prior to the issuance of building permits.

37. The applicant shall submit a wet-signed and stamped Earthwork Cut and Fill Certification Letter prepared by a Civil Engineer registered in the State of California to the Public Works Engineering Division for review.

38. The applicant shall provide pad elevation certification for all building pads, in conformance with the approved Precise Grading Plan, to the Engineering Division prior to construction of any building foundation.

39. The public street improvements outlined in these Conditions of Approval are intended to convey to the developer an accurate scope of required improvements, however, the City Engineer reserves the right to require reasonable additional improvements as may be determined in the course of the review and approval of street improvement plans required by these conditions.

40. The developer is responsible for requesting address assignment for any new building, irrigation water meter and electrical pedestal. Addresses for irrigation meters must be based upon approved civil plans. Addresses for electrical pedestals must be based upon

approved SCE plans. The main building address shall be included on Precise Grading Plans and Building Plan set along with the PPD number. The electrical meter pedestal addresses (single or dual) shall be included in the public improvement plans.

41. The applicant shall install underground all existing electrical distribution lines of sixteen thousand volts or less and overhead service drop conductors, and all telephone, television cable service, and similar service wires or lines, which are on-site, abutting, and/or transecting the site, in accordance with Chapter 15.32 of the Rialto Municipal Code. Utility undergrounding shall extend to the nearest off-site power pole. Unless City Engineer approved, no new power poles shall be installed. A letter from the owners of the affected utilities shall be submitted to the City Engineer prior to approval of the Precise Grading/Paving Plan, informing the City that they have been notified of the City's utility undergrounding requirement and their intent to commence design of utility undergrounding plans. When available, the utility undergrounding plan shall be submitted to the City Engineer identifying all above ground facilities in the area of the project to be undergrounded.

42. The applicant shall replace all damaged, destroyed, or modified pavement legends, traffic control devices, signing, striping, and streetlights, associated with the proposed Project shall be replaced as required by the City Engineer prior to issuance of a Certificate of Occupancy.

43. The applicant shall reconstruct any broken, chipped, or unsatisfactory sidewalks or curbs along the entire project frontage, in accordance with the General Plan and the City of Rialto Standard Drawings, as required by the City Engineer, prior to the issuance of a Certificate of Occupancy.

44. The applicant shall provide construction signage, lighting and barricading shall be provided during all phases of construction as required by City Standards or as directed by the City Engineer. As a minimum, all construction signing, lighting and barricading shall be in accordance with Part 6 "Temporary Traffic Control" of the 2014 California Manual on Uniform Traffic Control Devices, or subsequent editions in force at the time of construction.

45. Upon approval of any improvement plan by the City Engineer, the applicant shall provide the improvement plan to the City in digital format, consisting of a DWG (AutoCAD drawing file), DXF (AutoCAD ASCII drawing exchange file), and PDF (Adobe Acrobat) formats. Variation of the type and format of the digital data to be submitted to the City may be authorized, upon prior approval by the City Engineer.

46. Construct asphalt concrete paving for streets in two separate lifts. The final lift of asphalt concrete pavement shall be postponed until such time that on-site construction activities are complete, as may be determined by the City Engineer. Paving of streets in one lift prior to completion of on-site construction will not be allowed unless prior authorization has been obtained from the City Engineer. Completion of asphalt concrete paving for streets prior to completion of on-site construction activities, if authorized by

the City Engineer, will require additional paving requirements prior to acceptance of the street improvements, including, but not limited to: removal and replacement of damaged asphalt concrete pavement, overlay, slurry seal, or other repairs, as required by the City Engineer.

47. Access drive from Willow Avenue shall include Planning Division approved screening along the perimeter to prevent blinding oncoming traffic with high beam headlights during nighttime hours of operation

48. At the discretion of the City Engineer, the applicant shall remove existing pavement and construct new pavement with a minimum pavement section of 4 inches asphalt concrete pavement over 6 inches crushed aggregate base with a minimum subgrade of 24 inches at 95% relative compaction, or equal, along the entire frontages of the driveway on Willow Avenue, in accordance with City of Rialto Standard Drawings. The pavement section shall be determined using a Traffic Index ("TI") of 6. The pavement section shall be designed by a California registered Geotechnical Engineer using "R" values from the project site and submitted to the City Engineer for approval. Pavement shall extend from clean sawcut edge of pavement at centerline of each street.

49. The applicant shall install "No Stopping Anytime" R26A(S)(CA) signage along the entire project frontage of the driveway on Willow Avenue, as required by the City Engineer.

50. The minimum pavement section for all on-site pavements shall be two (2) inches asphalt concrete pavement over 4 inches crushed aggregate base with a minimum subgrade of 24 inches at 95% relative compaction, or equal. If an alternative pavement section is proposed, the proposed pavement section shall be designed by a California registered Geotechnical Engineer using "R" values from the project site and submitted to the City Engineer for approval.

51. The applicant shall connect the project to the City of Rialto sewer system and apply for a sewer connection account with Rialto Water Services.

52. Domestic water service to the underlying property is provided by West Valley Water District. The applicant shall be responsible for coordinating with West Valley Water District and complying with all requirements for establishing domestic water service to the property. The design must include fire hydrants along the driveway on Willow Avenue.

53. The applicant shall install a new domestic water line lateral connection to the main water line within the driveway on Willow Avenue, pursuant to the West Valley Water District requirements. A water line plan shall be approved by Rialto Water Services prior to the issuance of building permits.

54. The applicant shall provide certification from Rialto Water Services and West Valley Water District that demonstrates that all water and/or wastewater service accounts for

the project are documented, prior to the issuance of a Certificate of Occupancy or final inspection approval from the Public Works Engineering Division.

55. The applicant shall submit a Water Quality Management Plan identifying site specific Best Management Practices ("BMPs") in accordance with the Model Water Quality Management Plan ("WQMP") approved for use for the Santa Ana River Watershed. The site specific WQMP shall be submitted to the City Engineer for review and approval with the Precise Grading Plan. A WQMP Maintenance Agreement shall be required, obligating the property owner(s) to appropriate operation and maintenance obligations of on-site BMPs constructed pursuant to the approved WQMP. The WQMP and Maintenance Agreement shall be approved prior to issuance of a building permit, unless otherwise allowed by the City Engineer. The development of the Site is subject to the requirements of the National Pollution Discharge Elimination System (NPDES) Permit for the City of Rialto, issued by the Santa Ana Regional Water Quality Control Board, Board Order No. R8-2010-0036. Pursuant to the NPDES Permit, the Applicant shall ensure development of the site incorporates post-construction Best Management Practices ("BMPs") in accordance with the Model Water Quality Management Plan ("WQMP") approved for use for the Santa Ana River Watershed. The Applicant is advised that applicable Site Design BMPs will be required to be incorporated into the final site design, pursuant to a site specific WQMP submitted to the City Engineer for review and approval.

56. Prior to issuance of a certificate of occupancy or final City approvals, the applicant shall demonstrate that all structural BMP's have been constructed and installed in conformance with approved plans and specifications, and as identified in the approved WQMP.

57. Direct release of on-site nuisance water or stormwater runoff shall not be permitted to the adjacent public streets. Provisions for the interception of nuisance water from entering adjacent public streets from the project site shall be provided through the use of a minor storm drain system that collects and conveys nuisance water to landscape or parkway areas, and in only a stormwater runoff condition, pass runoff directly to the streets through parkway or under sidewalk drains. All on-site and off-site designs must comply with NPDES stormwater regulations.

58. The original improvement plans prepared for the proposed development and approved by the City Engineer (if required) shall be documented with record drawing "as-built" information and returned to the Engineering Division prior to issuance of a final certificate of occupancy. Any modifications or changes to approved improvement plans shall be submitted to the City Engineer for approval prior to construction.

59. The applicant shall adhere to the City Council approved franchise agreements and disposal requirements during all construction activities, in accordance with Section 8.08 (Refuse Collection of the City of Rialto Municipal Code).

60. Prior to commencing with any grading, the applicant shall implement the required erosion and dust control measures shall be in place. In addition, the following shall be included if not already identified:

    a. 6-foot-high tan colored perimeter screened fencing

    b. Post dust control signage with the following verbiage: "Project Name, WDID No., IF YOU SEE DUST COMING FROM THIS PROJECT CALL: NAME (XXX) XXX-XXX, If you do not receive a response, please call the AQMD at 1-800-CUT-SMOG/1-800-228-7664"

61. The applicant shall remove any graffiti within 24 hours, before, during, and post construction.

62. The applicant shall submit full architectural and structural plans with all mechanical, electrical, and plumbing plans, structural calculations, truss calculations and layout, rough grading plans approved by Public Works Engineering, Water Quality Management Plan, Erosion Control Plan, Stormwater Pollution Prevention Plan, and Title 24 Energy Calculations to the Building Division for plan check and review, prior to the issuance of building permits.

63. The applicant shall provide a Scope of Work on the title page of the architectural plan set. The Scope of Work shall call out all work to be permitted (ex. Main structure, perimeter walls, trash enclosure, etc.).

64. The applicant shall design the structures in accordance with the 2019 California Building Code, 2019 California Mechanical Code, 2019 California Plumbing Code, and the 2019 California Electrical Code, 2019 Residential Code and the 2019 California Green Buildings Standards adopted by the State of California.

65. The applicant shall design the structures to withstand ultimate wind speed of 130 miles per hour, exposure C and seismic zone D.

66. The applicant shall submit fire sprinkler, fire alarm systems, and fire hydrant plans to the Building Division for plan review concurrently with building plans and shall be approved prior to the issuance of a building permit.

67. The applicant shall obtain an Electrical Permit from the Building Division for any temporary electrical power required during construction. No temporary electrical power will be granted to a project unless one of the following items is in place and approved by the Building Division: (A) Installation of a construction trailer, or, (B) Security fencing around the area where the electrical power will be located.

68. The applicant shall install temporary construction fencing and screening around the perimeter of the project site. The fencing and screening shall be maintained at all times during construction to protect pedestrians.

69. The applicant shall install any required temporary construction trailer on private property. No trailers are allowed to be located within the public right-of-way. The trailer shall be removed prior to the issuance of a Certificate of Occupancy.

70. The applicant shall design and construct accessible paths of travel from the building's accessible entrances to the public right-of-way, accessible parking, and the trash enclosure. Paths of travel shall incorporate (but not limited to) exterior stairs, landings, walks and sidewalks, pedestrian ramps, curb ramps, warning curbs, detectable warning, signage, gates, lifts and walking surface materials, as necessary. The accessible route(s) of travel shall be the most practical direct route between accessible building entrances, site facilities, accessible parking, public sidewalks, and the accessible entrance(s) to the site, California Building Code, (CBC) Chapter 11, Sec, 11A and 11B.

71. Prior to issuance of a Building Permit all of the following must be in place on the Site: a portable toilet with hand wash station, temporary construction fencing, and signage on each adjacent street saying "If there is any dust or debris coming from this site please contact (superintendent number here) or the AQMD if the problem is not being resolved" or something similar to this.

72. The applicant shall provide temporary toilet facilities for the construction workers. The toilet facilities shall always be maintained in a sanitary condition. The construction toilet facilities of the non-sewer type shall conform to ANSI ZA.3.

73. The applicant shall underground all on site utilities to the new proposed structures, prior to the issuance of a Certificate of Occupancy, unless prior approval has been obtained by the utility company or the City.

74. Prior to issuance of Building Permits, site grading final and pad certifications shall be submitted to the Building Division, which include elevation, orientation, and compaction. The certifications are required to be signed by the engineer of record.

75. The applicant shall provide proof of payment to the Colton Joint Unified School District for all required school fees, prior to the issuance of a building permit.

76. Site facilities such as parking open or covered, recreation facilities, and trash dumpster areas, and common use areas shall be accessible per the California Building Code, Chapter 11.

77. The applicant shall place a copy of the Conditions of Approval herein on within the building plan check submittal set and include the PPD number on the right bottom corner cover page in 20 point bold, prior to the issuance of a building permit.

78. The applicant shall ensure that a minimum of 65% of all construction and demo debris shall be recycled using an approved City of Rialto recycling facility during construction.

Copies of receipts for recycling shall be provided to the City Inspector and a copy shall be placed in the office of the construction site.

79. Prior to issuance of Building Permits, on site water service shall be installed and approved by the responsible agency. On site fire hydrants shall be approved by the Fire Department. No flammable materials will be allowed on the site until the fire hydrants are established and approved.

80. The applicant shall comply with all applicable requirements of the California Fire Code and Chapter 15.28 (Fire Code) of the Rialto Municipal Code.

81. At the discretion of the Rialto Police Department, the applicant shall illuminate all walkways, passageways, and locations where pedestrians are likely to travel with a minimum of 1.5-foot candles (at surface level) of light during the hours of darkness. Lighting shall be designed/constructed in such a manner as to automatically turn on at dusk and turn off at dawn.

82. At the discretion of the Rialto Police Department, the applicant shall illuminate all alleyways, driveways, and uncovered parking areas with a minimum of 1.5-foot candles (at surface level) of light during the hours of darkness. Lighting shall be designed/constructed in such a manner as to automatically turn on at dusk and turn off at dawn.

83. At the discretion of the Rialto Police Department, the applicant shall illuminate all loading dock areas, truck well areas, and delivery areas with a minimum of 1.5 foot-candles (at surface level) of light during the hours of darkness. Lighting shall be designed/constructed in such a manner as to automatically turn on at dusk and turn off at dawn.

84. The applicant shall design/construct all lighting fixtures and luminaries, including supports, poles and brackets, in such a manner as to resist vandalism and/or destruction by hand.

85. The applicant shall provide an illuminated channel letter address prominently placed on the building to be visible to the front of the location, prior to the issuance of a Certificate of Occupancy.

86. At the discretion of the Rialto Police Department, the applicant shall install exterior security cameras at the location that cover the entire Site, prior to the issuance of a Certificate of Occupancy. The security cameras shall be accessible to the Rialto Police Department via FusionONE web application.

87. The applicant shall install Knox boxes immediately adjacent to all vehicle gates as well as the main entrance of the building and at least one (1) rear entrance on the building to facilitate the entry of safety personnel. The Knox boxes shall be installed in such a manner as to be alarmed, resist vandalism, removal, or destruction by hand, and be fully

recessed into the building. The Knox boxes shall be equipped with the appropriate keys, for each required location, prior to the first day of business. The Knox-Box placement shall be shown on the formal building plan review submittal prior to the issuance of a building permit.

88. The applicant shall prominently display the address on the building rooftop to be visible to aerial law enforcement or fire aircraft. Specifications to be followed for alphanumeric characters are as follows: Three (3) foot tall and six (6) inches thick alphanumeric characters. The alphanumeric characters shall be constructed in such a way that they are in stark contrast to the background to which they are attached (e.g. white numbers and letters on a black background), and resistant weathering that would cause a degradation of the contrast.

89. The applicant shall provide an audible alarm within the building, prior to the issuance of a Certificate of Occupancy. The building shall be alarmed in such a way as to emit a continuous audible notification until reset by responsible personnel (e.g. alarmed exit device / crash bar.

90. The applicant or General Contractor shall identify each contractor and subcontractor hired to work at the job site on a Contractor Sublist form and return it to the Business License Division with a Business License application and the Business License tax fee based on the Contractors tax rate for each contractor.

91. Prior to issuance of a Certificate of Occupancy, the applicant shall pay a business license tax based on the applicable tax rate pertaining to the proposed use.

SECTION 6. The Chairman of the Planning Commission shall sign the passage and adoption of this resolution and thereupon the same shall take effect and be in force.

PASSED, APPROVED AND ADOPTED this 14th day of September, 2022.

_____
JERRY GUTIERREZ, CHAIR
CITY OF RIALTO PLANNING COMMISSION

STATE OF CALIFORNIA)
COUNTY OF SAN BERNARDINO) ss
CITY OF RIALTO)

I, Kim Dame, Administrative Analyst of the City of Rialto, do hereby certify that the foregoing Resolution No. ____ was duly passed and adopted at a regular meeting of the Planning Commission of the City of Rialto held on the ___th day of ____, 2022.

Upon motion of Planning Commissioner_____., seconded by Planning Commissioner ____, the foregoing Resolution No. ____was duly passed and adopted.

Vote on the motion:

AYES:

NOES:

ABSENT:

IN WITNESS WHEREOF, I have hereunto set my hand and the Official Seal of the City of Rialto this __th day of ___, 2022.

_____

KIM DAME, AMMINISTRATIVE ANALYST

File #: PC-22-835, **Version:** 1, **Agenda #:**

For the Planning Commission Meeting of September 14, 2022

TO: Honorable Chairman and Planning Commissioners

APPROVAL: Paul Gonzales, Community Development Manager

FROM: Daniel Casey, Senior Planner

Conditional Development Permit No. 2021-0040: A request to allow the redevelopment and reuse of an existing industrial site comprised of 5.02 gross acres (4.78 net acres) of land (APN: 0239-192-12) located at the northwest corner of Locust Avenue and Lowell Street within the General Manufacturing (I-GM) land use district of the Rialto Airport Specific Plan for a 100,880 square foot industrial commerce building. An Addendum to the Environmental Impact Report for the Rialto Airport Specific Plan (Environmental Assessment Review No. 2021-0051) has been prepared for consideration in conjunction with the project.

Precise Plan of Design No. 2021-0055: A request to allow the redevelopment of an existing industrial site comprised of 5.02 gross acres (4.78 net acres) of land (APN: 0239-192-12) located at the northwest corner of Locust Avenue and Lowell Street within the General Manufacturing (I-GM) land use district of the Rialto Airport Specific Plan with a 100,880 square foot industrial commerce building and associated paving, landscaping, fencing, lighting, and drainage improvements. An Addendum to the Environmental Impact Report for the Rialto Airport Specific Plan (Environmental Assessment Review No. 2021-0051) has been prepared for consideration in conjunction with the project.

APPLICANT:

Best California Gas, Ltd., 13116 Imperial Highway, Santa Fe Springs, CA 90670

LOCATION:

The project site consists of one (1) parcel of land (APN: 0239-192-12) located at the northwest corner of Locust Avenue and Lowell Street (Refer to the attached Location Map (**Exhibit A**)).

BACKGROUND:

Surrounding General Plan Land Use Designations

Location	***General Plan Designation***
Site	Business Park with a Specific Plan Overlay (Rialto Airport SP)
North	Business Park with a Specific Plan Overlay (Rialto Airport SP)

East	Light Industrial with a Specific Plan Overlay (Rialto Airport SP)
South	General Industrial with Specific Plan Overlay (Rialto Airport SP)
West	Business Park with a Specific Plan Overlay (Rialto Airport SP)

Surrounding Zoning Designations

Location	***Zoning or Specific Plan Land Use Designation***
Site	General Manufacturing (I-GM)
North	General Manufacturing (I-GM)
East	Planned Industrial Development (I-PID)
South	General Manufacturing (I-GM)
West	General Manufacturing (I-GM)

Site Characteristics
The project site is comprised of one (1) parcel of land approximately 5.02 gross acres (4.78 net acres) in size with approximate dimensions of 410 feet (north-south) by 505 feet (east-west). The project site is bound on the south by Lowell Street and on the east by Locust Avenue, the latter of which is an established truck route. The property was previously developed in 2009 into a contractor's storage yard under Precise Plan of Design No. 2136, and the property was occupied by Aluma Systems Concrete Construction, LLC until early 2022.

Surrounding Area
To the north of the project site is an approximately 75,000 square foot industrial commerce building occupied by B & B Plastics, and to the east, across Locust Avenue, is an approximately 29,000 square foot industrial commerce building and 8.95 acres of storage yard area occupied by Rig Runner Trucking. To the south, across Lowell Street, is approximately 19.03 acres of vacant land, and to the west are two (2) industrial commerce buildings totaling approximately 34,700 square feet in size and occupied by Pipeline Carriers and Thompson Pipe Group.

ANALYSIS/DISCUSSION:

Project Proposal
The applicant, Best California Gas, Ltd., proposes to construct a 100,880 square foot industrial commerce building and install associated paving, landscaping, fencing, lighting, and drainage improvements on the project site. There is no proposed tenant for the new building at this time, but the design of the building will accommodate various storage and distribution uses.

Entitlement Requirements
The following entitlements are required for the applicant's proposal:

- Conditional Development Permit: The development and operation of an industrial warehouse use within the I-GM land use district requires the approval of a Conditional Development Permit.

- Precise Plan of Design: The design of the development and the related site improvements

(e.g. building exterior, landscaping, etc.) requires the approval of a Precise Plan of Design.

Site Design
As shown on the site plan (**Exhibit B**), the applicant proposes to construct a 100,880 square foot industrial commerce building in the center of the project site. The proposed layout includes a truck court on the north side of the building and passenger vehicle parking areas along the north, south, and west sides of the building. The truck court will accommodate a maximum of 12 trucks and trailers, while the passenger vehicle parking areas will provide for the parking of up to 87 passenger vehicles.

Two (2) driveways are proposed to be connected to Lowell Street for access - a forty (40) foot wide driveway at the west end of the project site will provide right-in/left-out access for trucks and passenger vehicles and a thirty-two (32) foot wide driveway at the east end of the project site will provide right-in/left-out out access for passenger vehicles only. Additionally, one (1) new fifty (50) foot wide driveway connected to Locust Avenue will provide full access for trucks and passenger vehicles.

Additional on-site improvements include paving, lighting, landscape planters throughout the site, screen walls, and an underground infiltration basin for runoff water quality treatment and retention.

Floor Plan
The floor plan for the proposed building (**Exhibit C**) indicates that the building will consist of 9,000 square feet of office space and 91,880 square feet of storage space. The office space will potentially occupy either the southeast corner of the building and/or the southwest corner of the building, with 4,500 square feet on the ground floor and another 4,500 square feet up above on a second-floor mezzanine. The north side of the building will have up to 12 dock high loading doors and one (1) grade level roll-up door.

Architectural Design
The proposed building will feature significant vertical and horizontal wall plane articulation in the form of recessed wall panels, projected wall panels, and panel height variations on all four (4) sides of the building. As shown on the elevations (**Exhibit D**), the height of the building will range from 34 feet to 36 feet from the finished floor level. The exterior of the building will be of concrete tilt-up wall construction painted with a palette of three (3) different colors - white and two (2) gray tones. Additional architectural features of the building include tile accents, wall panel reveals, metal brow accents, and glazing.

Parking
The development will have 87 auto-parking spaces, including six (6) ADA accessible parking spaces. This quantity exceeds the minimum parking requirement as shown in the parking calculation chart below and as required by Chapter 18.58 (Off-Street Parking) of the Rialto Municipal Code:

Type of Use	***Floor Area (square feet)***	***Parking Ratio***	***Number of spaces required***
Office Ground floor Above ground floor Warehouse	4,500 4,500	1 / 250 1 / 500	18 9

Floor area up to 10,000 square feet	10,000	1 / 1,000 1 /	10 41
Floor area 10,001 square feet or more	81,880	2,000	
Total Required/Total Provided			**78/87**

Landscaping
The landscape coverage for the project is 14.9 percent, which exceeds the minimum required amount of 10.0 percent. This includes a thirty-six (36) foot landscape setback along Locust Avenue, a fifteen (15) foot landscape setback along Lowell Street, as well as planters around the perimeter of the building and the project site. All the landscape planters will feature a variety of trees spaced every thirty (30) linear feet and an abundant number of shrubs and groundcover (**Exhibit E**).

Traffic
Kimley-Horn and Associates, Inc. prepared a Traffic Impact Analysis Scoping Agreement (TIASA), dated May 11, 2022, to assess the project's potential impacts to local streets and intersections, as well as vehicle miles travelled (**Exhibit F**). The TIASA estimates that the project will generate up to 173 actual daily vehicle trips (125 new trips + 48 existing trips) with approximately 17 trips in the AM peak hour and 18 trips in the PM peak hour. Trucks will constitute approximately 68 of the 173 potential daily vehicle trips. The TIASA concluded that the project would generate an insignificant amount of traffic, and all nearby intersections and roadway segments will continue to operate under their current Level of Service (LOS). The nearby intersections and roadway segments do not require any improvements to maintain an acceptable LOS, and therefore the project will not be responsible for the payment of "fair-share" fees.

Land Use Compatibility
The project is consistent with the I-GM land use district, the Rialto Airport Specific Plan, the regulations contained within Chapter 18.112 (Indoor Storage Uses) of the Rialto Municipal Code, and the industrial uses surrounding the project site. Additionally, the Draft Resolutions of Approval contain conditions of approval requiring that the project not exceed the traffic estimates contained within the TIASA, thereby ensuring that the project will not significantly impact local streets and intersections. The project will be a benefit to the community and an improvement to the surrounding area.

GENERAL PLAN CONSISTENCY:

The General Plan land use designation of the site is Business Park with a Specific Plan Overlay. This designation requires the underlying Specific Plan to establish distinct land use designations within the Specific Plan itself. Exhibit 3 (Land Use Plan) of the Rialto Airport Specific Plan indicates that the land use designation for the project site is General Manufacturing (I-GM). According to Section 3.3.4 of the Rialto Airport Specific Plan, the I-GM designation is intended to facilitate the most intensive industrial uses with the Specific Plan area, including warehousing, manufacturing, and multi -tenant spaces. As a result, the project is consistent with the I-GM designation. Furthermore, the project is consistent with the following goals of the Land Use Element and Economic Development Element of the Rialto General Plan:

Goal 2-16: Improve the architectural and design quality of development in Rialto.

Goal 2-22: Promote commercial and/or industrial development that is well designed, people-oriented, environmentally sustainable, sensitive to the needs of the visitor or resident, and functionally efficient for its purpose.

Goal 3-1: Strengthen and diversify the economic base and employment opportunities, and maintain a positive business climate.

ENVIRONMENTAL IMPACT:

California Environmental Quality Act
The applicant engaged Kimley-Horn and Associates, Inc. to prepare an Addendum to the previously certified Environmental Impact Report for the Rialto Airport Specific Plan (EIR Addendum), in accordance with the provisions of the California Environmental Quality Act (CEQA), the State CEQA Guidelines, and the rules, regulations, and procedures for implementing CEQA as set forth by the City of Rialto. Section 15164(a) of the State CEQA Guidelines states that "the lead agency or a responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred."

The purpose of the EIR Addendum is to analyze any potential differences between the impacts identified in the Environmental Impact Report for the Rialto Airport Specific Plan (EIR RASP) and those that would be associated with the proposed Project. Pursuant to provisions of CEQA and State CEQA Guidelines, the City is the Lead Agency charged with the responsibility of deciding whether to approve development on the Project site. As detailed in the EIR Addendum, the proposed Project will not result in any new significant impacts that were not previously analyzed in the EIR RASP, nor would the proposed Project cause a substantial increase in the severity of any previously identified environmental impacts. The potential impacts associated with proposed Project would either be the same or less than those described in the EIR RASP. In addition, there are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the EIR RASP, nor has any new information regarding the potential for new or more severe significant environmental impacts been identified. The EIR Addendum to the EIR RASP is attached to the agenda report (**Exhibit G**).

PUBLIC NOTICE:

The City published a public hearing notice for proposed project in the *San Bernardino Sun* newspaper, posted copies of the public hearing notice outside the Council Chambers and the City Clerk's Office, and mailed public hearing notices to all property owners within 1,000 feet of the project site, as required by State law.

RECOMMENDATION:

The Planning Division recommends that the Planning Commission:

- Adopt the attached Resolution (**Exhibit H**) to approve an Addendum to the previously certified Environmental Impact Report for the Rialto Airport Specific Plan (Environmental Assessment

Review No. 2021-0051) for the proposed project, and authorize staff to file the attached Notice of Determination with the Clerk of the Board of San Bernardino County; and

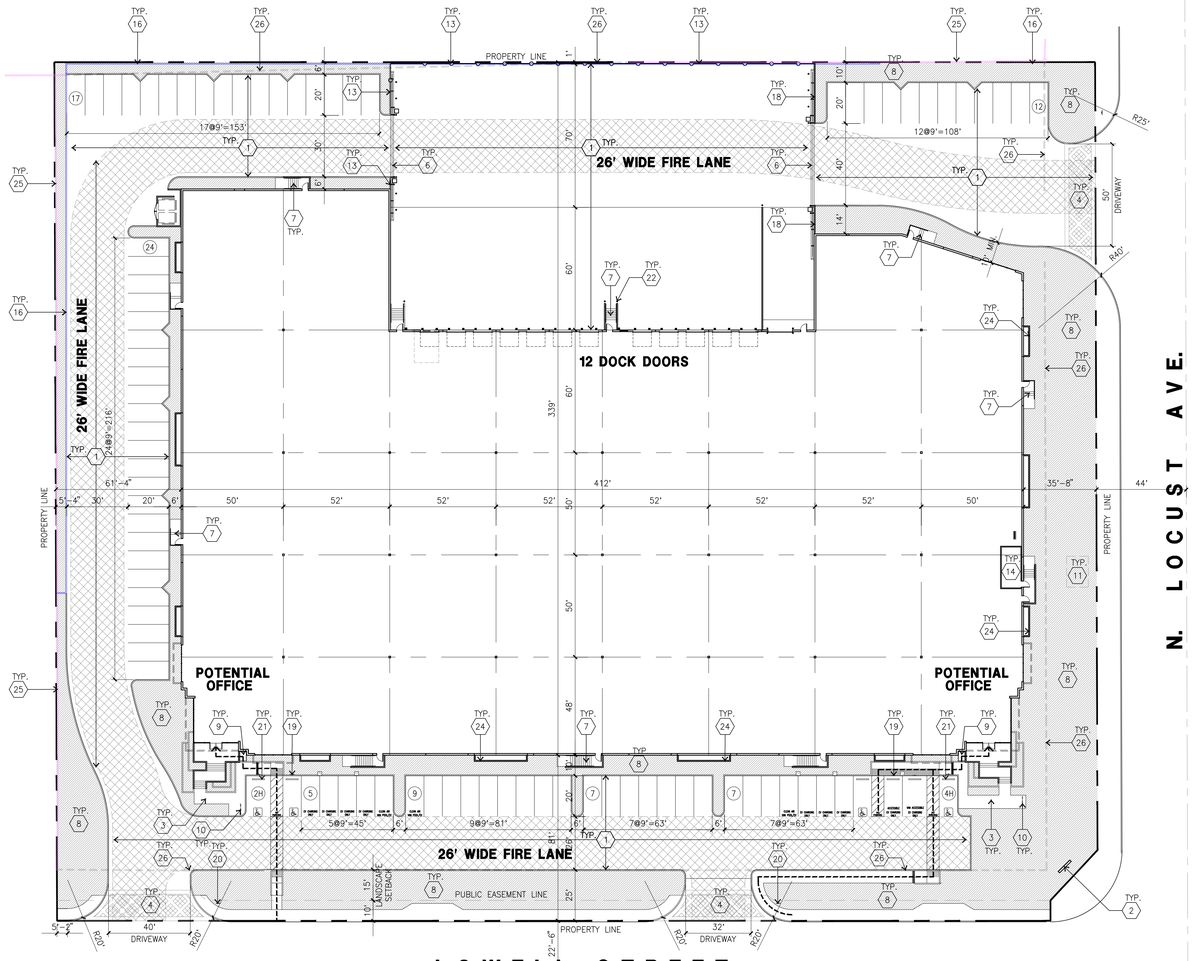
- Adopt the attached Resolution (**Exhibit I**) to approve Conditional Development Permit No. 2021-0040 to allow the redevelopment and reuse of an existing industrial site comprised of 5.02 gross acres (4.78 net acres) of land (APN: 0239-192-12) with a 100,880 square foot industrial commerce building, subject to the findings and conditions therein; and

- Adopt the attached Resolution (**Exhibit J**) to approve Precise Plan of Design No. 2021-0055 to allow the redevelopment of an existing industrial site comprised of 5.02 gross acres (4.78 net acres) of land (APN: 0239-192-12) with a 100,880 square foot industrial commerce building and associated paving, landscaping, fencing, lighting, and drainage improvements, subject to the findings and conditions therein.



Project Location Map

N



OVERALL SITE PLAN

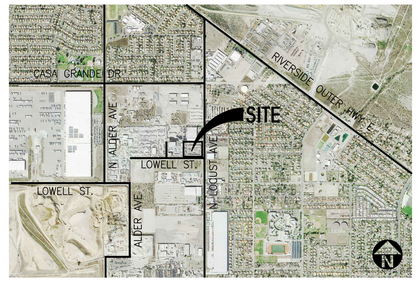
scale: 1"=20'-0"

SCALE: 1" = 30'-0"

0 30' 60' 90'

TRUE NORTH

VICINITY MAP



PROJECT DATA

SITE AREA		
In s.f. (Less pedestrian easement)	208,131	s.f.
In acres	4.78	ac
BUILDING AREA		
Office	4,500	s.f.
Office 2nd floor	4,500	s.f.
Warehouse	91,880	s.f.
TOTAL	100,880	s.f.
COVERAGE	48.5%	
AUTO PARKING REQUIRED		
Office: 1/250 s.f.	36	stalls
Whse: 1st 10'k @ 1/1000 s.f.	10	stalls
whse: above 10'k @ 1/2000 s.f.	41	stalls
TOTAL	87	stalls
AUTO PARKING PROVIDED		
Standard (9' x 20')	87	stalls
ZONING ORDINANCE FOR CITY		
Zoning Designation - Rialto Airport Specific Plan - I-GM (General Manufacturing)		
MAXIMUM BUILDING HEIGHT ALLOWED		
Height - 35' with 1:1 Setback Ratio		
MAXIMUM FLOOR AREA RATIO		
FAR - 3:1		

SETBACKS	
Building	Landscape
Locust Ave/Front - 25'	15'
Lowell St/Side - 15'	15'
Rear - 0'-15'	0

PROPERTY OWNER

THRIFTY OIL CO.
13116 IMPERIAL HIGHWAY
SANTA FE SPRINGS CA 90670
TEL: 562-921-3581
ATTN: STEPHANE WANDEL

ADDRESS OF THE PROPERTY

TBD

ASSESSOR'S PARCEL NUMBER

0232-192-12-0-000

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF RIALTO, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL NO. 5 OF PARCEL MAP NO. 7173, IN BERNARDINO, STATE OF CALIFORNIA, AS PER INCLUSIVE OF PARCEL MAPS, IN THE OFFICE THE CITY OF RIALTO, COUNTY OF SAN MAP RECORDED IN BOOK 77 PAGES 64 TO 68 OF THE COUNTY RECORDER OF SAID COUNTY.

APN: 0239-192-12-0-000

ZONING

ZONING DESIGNATION - RIALTO AIRPORT SPECIFIC PLAN
- I-GM (GENERAL MANUFACTURING)

APPLICANT

THRIFTY OIL CO.
13116 IMPERIAL HIGHWAY
SANTA FE SPRINGS CA 90670
TEL: 562-921-3581
ATTN: STEPHANE WANDEL

APPLICANT'S REPRESENTATIVE

HPA, INC.
18831 BARDEEN AVE SUITE 100
IRVINE CA 92612
TEL: 949-862-2137
ATTN: JOSEPH KIM

SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONC. PAVEMENT,
2. FUTURE MONUMENT SIGN
3. CONCRETE WALKWAY
4. DRIVEWAY APRONS TO BE CONSTRUCTED PER "L" DRAWINGS.
5. 5'-6"X5'-6"X4" MIN. THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. SLOPE TO BE 1/4" : 12" MAX. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY W/ 1:20 MAX. AS REQ. BY CITY INSPECTOR.
6. PROVIDE METAL, MANUAL OPERATED GATES W/ KNOX-PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
7. EXTERIOR CONC. STAIR.
8. LANDSCAPE. SEE "L" DWGS.
9. ACCESSIBLE LIFT.
10. BIKE RACK.
11. APPROXIMATE LOCATION OF TRANSFORMER.
12. NOT USED.
13. 8'H WROUGHT IRON FENCE
14. ELECTRICAL ROOM
15. SITE LIGHT FIXTURE
16. PROPOSED RETAINING WALL.
17. TRASH ENCLOSURE PER CITY STANDARD.
18. 12'H CONCRETE TILT SCREEN WALL
19. HANDICAPPED PARKING STALL SIGN
20. HANDICAPPED ENTRY SIGN
21. PRE-CAST CONC. WHEEL STOP
22. CONC. FILLED GUARD POST "6 DIA. U.N.O. 42" H,
23. EMPLOYEE BREAK AREA WITH TRELLIS
24. NON-STRUCTURAL ARCHITECTURAL TREATMENT WITH SMOOTH PLASTER FINISH
25. EXISTING RETAINING WALL TO REMAIN.
26. EXISTING RETAINING WALL TO BE DEMOLISHED

SITE LEGEND

- LANDSCAPED AREA
- CONCRETE PAVING SEE "C" DRWGS. FOR THICKNESS
- STANDARD PARKING STALL (9' X 20')
- HANDICAP PARKING STALL (12' X 20')
- 26' FIRE LANE.
- PROPERTY LINE
- PATH OF TRAVEL

SITE PLAN GENERAL NOTES

1. THE SOILS REPORT PREPARED BY _____ SHOULD BE A PART OF THESE CONTRACT DOCUMENTS.
2. IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE.
3. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINE U.N.O.
4. SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES. DETAILS ON SHEET AD.1 ARE MINIMUM STANDARDS.
5. THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM, PRIOR TO INSTALLATION & AT LEAST 60 DAYS BEFORE BLDG. COMPLETION.
6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
9. SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.
10. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY W/ 1:20 MAX. SLOPE. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4". SEE "L" DRAWINGS FOR FINISH.
11. PROVIDE TWO FIRE HYDRANT ON THE SITE. FINAL LOCATION WILL DETERMINATE IN DURING SUBMITTAL.
12. PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.
13. CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND IRRIGATION OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
14. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
15. NOT USED
16. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
17. NOT USED.
18. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB
19. APPROVED CONCEPTUAL LANDSCAPE PLAN PRIOR TO GRADING PERMIT

OFFICIAL USE ONLY

HPA architecture

hpa, inc.
18831 bardeen avenue, - ste. #100
irvine, ca
92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:

THRIFTY OIL CO.

13116 Imperial Highway
Santa Fe Springs CA 90670
tel: 562-921-3581

Project:

Locust and Lowell

NWC of Locust and Lowell
Rialto CA

Consultants:

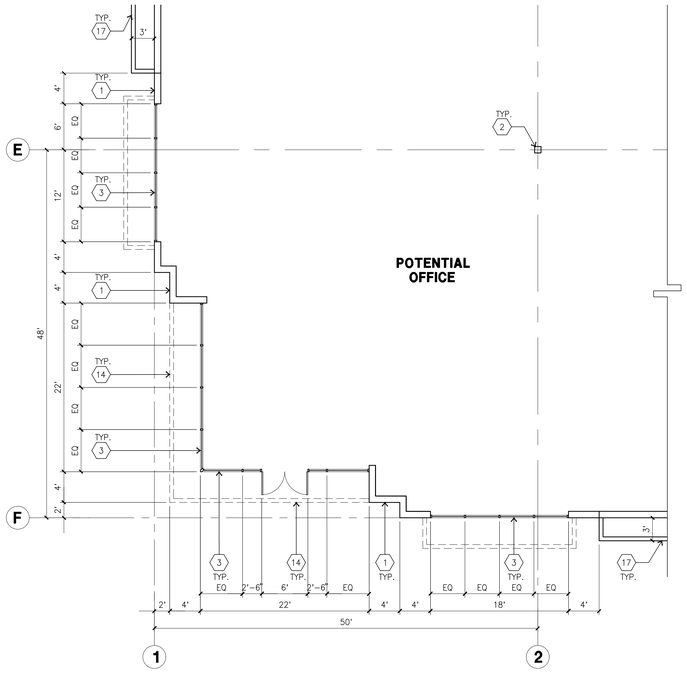
CIVIL	Kimley Horn
STRUCTURAL	-
MECHANICAL	-
PLUMBING	-
ELECTRICAL	-
LANDSCAPE	Hunter Landscape
FIRE PROTECTION	-
SOILS ENGINEER	-

Title: Overall Site Plan

Project Number: 21180
Drawn by: J.K.
Date: 1/14/2022
Revision:

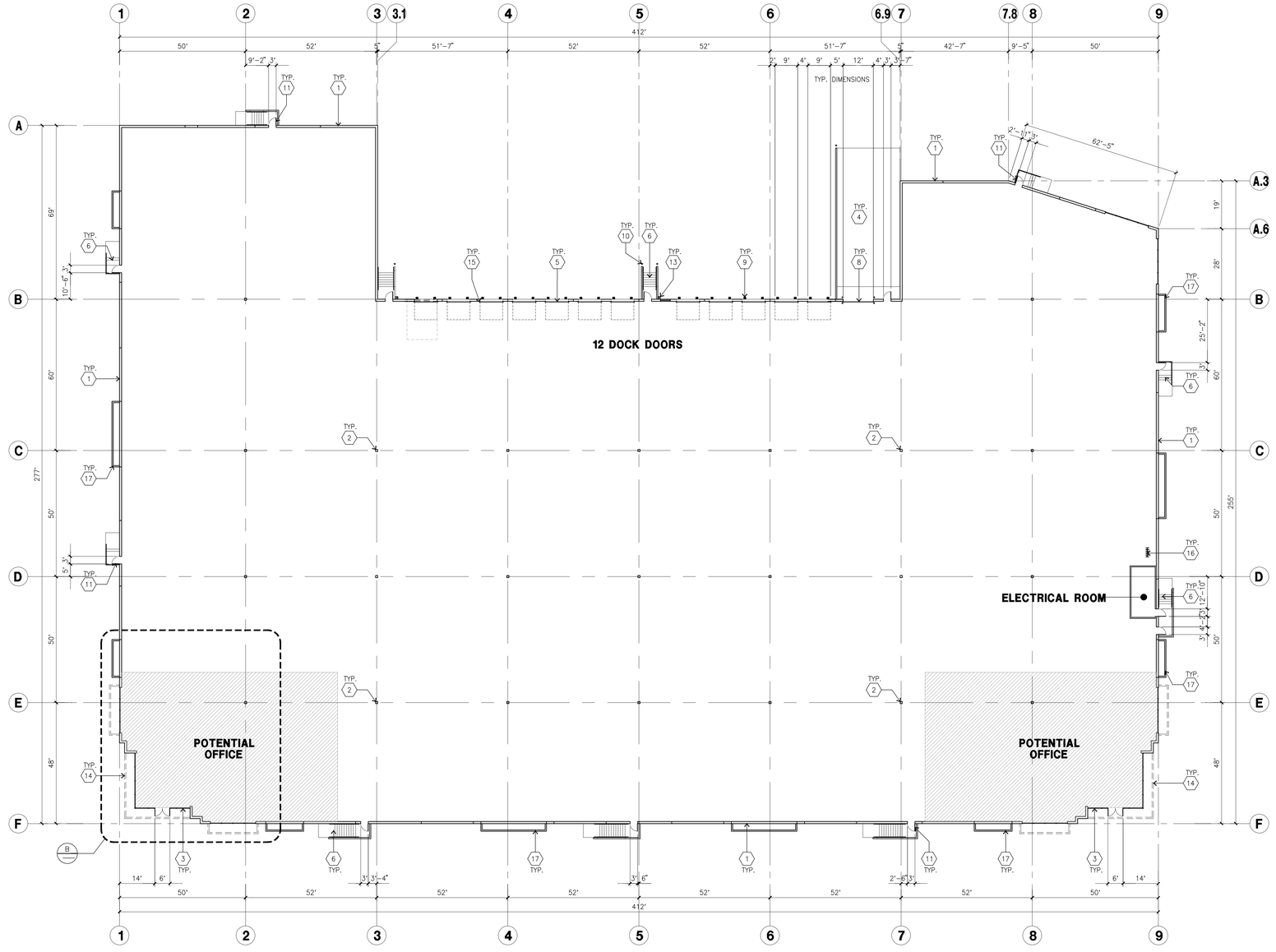
Sheet:

DAB-A1.1



ENLARGED FLOOR PLAN B
scale: 1/8" = 1'-0"

SCALE: 1/8" = 1'-0"
0 8' 16' 24'
TRUE NORTH



OVERALL FLOOR PLAN A
scale: 1"=20'-0"

SCALE: 1" = 20'-0"
0 20' 40' 60'
TRUE NORTH

KEYNOTES - FLOOR PLAN

1. CONCRETE TILT-UP PANEL.
2. STRUCTURAL STEEL COLUMN.
3. TYPICAL STOREFRONT SYSTEM WITH GLAZING. SEE OFFICE BLOW-UP AND ELEVATIONS FOR SIZE, COLOR AND LOCATIONS.
4. CONCRETE RAMP W/ 42"HIGH CONC TILT-UP GUARD WALL OR BUILDING WALL ON BOTH SIDE OF RAMP.
5. 9'-0" X 10' TRUCK DOOR, SECTIONAL O'H., STANDARD GRADE.
6. EXTERIOR CONCRETE STAIR
7. 5'-6"X5'-6"X4" THICK CONCRETE EXTERIOR LANDING PAD TYPICAL AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREA. FINISH TO BE MEDIUM BLOOM FINISH. SLOPE TO BE 1/4" : 12" MAX. PROVIDE WALK TO HARD SURFACE PER CITY REQUIREMENTS.
8. 12' X 14' DRIVE THRU. SECTIONAL OH., STANDARD GRADE.
9. DOCK DOOR BUMPER
10. CONC. FILLED GUARD POST. 6" DIA. U.N.O.. 42"H.
11. 3'X7' HOLLOW METAL EXTERIOR MAN DOOR.
12. SOFFIT LINE ABOVE
13. EXTERIOR DOWNSPOUT WITH OVERFLOW SCUPPER,
14. TUBE STEEL CANOPY.
15. Z GUARD
16. BIKE RACK
17. NON-STRUCTURAL ARCHITECTURAL TREATMENT WITH SMOOTH PLASTER FINISH

GENERAL NOTES - FLOOR PLAN

A. THIS BUILDING IS DESIGNED FOR HIGH PILE STORAGE WITH FIRE ACCESS MAN DOORS AT 100' MAXIMUM O.C. A SEPARATE PERMIT WILL BE REQUIRED FOR ANY RACKING/CONVEYER SYSTEMS.

B. FIRE HOSE LOCATIONS SHALL BE APPROVED PER FIRE DEPARTMENT.

C. THE BUILDING FLOOR SLAB IS SLOPED, SEE "C" DRAWINGS FOR FINISH SURFACE ELEVATIONS.

D. NOT USED

E. WAREHOUSE INTERIOR CONCRETE WALLS ARE PAINTED WHITE. COLUMNS ARE TO RECEIVE PRIMER ONLY. ALL GYP. BD. WALLS IN WAREHOUSE TO RECEIVE 1 COAT OF WHITE TO COVER.

F. SLOPE POUR STRIP 1/2" TO EXTERIOR AT ALL MANDOOR EXITS. SEE "S" DRAWINGS FOR POUR STRIP LOCATION.

G. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE PANEL WALL, GRIDLINE, OR FACE OF STUD U.N.O.

H. SEE CIVIL DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR TO VERIFY ACTUAL UTILITY LOCATIONS. PLUMBING/ELECTRICAL COORDINATION.

I. FOR DOOR TYPES AND SIZES, SEE DETAIL SHEET AD.4. NOTE: ALL DOORS PER DOOR SCHEDULE ARE FINISH OPENINGS.

J. CONTRACTOR TO PROTECT AND KEEP THE FLOOR SLAB CLEAN. ALL EQUIPMENT TO BE DIAPERED INCLUDING CARS AND TRUCKS.

K. ALL EXIT MAN DOORS IN WAREHOUSE TO HAVE ILLUMINATED EXIT SIGN. HARDWARE.

L. HIGHLY FLAMMABLE AND COMBUSTIBLE MATERIAL SHALL NOT BE USED OR STORED IN THIS BUILDING.

M. EACH EXTERIOR EXIT DOOR SHALL BE IDENTIFIED BY A TACTILE EXIT SIGN WITH THE WORDS "EXIT". THE MOUNTING HEIGHT FOR SUCH SIGNAGE SHALL BE 60" FROM FINISH FLOOR LEVEL TO THE CENTER OF THE SIGN.

N. NON-ACCESSIBLE DOOR. PROVIDE WARNING SIGN LOCATED IN THE INTERIOR SIDE PER CBC 1133B.1.1.1

O. ALL ROOF MOUNTED MATERIALS SHALL BE FULLY SCREENED FROM PUBLIC VIEW, SEE A/A4.1 OFFICE SECTION.

HPA architecture

hpa, inc.
18831 bardeen avenue, - ste. #100
irvine, ca
92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:

THRIFTY OIL CO.

13116 Imperial Highway
Santa Fe Springs CA 90670
tel: 562-921-3581

Project:

Locust and Lowell

NWC of Locust and Lowell
Rialto CA

Consultants:

CIVIL	Kimley Horn
STRUCTURAL	-
MECHANICAL	-
PLUMBING	-
ELECTRICAL	-
LANDSCAPE	Hunter Landscape
FIRE PROTECTION	-
SOILS ENGINEER	-

Title: overall floor plan

Project Number: 21180
Drawn by: J.K.
Date: 1/14/2022
Revision:

Sheet:

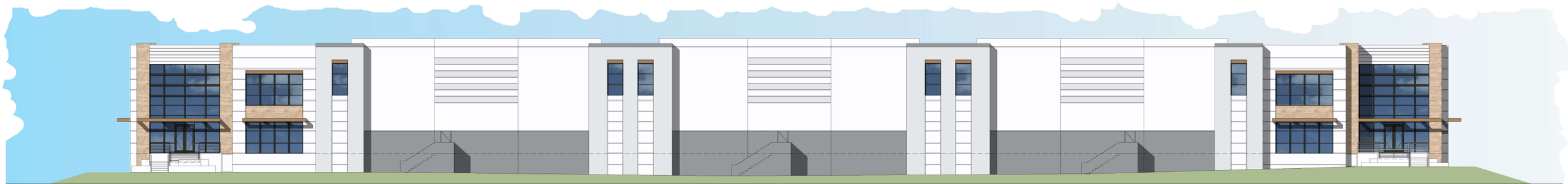
DAB-A2.1



NORTH ELEVATION



WEST ELEVATION



SOUTH ELEVATION



EAST ELEVATION

JOB NO. 21180.00

HPA architecture

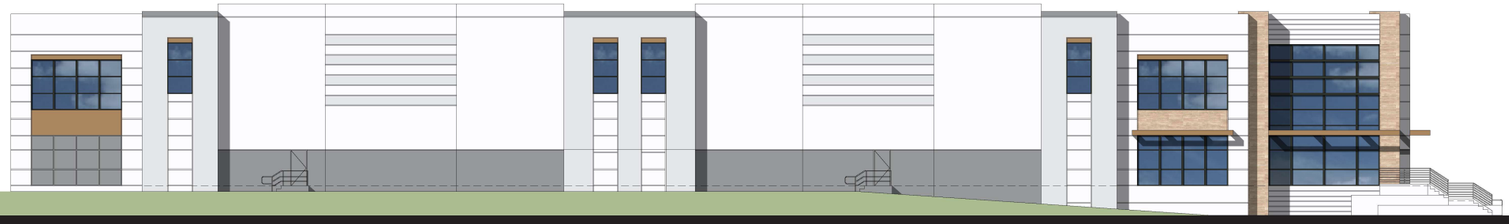
06.06.2022

BUILDING CONCEPTUAL ELEVATIONS

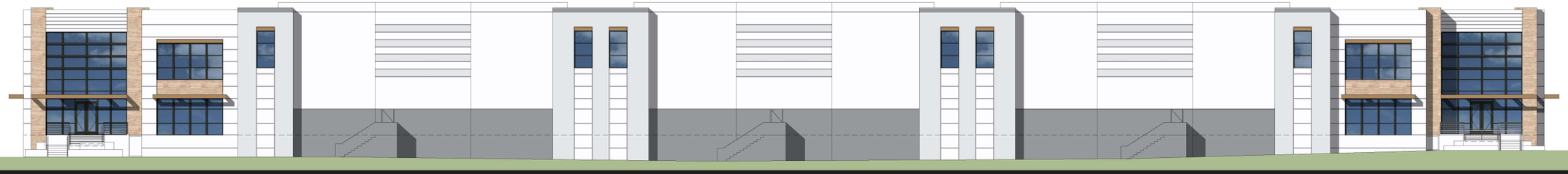
LOCUST AVE. AND LOWELL ST.

RIALTO, CALIFORNIA

THRIFTY OIL



WEST ELEVATION



SOUTH ELEVATION



1. Sherwin Williams
SW 7005
PURE WHITE

2. Sherwin Williams
SW 7071
GRAY SCREEN

3. Sherwin Williams
SW 7074
SOFTWARE

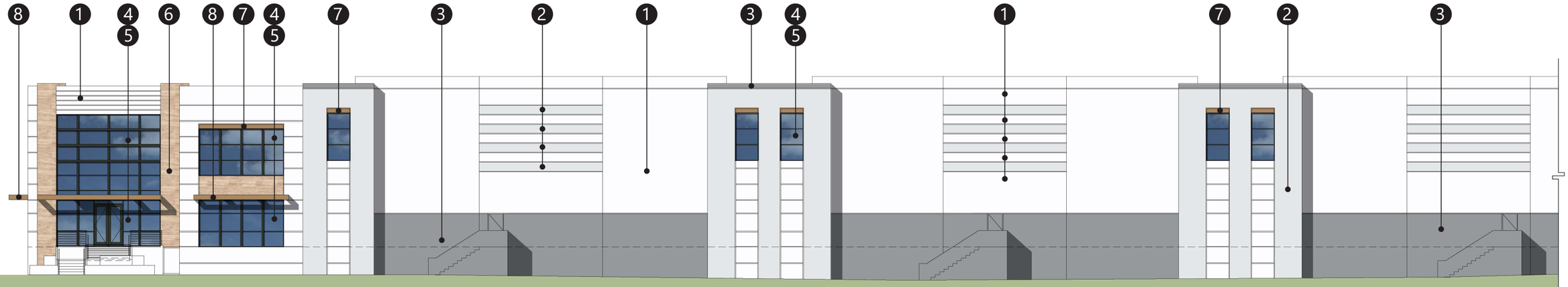
4. Black Anodized
MULLIONS

5. Blue Reflective
GLAZING

6. Arizona Tile
Porta Nuova
Rovere
6 1/2” x 40”
ACCENT MATERIAL

7. Sherwin Williams
Acrylic Latex Systems
High Gloss/High Performance
in color: SW 7535
Sandy Ridge

8. Sherwin Williams
Acrylic Latex Systems
High Gloss/High Performance
in color: SW 7535 Sandy Ridge
@ Metal Canopy



ENLARGED SOUTH ELEVATION

JOB NO. 21180.00

HPA architecture

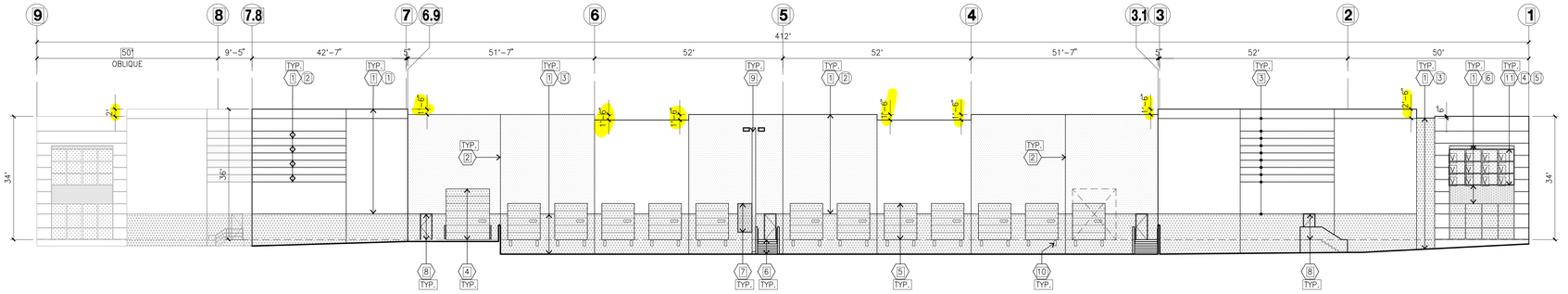
06.06.2022

BUILDING CONCEPTUAL ELEVATIONS & MATERIAL BOARD

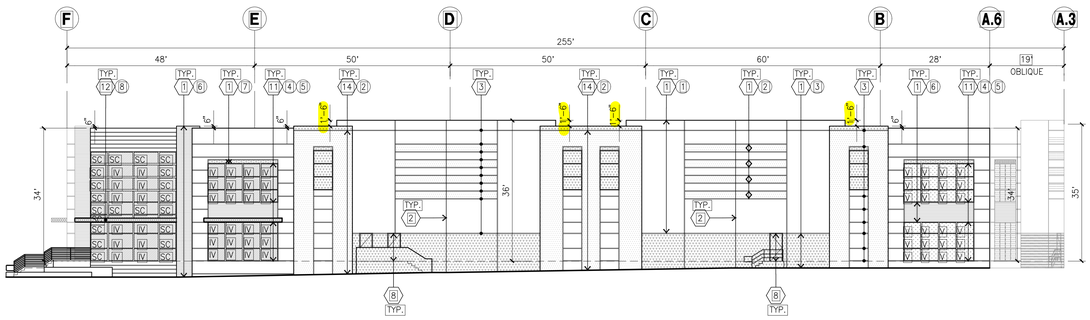
LOCUST AVE. AND LOWELL ST.

RIALTO, CALIFORNIA

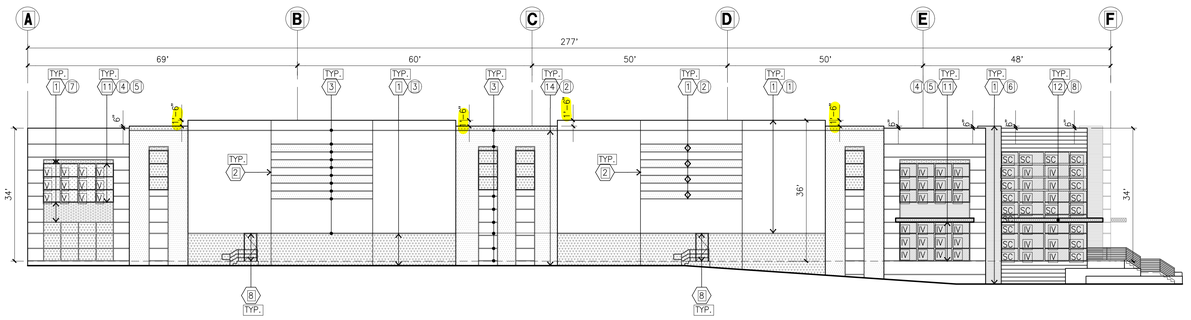
THRIFTY OIL



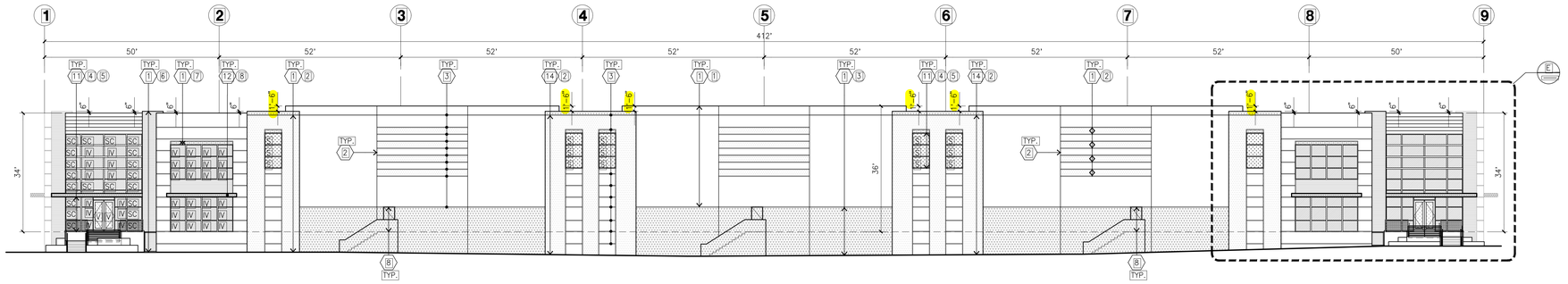
NORTH ELEVATION A
scale: 1/16" = 1'-0"



EAST ELEVATION C
scale: 1/16" = 1'-0"



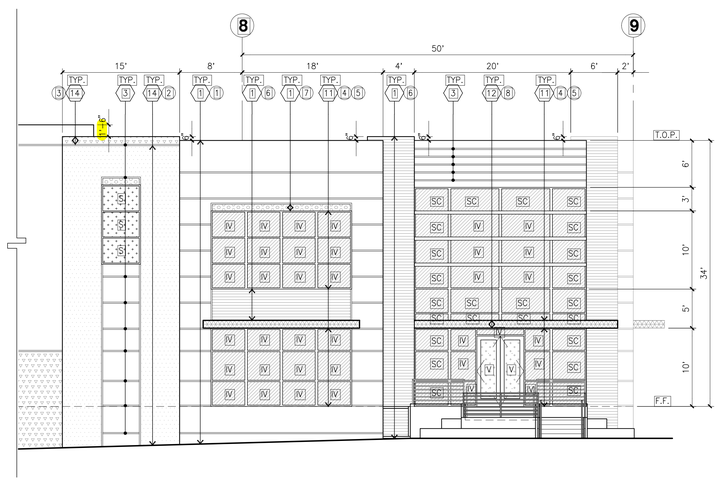
WEST ELEVATION B
scale: 1/16" = 1'-0"



SOUTH ELEVATION D
scale: 1/16" = 1'-0"



LIGHT FIXTURE (LSI SLICE MEDIUM -WHITE) F
scale: NTS



ENLARGED SOUTH ELEVATION E
scale: 1/8" = 1'-0"

KEYNOTES - ELEVATIONS

(1) CONCRETE TILT-UP PANEL(PAINTED).
FINISH GRADE VARIES. SEE "C" DRAWINGS. WATERPROOF ALL WALLS WHERE GRADE IS HIGHER AND EXPOSED TO THE WEATHER ONE SIDE. WATERPROOFING TO BE PROTECTED WITH PROTECTION BOARD AND A MIN. OF 6" OF GRAVEL. PROVIDE TRENCH DRAIN AT BOTTOM AND DAYLIGHT TO CURB OR TAKE TO STORM DRAIN.
NOT REQUIRED AT DOCK HIGH CONDITION OR AT RAMP WALLS.

(2) PANEL JOINT.

(3) PANEL REVEAL. ALL REVEALS TO HAVE A MAX. OF 3/8" CHAMFER. REVEAL COLOR TO MATCH ADJACENT BUILDING FIELD COLOR. U.N.O.

(4) OVERHEAD DOOR @ DRIVE THRU. SEE DOOR SCHEDULE. PROVIDE COMPLETE WEATHER-STRIPPING PROTECTION ALL AROUND.

(5) OVERHEAD DOOR @ DOCK HIGH. SEE DOOR SCHEDULE. PROVIDE COMPLETE WEATHER-STRIPPING PROTECTION ALL AROUND.

(6) CONCRETE STAIR, LANDING AND GUARDRAIL W/ METAL PIPE HANDRAIL. PROVIDE NON SKID NOSING TO MEET ADA REQUIREMENTS. PROVIDE CONTRASTING COLORED 3" WIDE WARNING STRIPE INTEGRAL TO CONCRETE AT TOP LANDING AND BOTTOM TREAD PER ADA REQUIREMENTS.

(7) METAL LOUVER, PAINT TO MATCH BUILDING COLOR.

(8) HOLLOW METAL DOORS. SEE DOOR SCHEDULE.
PROVIDE COMPLETE WEATHER STRIPING ALL AROUND DOOR.
PROVIDE FOR RAIN DIVERTER ABOVE DOOR.

(9) EXTERIOR DOWNSPOUT AND OVERFLOW SCUPPER

(10) DOCK BUMPER

(11) ALUMINUM STOREFRONT FRAMING WITH TEMPERED GLAZING AT ALL DOORS, SIDELITES ADJACENT TO DOORS AND GLAZING WITH BOTTOMS LESS THAN 18" ABOVE FINISH FLOOR ELEVATION.

(12) TUBE STEEL CANOPY WITH 3" FORM CODA XT COVER OVER ENTRANCE.

(13) LIGHT FIXTURE SEE DETAIL "F" CENTER ON PANEL AND AT 30" AFF

(14) NON-STRUCTURAL ARCHITECTURAL TREATMENT WITH SMOOTH PLASTER FINISH OVER CONCRETE TILT-UP WALL

GENERAL NOTES - ELEVATIONS

A. ALL PAINT COLOR CHANGES TO OCCUR AT INSIDE CORNERS UNLESS NOTED OTHERWISE.
B. ALL PAINT FINISHES ARE TO BE FLAT UNLESS NOTED OTHERWISE.
C. T.O.P. EL= TOP OF PARAPET ELEVATION.
D. F.F. = FINISH FLOOR ELEVATION.
E. STOREFRONT CONSTRUCTION: GLASS, METAL ATTACHMENTS AND LINTELS SHALL BE DESIGNED TO RESIST 90 MPH: EXPOSURE "C" WINDS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO INSTALLATION.
F. CONTRACTOR SHALL FULLY PAINT ONE CONCRETE PANEL W/ SELECTED COLORS. ARCHITECT AND OWNER SHALL APPROVE PRIOR TO PAINTING REMAINDER OF BUILDING.
G. BACK SIDE OF PARAPETS TO HAVE SMOOTH FINISH AND BE PAINTED WITH ELASTOMERIC PAINT.
H. FOR SPANDREL GLAZING, ALLOW SPACE BEHIND SPANDREL TO BREATH.
J. USE ADHESIVE BACK WOOD STRIPS FOR ALL REVEAL FORMS.
K. THE FIRST COAT OF PAINT TO BE ROLLED-ON AND THE SECOND COAT TO BE SPRAYED-ON

COLOR SCHEDULE - ELEVATIONS

	(1) CONCRETE TILT-UP PANEL	PAINT BRAND	SW7005 PURE WHITE
	(2) CONCRETE TILT-UP PANEL	PAINT BRAND	SW7071 GRAY SCREEN
	(3) CONCRETE TILT-UP PANEL	PAINT BRAND	SW7074 SOFTWARE
	(4) MULLIONS	COLOR	BLACK ANODIZED ALUMINUM MULLIONS
	(5) GLAZING	COLOR	BLUE REFLECTIVE GLAZING
	(6) CONCRETE TILT-UP PANEL	STONE	ARIZONA TILE PORTA NUOVA ROVERE 6 1/2" X 40" ACCENT MATERIAL
	(7) CONCRETE TILT-UP PANEL	COLOR	ACRYLIC LATEX SYSTEMS HIGH GLOSS/HIGH PERFORMANCE SW7535 SANDY RIDGE
	(8) METAL CANOPY	COLOR	ACRYLIC LATEX SYSTEMS HIGH GLOSS/HIGH PERFORMANCE SW7535 SANDY RIDGE

GLAZING LEGEND

NOTE: ALL EXTERIOR AND INTERIOR GLAZING SHALL BE TEMPERED.

IV INSULATED VISION GLASS
SC SPANDREL GLASS WITH CONCRETE BEHIND
V SINGLE LITE VISION GLASS
S SPANDREL GLASS

IV : INSULATED VISION GLASS
1/4" **ATLANTICA** + 1/4" **SUNGATE 400** CLEAR
1" INSULATED GLASS UNIT WITH 1/2" AIRSPACE AND 1/4" LITES
U: **0.27** SHGC: **0.35** VLT: **58%**
MINIMUM VT TO BE 0.42 PER 2016 CEC TABLE 140.3-B

SC : SPANDREL WITH CONCRETE BEHIND
1/4" **CLEAR** WITH **ATLANTIC WATERS** OPACICOAT PAINTED ON REFLECTIVE. INSTALLED ON CONCRETE.

V : VISION GLASS
1/4" **ATLANTICA**

MULLIONS : **ANODIZED CLEAR.**

HPA architecture
hpa, inc.
18831 bardeen avenue, - ste. #100
irvine, ca
92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:

THRIFTY OIL CO.

13116 Imperial Highway
Santa Fe Springs CA 90670
tel: 562-921-3581

Project:

Locust and Lowell

NWC of Locust and Lowell
Rialto CA

Consultants:

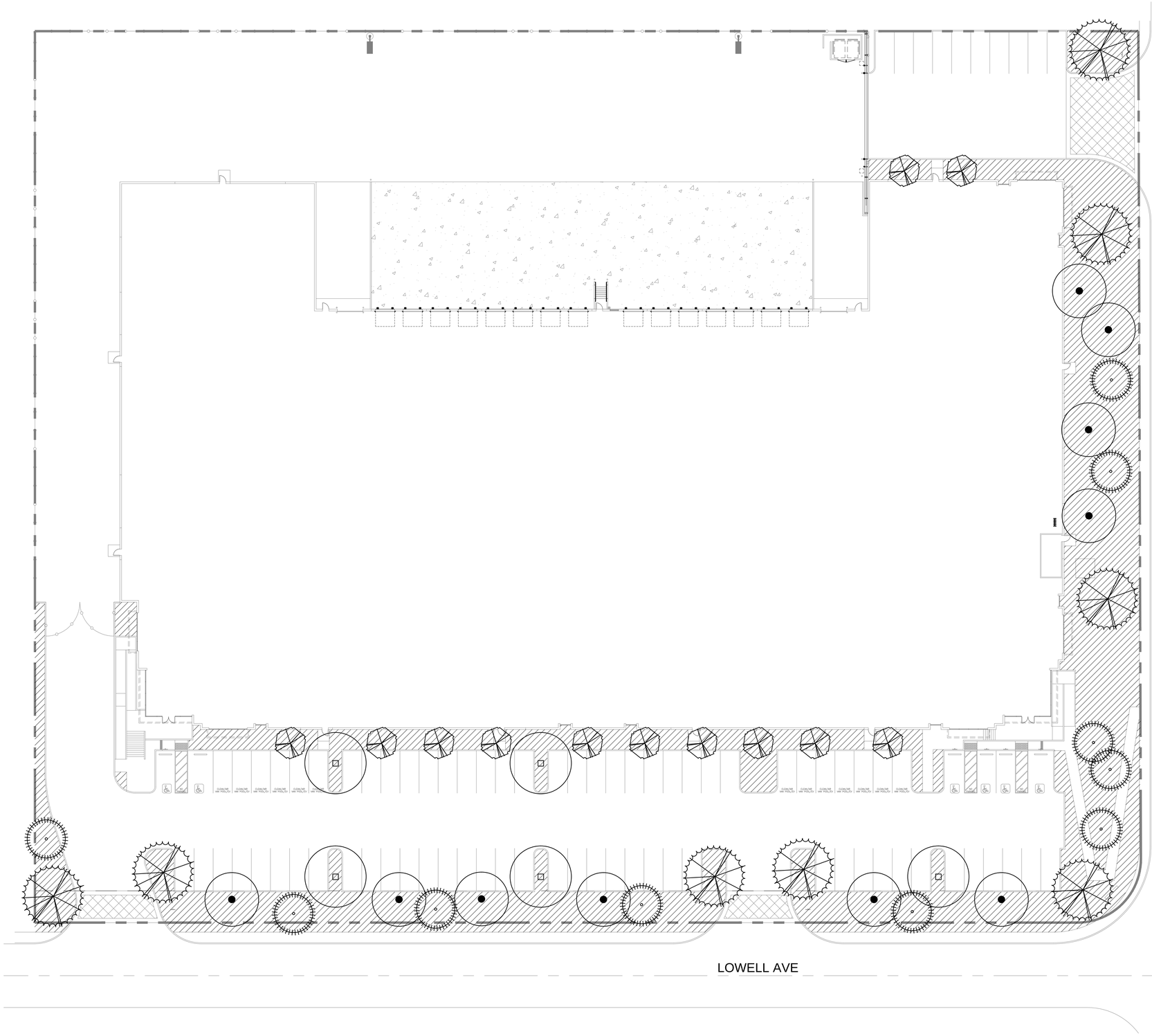
CIVIL	Kimley Horn
STRUCTURAL	-
MECHANICAL	-
PLUMBING	-
ELECTRICAL	-
LANDSCAPE	Hunter Landscape
FIRE PROTECTION	-
SOILS ENGINEER	-

Title: elevation

Project Number: 21180
Drawn by: J.K.
Date: 1/14/2022
Revision:

Sheet:

DAB-A3.1



PLANTING LEGEND

TREES

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	REMARKS
	Cercidium 'Desert Museum' Blue Palo Verde	24" Box	10	L	Multi
	Chilopsis linearis Desert Willow	24" Box	10	L	Multi
	Prosopis chilensis Chilean Mesquite	36" Box	8	M	Multi
	Rhus lancea African Sumac	24" Box	5	L	Standard
	Tristania conferta Brisbane Box	15 Gal	12	M	Standard

SHRUBS

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	REMARKS
	Arbutus unedo Strawberry Tree	5 Gal	191	L	
	Leucophyllum f. 'Green Cloud' Texas Ranger	5 Gal	164	L	
	Rhamnus californica Coffeeberry	5 Gal	143	L	
	Salvia greggii Autumn Sage	5 Gal	201	L	
	Senna artemisioides Feathery Cassia	5 Gal	337	L	
	Westingia fruticosa Coast Rosemary	5 Gal	584	L	
	Agave villmoriniana Agave	5 Gal	13	L	
	Anigozanthos flavidus Kangaroo Paw	5 Gal	55	L	
	Dasylerion wheeleri Desert Spoon	5 Gal	24	L	
	Hesperaloe parviflora Red Yucca	5 Gal	106	L	
	Muhlenbergia rigens Deergrass	5 Gal	173	M	
	Pennisetum s. 'Cupreum' Purple Fountain Grass	5 Gal	240	L	

GROUNDCOVER

SYMBOL	BOTANICAL/COMMON NAME	SIZE	SPACING	WUCOLS	REMARKS
	Acacia redolens 'Low Boy' Acacia	1 Gal	6' O.C.	L	
	Baccharis pilularis Coyote Bush	1 Gal	24" O.C.	L	
	Carex praegracilis Cluster Field Sedge	Seed	Hydro-Seed	L	
	Lantana montevidensis Purple and White Lantana	1 Gal	24" O.C.	L	
	Leymus c. 'Canyon Prince' California Rye Grass	1 Gal	24" O.C.	L	
	Rosa californica California Wild Rose	2 Gal	30" O.C.	L	
	Rosmarinus o. 'Prostratus' Prostrate Rosemary	1 Gal	30" O.C.	L	

N

0 10' 20' 40'

Locust and Lowell

21-000
10.01.21

Rialto, California

HUNTER LANDSCAPE
711 FEE ANA STREET PLACENTIA, CA 92870
714.986.2400 FAX 714.986.2408

APPENDIX I

TRAFFIC SCOPING AGREEMENT

Exhibit A

SCOPING AGREEMENT FOR TRAFFIC IMPACT ANALYSIS

This following form shall be used to acknowledge preliminary approval of the scope for the traffic impact analysis (TIA) of the following project. The TIA must follow the City of Rialto Traffic Impact Analysis – Report Guidelines and Requirements, adopted by the City Council on _____.

City of Rialto

Traffic Impact Analysis

Scoping Agreement

Case No. 2021-0064

Related Cases -

SP No. _____

EIR No. _____

GPA No. _____

ZC No. _____

Project Name: Thrifty Locust and Lowell Warehouse

Project Address: Intersection of Locust Avenue and Lowell Street

Project Description: ±101,230-square foot Warehouse on ±4.9-acre parcel

	Consultant	Developer
Name:	Kimley Horn - Pranesh Tarikere, PE	Thrifty Oil Co.
Address:	1100 Town and Country Road, Suite 700, Oran	13116 Imperial Highway, Santa Fe Sp
Telephone:	714-780-2543	310-418-6588
Fax:		

1. Trip Generation Source: ITE Trip Generation Manual, 11th Edition

Existing GP Land Use Business Park Proposed Land Use Industrial

Current Zoning: Industrial General Manufacturing Proposed Zoning: Industrial General Manufac

Total Daily Project Trips: Net 125 trips (220 PCE)

	Current Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	7	7	14	22	7	29
PM Trips	0	1	1	8	22	30

Internal Trip Allowance Yes No (_____ % Trip Discount)

Pass-By Trip Allowance Yes No (_____ % Trip Discount)

For appropriate land uses, a pass-by trip discount may be allowed not to exceed 25%. Discount trips shall be indicated on a report figure for intersections and access locations.

2. Trip Geographic Distribution: N % S % E % W %

(Detailed exhibits of trip distribution must be attached with Trucks as a separate exhibit)

3. Background Growth Traffic

Project Completion Year: _____ Annual Background Growth Rate: _____%

Other Phase Years _____

Other area projects to be considered: _____

(Contact Planning for Lists. Correlate projects to exhibit map and also indicate which projects have been included in study area forecasts for existing + background growth + project + cumulative)

Model/Forecast methodology: _____

4. Study Intersections: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies received.)

1. _____ 6. _____
2. _____ 7. _____
3. _____ 8. _____
4. _____ 9. _____
5. _____ 10. _____

5. Study Roadway Segments: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies received.)

1. _____ 6. _____
2. _____ 7. _____
3. _____ 8. _____
4. _____ 9. _____
5. _____ 10. _____

6. Other Jurisdictional Impacts

Is this project within any other Agency's Sphere of Influence or within one-mile of another jurisdictional boundary?

_____YES
_____NO

If so, name of Jurisdiction: _____

7. Site Plan (please attach 11" x 17" legible copy)

8. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (to be filled out by the City of Rialto Public Works Department) (NOTE: If the traffic study states that "a traffic signal is warranted" (or "a traffic signal appears to be warranted," or similar statement) at an existing un-signalized intersection under existing conditions, 8-hour approach traffic volume information must be submitted in addition to the peak hourly turning movement counts for that intersection.)

_____
_____
_____
_____

9. Existing Conditions

Traffic count data must be new or within one year. Provide traffic count dates if using other than new counts.

Date of counts: _____

NOTE Fees are due and must be submitted with, or prior to submittal of this form. The City will not process the Scoping Agreement prior to the receipt of the processing fee.

Fees Paid: _____ Date _____

Recommended:

Scoping Agreement Submittal date 3/2/22

Scoping Agreement Resubmittal date 5/11/22

5/11/22

Applicant/Engineer Date

Land Use Concurrence:

5-25-2022

Development Services Department Date

Approved by: Recommended Approval 5/24/22: Justin P. Schlafli

5/26/22

Public Works Department Date

NOTE:

The Applicant/Engineer acknowledges that the Scoping Agreement is intended to assist in the preparation of any required TIA. It is preliminary in nature and the City does not have sufficient data to determine the ultimate conditions that may be imposed for the project. It does not provide nor limit the requirements imposed on the Project but is intended only to provide initial input into the parameters for review of the traffic generated by the Project and the initial areas to be considered and studied. Subsequent changes to scope of required analysis to be included in the TIA may be required by the Transportation Commission, Planning Commission, and/or the City Council upon Public Works Director/City Engineer review and approval.

Kimley»Horn

MEMORANDUM

To: Mr. Justin Schlaefli, P.E., T.E.
City of Rialto
From: Pranesh Tarikere, P.E.
Kimley-Horn and Associates, Inc.
Date: May 11, 2022 (Updated)

Subject: Thrifty Rialto Warehouse – Traffic Scoping Agreement

---

Kimley-Horn has been hired to prepare this scoping letter to the City of Rialto for an approximately 101,230 square foot industrial warehouse (Project) proposed in the City of Rialto. The Project site is located northwest of the intersection of Locust Avenue and Lowell Street. The 4.9-acre site is bounded on the north and west by existing buildings, the east by Locust Avenue, and the south by Lowell Street. The currently undeveloped site is located within the Rialto Airport Specific Plan, with permitted uses of Industrial and Business Park uses. Regional access would be provided via Interstate 15, located to the west of the Project Site, and State Route 210, located to the south of the Project Site. Local access would be provided via Locust Avenue, east of the Project Site. The Project proposes two driveways, one on Locust Avenue, and one on Lowell Avenue. **Attachment A** contains the preliminary site plan. This scoping agreement memo describes the trip generation, trip distribution, and analysis methodology.

Trip Generation

The *Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition* is used to develop trip generation characteristics of the project. The Project is most comparable to Warehousing (Land Use Code 150), which is also in line with the *City of Rialto Traffic Impact Analysis Guidelines* for Vehicles Miles Traveled (VMT) and Level of Service (LOS) (October 2021) which states Warehousing (Land Use Code 150) shall be used for all warehousing projects. The truck rates, tuck mixes and Passenger Car Equivalents (PCEs) for warehousing follow the City's Guidelines. The estimated trip generation is shown in **Attachment B**. The proposed project is estimated to generate a total of 291 PCE per day with 29 PCE during the AM peak hour, and 30 PCE during the PM peak hour.

The project site is currently used as a contractor yard. Driveway counts were collected at the existing site on Wednesday, 12/15/2021 and Thursday 12/16/2021. The count data is included in Attachment C. The average of the two weekday counts was used to calculate trip generation from the existing use. The existing use generates 48 PCE per day with 8 PCE during the AM peak hour, and 1 PCE during the PM peak hour.

The net trip generation from the project is expected to be 220 PCE per day with 16 PCE during the AM peak hour, and 29 PCE during the PM peak hour.

Trip Distribution

The trip distribution is based on expected travel patterns to/from the site from areas in Rialto and other surrounding communities. Truck distributions use designated truck routes and are routed in the direction of intended travel to the nearest freeways while per the City of Rialto Guidelines. The distribution also reflects that the SR-210 Alder Avenue interchange provides the shortest travel times and most direct routing to the site for passenger vehicle and trucks traveling from the west.

The trip distribution for passenger vehicles and trucks is summarized below:

Passenger Vehicles

- 30% to/from the east along Riverside Avenue (east of Locust Avenue)
- 20% to/from the east along SR-210, using Ayala Drive interchange
- 5% to/from the north along Riverside Avenue (west of Locust Avenue)
- 30% to/from the west along SR-210, using Alder Avenue interchange
- 15% to/from the south along Locust Avenue

Trucks

- 20% to/from the north along I-15, using Sierra Avenue interchange
- 30% to/from the east along SR-210, using Ayala Drive interchange
- 20% to/from the south along Cedar Avenue
- 30% to/from the west using SR-210, using Alder Avenue interchange

Study Area

The City's Traffic Impact Analysis Guidelines, require a Traffic Study to be prepared for the intersections where one or more of the following criteria are met:

- The project will generate more than 50 peak hour trips
- Freeway interchanges within 2 miles from the site that is expected to receive more than 40% of the project's traffic
- Additional intersections of concern (specifically located within the vicinity of schools, shopping areas, or other locations of high trip generation and roadways that exceed V/C ratio as a result of project traffic).

Based on the trip generated described above, the project is expected to generate less than 50 PCE peak hour trips and as such will not contribute 50 or more PCE trips to any intersection. The SR-210 freeway interchange at Alder Avenue is located less than two miles of the site. However, it is not expected to receive more than 40% of the project's traffic based on the distribution detailed above. Due to the expected distribution and low peak hour trip generation, project trips are also not expected to significantly impact any roadways or intersections near high traffic generating shopping centers and/or

nearby schools. Furthermore, the City's guidelines indicate that any proposed use which can demonstrate, based on the most current Trip Generation manual published by the Institute of Transportation Engineers (ITE) or other approved trip generation data, that there will be less than 50 vehicle trips during peak hours and no other operational concerns exist may be exempt from level of service analysis. Therefore, no additional traffic operational analysis is required for the project.

Vehicle Miles traveled (VMT)

The project proposes to do an addendum to the certified Rialto Airport Specific Plan EIR. Level of Service was the applicable threshold when the City certified the Rialto Airport Specific Plan Program EIR in 1997. The mandate requiring lead agencies to use VMT as a threshold for evaluating traffic impacts was adopted in 2018 and effective in 2020. It does not constitute "new information" requiring additional environmental review nor does it affect the assessment of project environmental impacts or mitigation measures compared to those analyzed in the Rialto Airport Specific Plan Program EIR.

The land use designation for the project site in the Rialto Airport Specific Plan is General Manufacturing (I-GM). The I-GM uses are the most intensive industrial uses within the Specific Plan area. Industrial land uses may include warehousing, manufacturing, and multi-tenant spaces. Key requirements for these industries include large parcels, designated truck access routes, and appropriate utility connections. Warehouses are a permitted use in the I-GM. Based on these land use designations and the maximum FAR of 1, allowable development of the site in the Rialto Airport Specific Plan could be 208,217 square feet. As such, the proposed development of 101,230 square feet of warehouse would have fewer VMT than the VMT generated by the site based on land use designation in the Rialto Airport Specific Plan.

Site Adjacent Roadway Cross-Sections

The typical cross-sections for the site adjacent roadways of N Locust Avenue and W Lowell Street along project frontage is included in Attachment D.

Truck Turning Exhibit

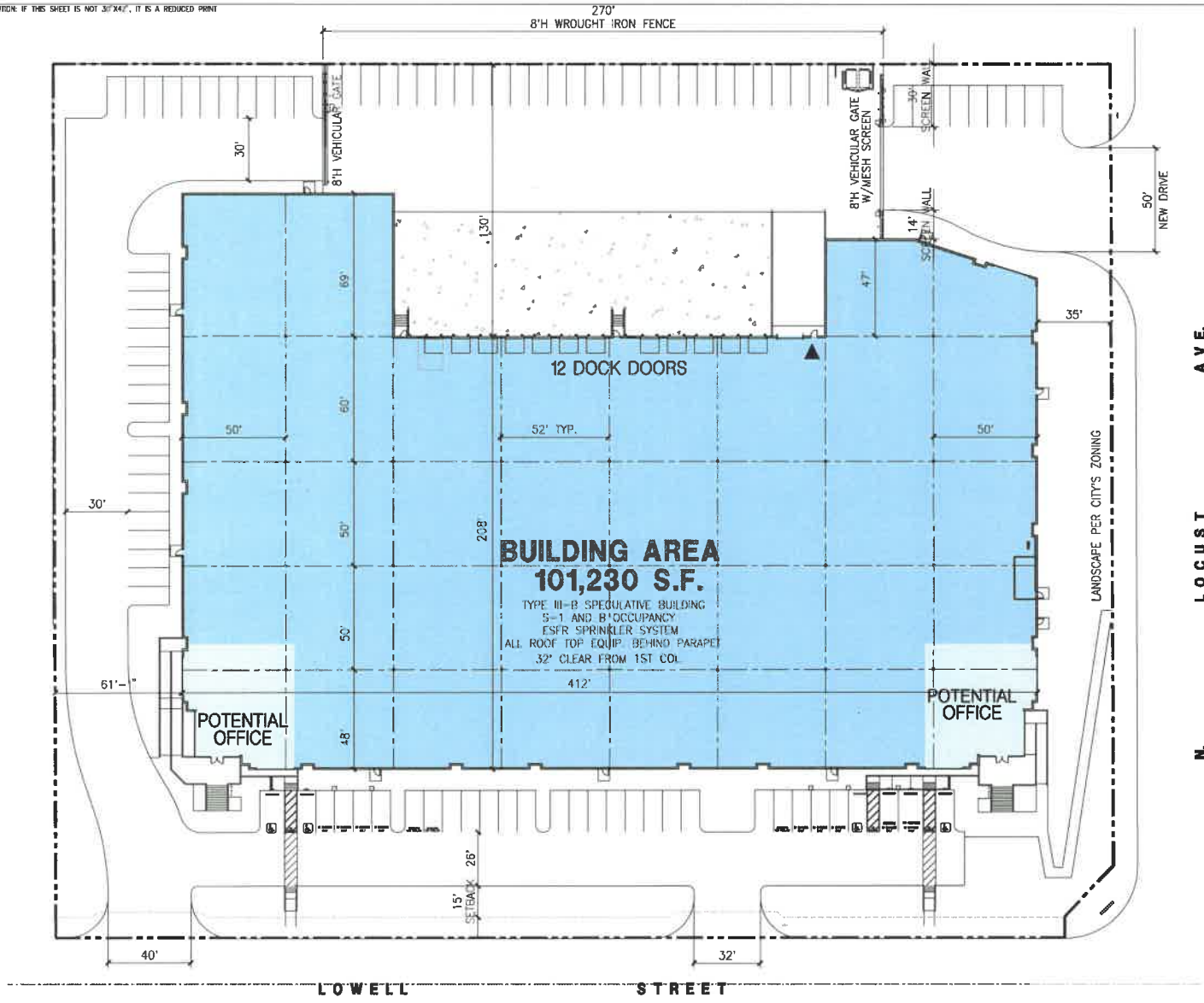
Truck turning exhibit showing truck turns for the truck driveway on Locust Avenue is included in Attachment E.

Line of Sight Exhibit

Line of Sight exhibit showing the proposed clear areas at each of the proposed driveway locations is included in Attachment F. Clear areas shall be annotated in the landscape plans for the project.

Attachment A – Site Plan

CAUTION: IF THIS SHEET IS NOT 30"X42", IT IS A REDUCED PRINT



Aerial Map



Tabulation

SITE AREA	
In s.f.	213,265 s.f.
In acres	4.90 ac
BUILDING AREA	
Office	4,500 s.f.
Office 2nd floor	5,000 s.f.
Warehouse	91,730 s.f.
TOTAL	101,230 s.f.
COVERAGE	47.5%
AUTO PARKING REQUIRED	
Office: 1/250 s.f.	38 stalls
Whse: 1st 10k @ 1/1000 s.f.	10 stalls
whse: above 10k @ 1/2000 s.f.	41 stalls
TOTAL	89 stalls
AUTO PARKING PROVIDED	
Standard (9' x 20')	94 stalls
ZONING ORDINANCE FOR CITY	
Zoning Designation - Rialto Airport Specific Plan - I-GM (General Manufacturing)	
MAXIMUM BUILDING HEIGHT ALLOWED	
Height - 35'	
MAXIMUM FLOOR AREA RATIO	
FAR - 3:1	
LANDSCAPE REQUIREMENT	
Percentage - To Be Verify	
SETBACKS	

Building	Landscape
Locust Ave/Front - 25'	15'
Lowell St/Side - 15'	15'
Rear - 0'-15'	0

Legend

- POTENTIAL OFFICE
- WAREHOUSE
- ▼ DRIVE THRU DOOR

north

1" = 20'
0 20 40 80

HPA architecture

Conceptual Site Plan

Locust Ave and Lowell St.

Rialto, CA

Thrifty Oil

18831 Bardeen Ave. - Ste. #100
Irvine, CA 92612
(949) 863-1770
www.hparchs.com

February 21, 2022 Job No. 21180

Scheme 10

Attachment B – Project Trip Generation

Land Use	Land Use as listed in ITE		Units[1]		Trip Rate[2]	Daily Trips	AM Peak-Hour					PM Peak-Hour				
							% of ADT[2]	In:Out Ratio[2]	In	Out	Total	% of ADT[2]	In:Out Ratio[2]	In	Out	Total
Driveway Trips [3]																
Proposed																
Warehouse Facility	Warehousing				1.71 / ksf	173										
Passenger Cars (60.0%)		60.0%			1.026 / ksf	104			8	2	10			3	8	11
2-Axle Trucks (0.8%)		0.8%	101.23	ksf	0.014 / ksf	1	10%	0.77 : 0.23	0	0	0	11%	0.28 : 0.72	0	0	0
3-Axle Trucks (11.2%)		11.2%			0.192 / ksf	19			1	1	2			1	1	2
4+-Axle Trucks (28.0%)		28.0%			0.479 / ksf	48			4	1	5			1	4	5
Proposed Total						**173**			**13**	**4**	**17**			**5**	**13**	**18**
Proposed PCE																
Warehouse Facility																
Passenger Cars		1				104			8	2	10			3	8	11
2-Axle Trucks (PCE=1.5)		1.5	101.23	ksf		2			0	0	0			0	0	0
3-Axle Trucks (PCE=2.0)		2				39			2	2	4			2	2	4
4+-Axle Trucks (PCE=3.0)		3				145			12	3	15			3	12	15
PCE Total (Proposed)						**291**			**22**	**7**	**29**			**8**	**22**	**30**
Existing (based on driveway counts)[4]																
Passenger Cars						30			2	1	3			0	1	1
2-Axle Trucks						6			1	2	3			0	0	0
3-Axle Trucks						4			0	0	0			0	0	0
4+-Axle Trucks						8			1	1	2			0	0	0
Existing Total						**48**			**4**	**4**	**8**			**0**	**1**	**1**
Existing PCE																
Passenger Cars		1				30			2	1	3			0	1	1
2-Axle Trucks (PCE=1.5)		1.5				9			2	3	5			0	0	0
3-Axle Trucks (PCE=2.0)		2				8			0	0	0			0	0	0
4+-Axle Trucks (PCE=3.0)		3				24			3	3	6			0	0	0
PCE Total (Existing)						**71**			**7**	**7**	**14**			**0**	**1**	**1**
NET TRIP GENERATION (Actual Vehicles) =						**125**			**9**	**0**	**9**			**5**	**12**	**17**
NET TRIP GENERATION (PCE) =						**220**			**16**	**0**	**16**			**8**	**21**	**29**

Note:
1. ksf = Thousand Square Feet
2. Trip rates references from ITE Trip Generation, 11th Edition.
3. Driveway trips are the total number of trips generated by a site.
4. Average of driveway counts collected at the existing site on Wednesday 12/15/2021 and Thursday 12/16/2021

Attachment C – Existing site Driveway Count Data (December 2021)

City:	Rialto
Location:	Locust Avenue Driveway
Date:	12/15/2021
Count Type:	Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	1	0	0	0	1
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	0	0
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	1	0	0	0	1
6:30	1	0	0	0	1
6:45	2	0	0	0	2
7:00	1	0	0	0	1
7:15	0	1	0	0	1
7:30	0	0	0	0	0
7:45	2	0	0	0	2
8:00	1	0	0	0	1
8:15	0	1	0	0	1
8:30	0	0	0	0	0
8:45	0	1	0	0	1
9:00	1	0	0	0	1
9:15	1	0	0	0	1
9:30	0	0	0	1	1
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	0	0
10:30	0	0	0	0	0
10:45	0	0	1	0	1
11:00	0	0	0	0	0
11:15	1	0	0	0	1
11:30	0	0	0	0	0
11:45	0	0	0	1	1

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	1	0	0	0	1
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	0	0
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	2	0	0	0	2
8:00	0	0	0	0	0
8:15	0	1	0	0	1
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	1	0	0	0	1
9:15	0	0	0	0	0
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	1	0	0	0	1
10:30	0	0	0	0	0
10:45	0	0	1	0	1
11:00	0	0	0	0	0
11:15	3	0	0	0	3
11:30	2	0	0	0	2
11:45	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City: Rialto
Location: Locust Avenue Driveway
Date: 12/15/2021
Count Type: Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	4	0	0	0	4
13:15	0	0	0	0	0
13:30	1	0	0	0	1
13:45	1	0	0	0	1
14:00	0	0	0	0	0
14:15	0	0	0	0	0
14:30	1	0	0	0	1
14:45	0	0	0	1	1
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	0	0	0	0	0
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
TOTAL	**19**	**3**	**1**	**3**	**26**

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	1	0	0	0	1
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	0	0	0	0
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	0	0	0	0	0
14:15	1	0	0	0	1
14:30	1	0	0	0	1
14:45	1	0	0	0	1
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	4	0	0	0	4
15:45	0	0	0	0	0
16:00	1	0	0	0	1
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
	19	**1**	**1**	**0**	**21**

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City: Rialto
Location: Lowell Street Driveway
Date: 12/15/2021
Count Type: Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	0	0
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	0	0	0	0
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	0	0	0	0	0
9:15	0	0	0	0	0
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	0	0
10:30	0	0	0	0	0
10:45	0	0	0	0	0
11:00	0	0	0	0	0
11:15	0	0	0	0	0
11:30	0	0	0	0	0
11:45	0	0	0	0	0

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	0	0
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	1	0	1	2
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	0	0	0	0	0
9:15	0	1	0	0	1
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	1	1
10:30	0	0	0	0	0
10:45	0	0	0	0	0
11:00	0	0	0	0	0
11:15	0	0	0	0	0
11:30	0	0	0	0	0
11:45	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City:	Rialto
Location:	Lowell Street Driveway
Date:	12/15/2021
Count Type:	Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	0	0	0	0
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	0	0	0	0	0
14:15	0	0	0	0	0
14:30	0	0	0	0	0
14:45	0	0	0	0	0
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	0	0	0	0	0
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**	**0**

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	0	0	0	0
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	0	0	0	0	0
14:15	0	0	0	0	0
14:30	0	0	0	0	0
14:45	0	0	0	0	0
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	0	0	0	1	1
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
	0	**2**	**0**	**3**	**5**

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City:	Rialto
Location:	DRIVEWAY TOTALS
Date:	12/12/2021
Count Type:	Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	1	0	0	0	1
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	0	0
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	1	0	0	0	1
6:30	1	0	0	0	1
6:45	2	0	0	0	2
7:00	1	0	0	0	1
7:15	0	1	0	0	1
7:30	0	0	0	0	0
7:45	2	0	0	0	2
8:00	1	0	0	0	1
8:15	0	1	0	0	1
8:30	0	0	0	0	0
8:45	0	1	0	0	1
9:00	1	0	0	0	1
9:15	1	0	0	0	1
9:30	0	0	0	1	1
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	0	0
10:30	0	0	0	0	0
10:45	0	0	1	0	1
11:00	0	0	0	0	0
11:15	1	0	0	0	1
11:30	0	0	0	0	0
11:45	0	0	0	1	1

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	1	0	0	0	1
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	0	0
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	2	0	0	0	2
8:00	0	0	0	0	0
8:15	0	2	0	1	3
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	1	0	0	0	1
9:15	0	1	0	0	1
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	1	0	0	1	2
10:30	0	0	0	0	0
10:45	0	0	1	0	1
11:00	0	0	0	0	0
11:15	3	0	0	0	3
11:30	2	0	0	0	2
11:45	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City:	Rialto
Location:	DRIVEWAY TOTALS
Date:	12/12/2021
Count Type:	Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	4	0	0	0	4
13:15	0	0	0	0	0
13:30	1	0	0	0	1
13:45	1	0	0	0	1
14:00	0	0	0	0	0
14:15	0	0	0	0	0
14:30	1	0	0	0	1
14:45	0	0	0	1	1
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	0	0	0	0	0
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
TOTAL	**19**	**3**	**1**	**3**	**26**

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	1	0	0	0	1
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	0	0	0	0
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	0	0	0	0	0
14:15	1	0	0	0	1
14:30	1	0	0	0	1
14:45	1	0	0	0	1
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	4	0	0	1	5
15:45	0	0	0	0	0
16:00	1	0	0	0	1
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
	19	**3**	**1**	**3**	**26**

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City:	Rialto
Location:	Locust Avenue Driveway
Date:	12/16/2021
Count Type:	Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	1	0	0	0	1
4:45	0	0	0	0	0
5:00	0	0	1	0	1
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	2	0	0	0	2
6:45	2	0	0	0	2
7:00	1	0	0	0	1
7:15	0	1	0	0	1
7:30	0	0	0	1	1
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	0	0	0	0
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	0	0	0	0	0
9:15	1	0	0	0	1
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	0	0
10:30	0	1	0	0	1
10:45	0	0	0	0	0
11:00	0	0	0	0	0
11:15	0	0	0	0	0
11:30	0	0	0	0	0
11:45	0	0	0	0	0

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	1	0	1
4:45	0	0	0	0	0
5:00	0	0	1	0	1
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	0	0	0	0
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	1	0	0	0	1
9:15	0	0	0	0	0
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	0	0
10:30	0	0	0	0	0
10:45	0	0	0	0	0
11:00	0	1	0	0	1
11:15	0	0	0	0	0
11:30	1	0	0	0	1
11:45	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City:	Rialto
Location:	Locust Avenue Driveway
Date:	12/16/2021
Count Type:	Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	1	0	1	0	2
12:15	0	0	0	1	1
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	1	0	0	1
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	0	0	0	0	0
14:15	1	0	0	0	1
14:30	0	0	0	1	1
14:45	0	0	0	0	0
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	0	0	0	0	0
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	1	0	0	1	2
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
TOTAL	**10**	**3**	**2**	**4**	**19**

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	0	0	0	0
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	1	0	0	0	1
14:15	0	0	0	0	0
14:30	0	0	0	0	0
14:45	1	0	0	0	1
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	4	0	0	0	4
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	1	0	0	0	1
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	1	1
20:15	1	0	0	0	1
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
	10	**1**	**2**	**1**	**14**

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City:	Rialto
Location:	Lowell Street Driveway
Date:	12/16/2021
Count Type:	Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	0	0
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	0	0	0	0
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	0	0	0	0	0
9:15	0	0	0	0	0
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	0	0
10:30	0	0	0	0	0
10:45	0	0	0	0	0
11:00	0	0	0	0	0
11:15	0	0	0	0	0
11:30	0	0	0	0	0
11:45	0	0	0	0	0

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	0	0
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	1	0	1	2
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	0	0	0	0	0
9:15	0	0	0	0	0
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	0	0
10:30	0	0	0	0	0
10:45	0	0	0	0	0
11:00	0	0	0	0	0
11:15	0	0	0	0	0
11:30	0	0	0	0	0
11:45	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City:	Rialto
Location:	Lowell Street Driveway
Date:	12/16/2021
Count Type:	Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	0	0	0	0
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	0	0	0	0	0
14:15	0	0	0	0	0
14:30	0	0	0	0	0
14:45	0	0	0	0	0
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	0	0	0	0	0
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**	**0**

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	0	1	1
12:30	0	0	0	1	1
12:45	0	0	0	0	0
13:00	0	1	0	0	1
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	0	0	0	0	0
14:15	0	0	0	0	0
14:30	0	0	0	0	0
14:45	0	0	0	0	0
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	0	0	0	0	0
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
	0	**2**	**0**	**3**	**5**

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City: Rialto
Location: DRIVEWAY TOTALS
Date: 12/16/2021
Count Type: Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	1	0	0	0	1
4:45	0	0	0	0	0
5:00	0	0	1	0	1
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	2	0	0	0	2
6:45	2	0	0	0	2
7:00	1	0	0	0	1
7:15	0	1	0	0	1
7:30	0	0	0	1	1
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	0	0	0	0
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	0	0	0	0	0
9:15	1	0	0	0	1
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	0	0
10:30	0	1	0	0	1
10:45	0	0	0	0	0
11:00	0	0	0	0	0
11:15	0	0	0	0	0
11:30	0	0	0	0	0
11:45	0	0	0	0	0

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	1	0	1
4:45	0	0	0	0	0
5:00	0	0	1	0	1
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	1	0	1	2
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	1	0	0	0	1
9:15	0	0	0	0	0
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	0	0
10:30	0	0	0	0	0
10:45	0	0	0	0	0
11:00	0	1	0	0	1
11:15	0	0	0	0	0
11:30	1	0	0	0	1
11:45	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

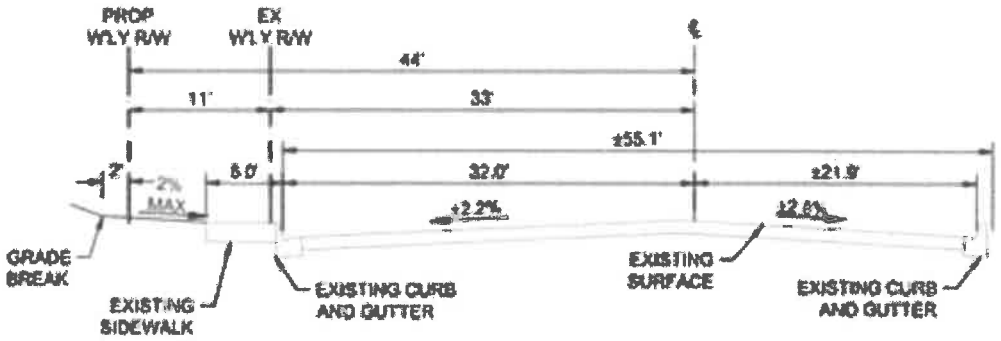
City: Rialto
Location: DRIVEWAY TOTALS
Date: 12/16/2021
Count Type: Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	1	0	1	0	2
12:15	0	0	0	1	1
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	1	0	0	1
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	0	0	0	0	0
14:15	1	0	0	0	1
14:30	0	0	0	1	1
14:45	0	0	0	0	0
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	0	0	0	0	0
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	1	0	0	1	2
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
TOTAL	**10**	**3**	**2**	**4**	**19**

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	0	1	1
12:30	0	0	0	1	1
12:45	0	0	0	0	0
13:00	0	1	0	0	1
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	1	0	0	0	1
14:15	0	0	0	0	0
14:30	0	0	0	0	0
14:45	1	0	0	0	1
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	4	0	0	0	4
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	1	0	0	0	1
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	1	1
20:15	1	0	0	0	1
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
	10	**3**	**2**	**4**	**19**

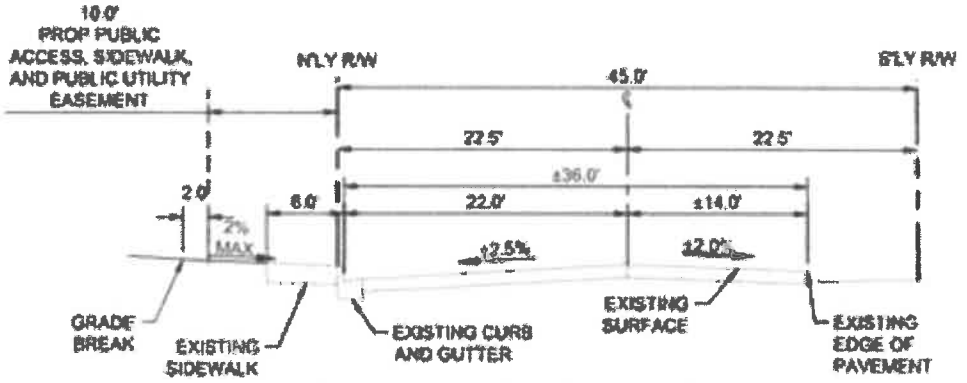
Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

Attachment D – Typical Roadway Cross-sections



TYPICAL SECTION - N LOCUST AVE

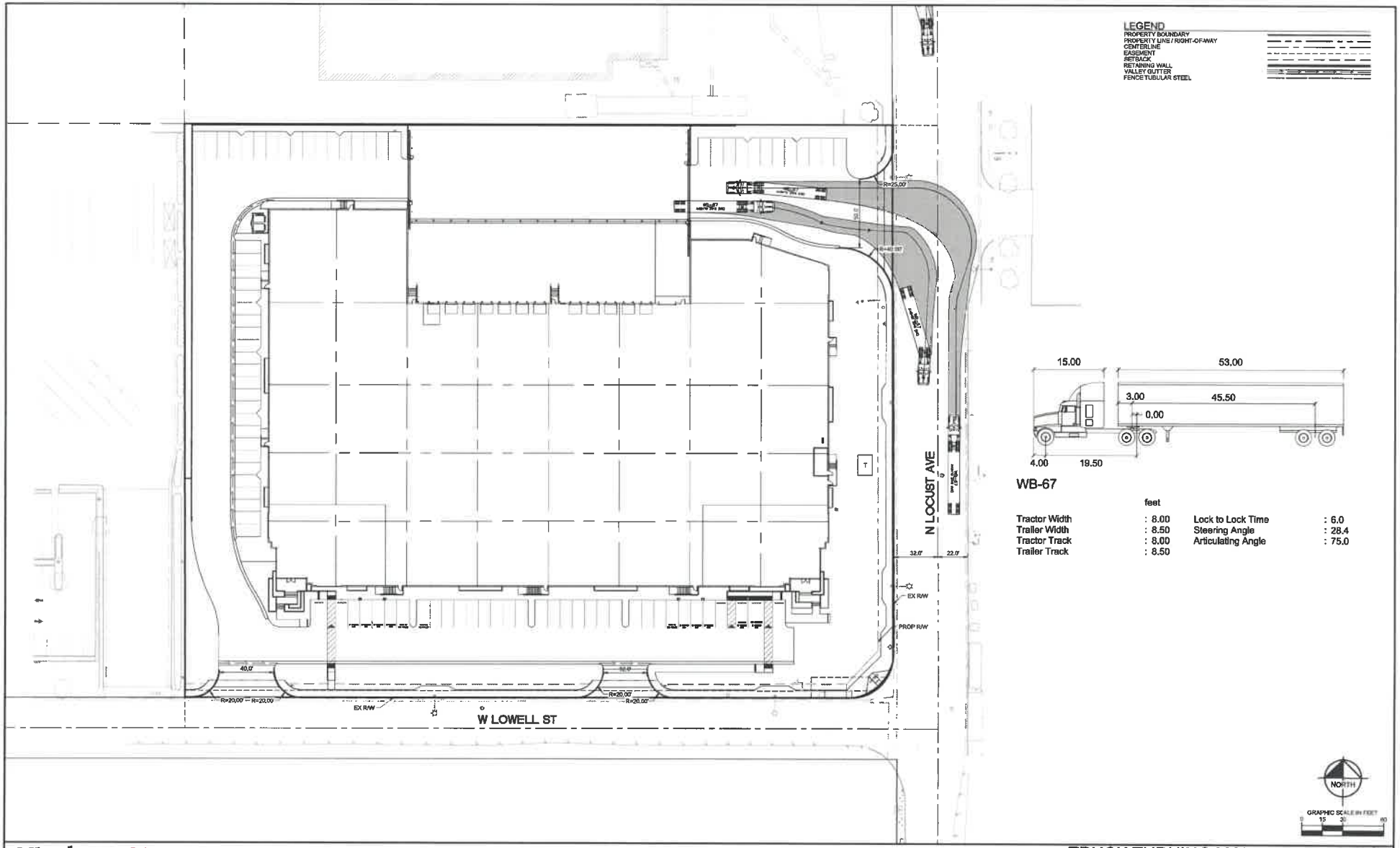
NTS



TYPICAL SECTION - W LOWELL ST

NTS

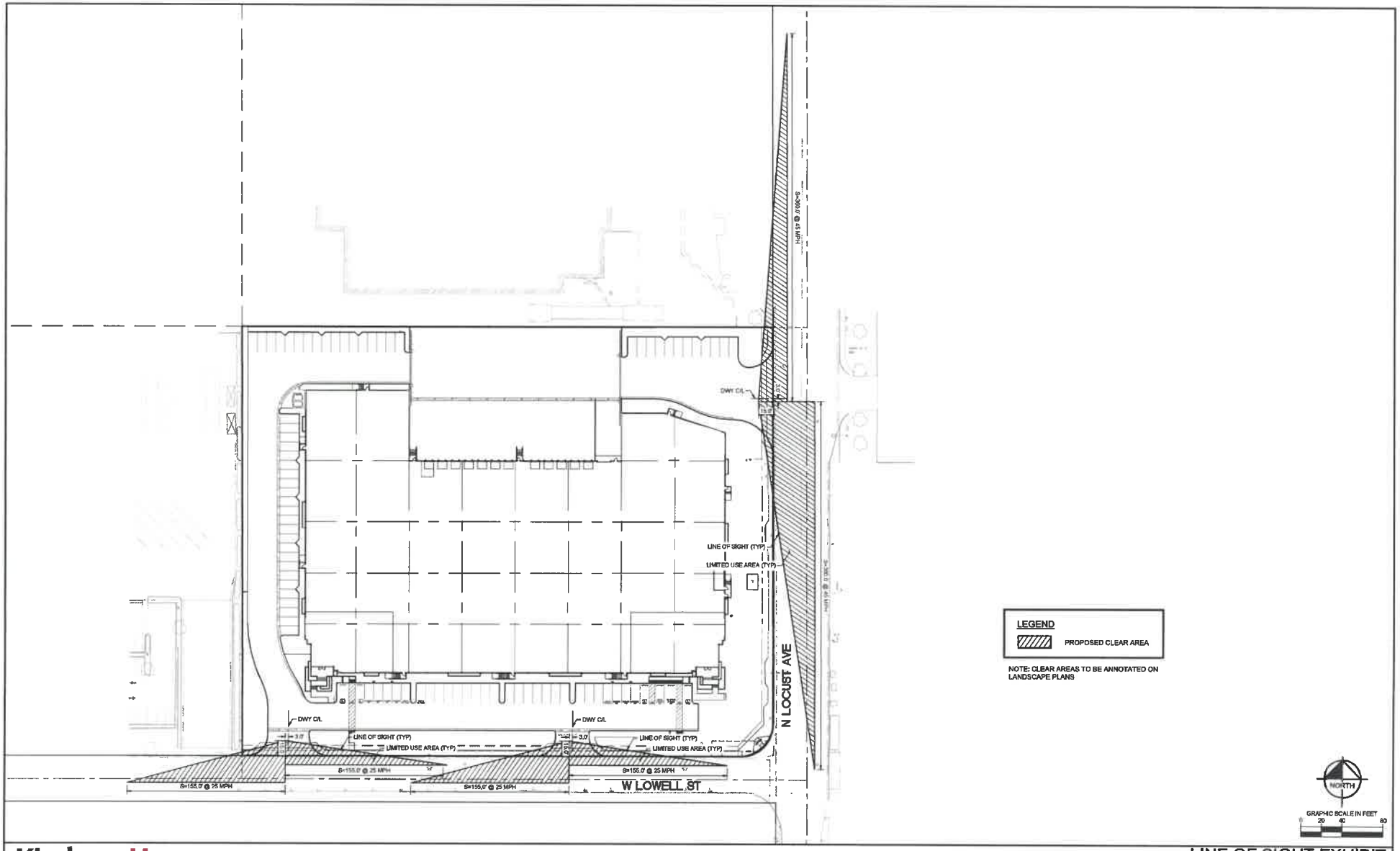
Attachment E – Truck Turn Exhibit



Kimley»Horn

TRUCK TURNING MOVEMENT EXHIBIT
THRIFTY LOCUST & LOWELL
RIALTO, CA

Attachment F – Line of Sight Exhibit



Kimley»Horn

LINE OF SIGHT EXHIBIT
THRIFTY LOCUST & LOWELL
RIALTO, CA

LOCUST AVENUE AND LOWELL STREET DEVELOPMENT PROJECT

Addendum to the City of Rialto Environmental Impact Report for the Rialto Airport Specific Plan (SCH No. 96071027)

Prepared By

Kimley-Horn and Associates, Inc.
1100 W. Town and Country Road, Suite 700
Orange, California 92868

Prepared For

City of Rialto
150 S. Palm Avenue
Rialto, California 92376

August 2022

Kimley»Horn

LOCUST AVENUE AND LOWELL STREET DEVELOPMENT PROJECT

ADDENDUM TO THE CITY OF RIALTO ENVIRONMENTAL IMPACT REPORT FOR THE RIALTO AIRPORT SPECIFIC PLAN (SCH NO. 96071027)

Prepared for	City of Rialto 150 S. Palm Avenue Rialto, California 92376
Prepared by	Kimley-Horn and Associates, Inc. 1100 West Town and Country Road, Suite 700 Orange, California 92868
Date	August 2022

This Page Intentionally Left Blank

Table of Contents

1 Introduction 1
1.1 Project Location 1
1.2 California Environmental Quality Act 1
1.3 Background 2
1.4 Conclusion 3
2 Description of Proposed Project 5
2.1 Project Setting and Location 5
2.2 Existing Land Use Designations 6
2.3 Project Objectives 6
2.4 Project Characteristics 11
2.5 Construction Activities 20
2.6 Intended Uses of the Addendum 20
3 Evaluation of Environmental Impacts 25
3.1 Aesthetics 26
3.2 Agricultural and Forestry Resources 30
3.3 Air Quality 32
3.4 Biological Resources 41
3.5 Cultural and Tribal Cultural Resources 44
3.6 Energy 47
3.7 Geology and Soils 52
3.8 Greenhouse Gas Emissions 59
3.9 Hazards and Hazardous Materials 66
3.10 Hydrology and Water Quality 71
3.11 Land Use and Planning 75
3.12 Mineral Resources 77
3.13 Noise 79
3.14 Population and Housing 89
3.15 Public Services 92
3.16 Recreation 96
3.17 Transportation 98
3.18 Utilities and Service Systems 104
3.19 Wildfire 112
4 Determination of Appropriate CEQA Documentation 113
5 Preparers 117
6 References 118

EXHIBITS

Exhibit 1: Regional Vicinity Map 7
Exhibit 2: Local Vicinity Map 9
Exhibit 3: Site Plan 13
Exhibit 4: Conceptual Exterior Elevations 15
Exhibit 5: Conceptual Landscaping Plan 17
Exhibit 6: Utility Plan 21
Exhibit 7: Water Quality Plan 23

TABLES

Table 2-1. Existing Land Uses 6
Table 2-2. Land Use Summary 11
Table 3.3-1: Construction-Related Emissions 34
Table 3.3-2: Operational Emissions 35
Table 3.3-3: Equipment-Specific Grading Rates 36
Table 3.3-4: Localized Significance of Construction Emissions 36
Table 3.3-5: Localized Significance of Operational Emissions 37
Table 3.6-1: Project and Countywide Energy Consumption 48
Table 3.8-1: Construction-Related Greenhouse Gas Emissions 63
Table 3.8-2: Project Greenhouse Gas Emissions 64
Table 3.13-1: Typical Construction Noise Levels 80
Table 3.13-2: Project Construction Noise Levels 82
Table 3.13-3: Typical Construction Equipment Vibration Levels 85
Table 3.17-1: Trip Generation 100
Table 3.18-1: WVWD Projected Water Supplies (AFY) 105
Table 3.18-2: Potable Water Demand 106
Table 3.18-3: WVWD Water Supply and Demand Comparison (AF) 106
Table 3.18-4: Single Dry Year Supply and Demand (AF) 107
Table 3.18-5: Multiple Dry Year Supply and Demand (AF) 107
Table 3.18-6: Estimated Wastewater Generation 108

APPENDICES

Appendix A Air Quality Assessment and Health Risk Assessment
Appendix B Energy Assessment
Appendix C Geotechnical Report
Appendix D Greenhouse Gas Emissions Assessment

Appendix E Phase I Environmental Assessment and Perchlorate Plume Map
Appendix F Drainage Report
Appendix G Preliminary Water Quality Management Plan
Appendix H Acoustical Assessment
Appendix I Traffic Scoping Agreement Memorandum

This Page Intentionally Left Blank

1 INTRODUCTION

The project applicant is requesting the City of Rialto's consideration of the approval of the Locust Avenue and Lowell Street Development Project (proposed Project), a 100,880-square-foot (sf) warehouse development on the northwest corner of Locust Avenue and Lowell Street.

1.1 Project Location

The project site is located in the northern area of the City of Rialto (City) in San Bernardino County (County), approximately one mile north of State Route (SR) 210. The project site is at the northwest corner of the intersection of Locust Avenue at Lowell Street. Vehicular access to the site is provided from driveways on Locust Avenue and Lowell Street. The site is bordered by a recycling center to the north; Lowell Street and vacant land designated for General Industrial uses to the south; Locust Avenue, a truck trailer storage yard, and an industrial warehouse to the east; and a manufacturing facility to the west. (See Exhibit 1: Regional Vicinity Map and Exhibit 2: Site Vicinity Map in Section 2).

1.2 California Environmental Quality Act

This Addendum has been prepared in accordance with the provisions of the California Environmental Quality Act (CEQA) (California Public Resources Code [PRC] §§21000 et seq.); the State CEQA Guidelines (Title 14, California Code of Regulations [CCR] §§15000 et seq.); and the rules, regulations, and procedures for implementing CEQA as set forth by the City of Rialto. Pursuant to the provisions of CEQA and the State CEQA Guidelines, Rialto is the Lead Agency charged with the responsibility of deciding whether to approve the proposed Project.

Section 15164(a) of the State CEQA Guidelines states that "the lead agency or a responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in PRC Section 21166 and Section 15162 calling for preparation of a subsequent EIR have occurred." Pursuant to Section 15162(a) of the State CEQA Guidelines, a subsequent Environmental Impact Report (EIR) or Negative Declaration is only required when:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

   (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

   (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

As part of its decision-making process, the City is required to review and consider whether the proposed Project would create new significant impacts or significant impacts that would be substantially more severe than those disclosed in the *Rialto Airport Specific Plan Environmental Impact Report* (Airport Specific Plan EIR). Additional CEQA review beyond this Addendum would be triggered if the proposed Project creates new significant impacts or impacts that are more severe than those disclosed in the Airport Specific Plan EIR such that major revisions to the Airport Specific Plan EIR would be required.

The following describes the requirements of an addendum, as defined by State CEQA Guidelines Section 15164:

(a) The lead agency or responsible agency shall prepare an Addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.

(b) An addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred.

(c) An addendum need not be circulated for public review but can be included in or attached to the Final EIR or adopted negative declaration.

(d) The decision making body shall consider the addendum with the final EIR prior to making a decision on the project.

(e) A brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR, the lead agency's findings on the project, or elsewhere in the record. The explanation must be supported by substantial evidence.

1.3 Background

The Rialto Airport Specific Plan (Airport Specific Plan) was adopted and the Rialto Airport Specific Plan Program EIR was certified by the Rialto City Council in November 1997. At that time, the Airport Specific Plan area included approximately 3,131 acres in northwest Rialto. As described in the Airport Specific Plan, the boundaries of the area were generally Baseline Road to the south and the City's corporate limits to the west. Much of the northern boundary was along Casa Grande Drive, with a small portion of the area (east of Locust Avenue) extending north to Riverside Avenue. The eastern boundary was east of Locust Avenue (between Maple Avenue and Locust Avenues) in the northern portion of the Specific Plan area, and along Cedar Avenue (south of Norwood Street) and Cactus Avenue (south of Route 30; now I-210). The Rialto Airport Specific was intended to provide a long-term strategy for the development of the airport and surrounding area.

On December 6, 2005, the Rialto City Council adopted resolutions declaring the intent to relocate the Rialto Airport operations to other nearby facilities. With the closure of the Rialto Airport, many of the assumptions for development in the Airport Specific Plan area were no longer applicable. On November 9, 2010, the Rialto City Council adopted the Renaissance Specific Plan and certified the Renaissance Specific Plan Program EIR. The approximately 1,439-acre Renaissance Specific Plan area is generally bordered by Casmalia Street to the north, Baseline Road to the south, Ayala Drive to the east, and Tamarind Avenue to the west. With the adoption of the Renaissance Specific Plan, the boundaries of the Airport Specific Plan area were modified to exclude the Renaissance Specific Plan area.

The remainder of the Airport Specific Plan continues to regulate the areas outside of the Renaissance Specific Plan area. The project site for the proposed Project is within the boundaries of the Airport Specific Plan area. The Airport Specific Plan EIR identified that the following topical areas would have a less than significant impact with the adoption of mitigation measures: Aesthetics, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use, Mineral Resources, Noise, Public Services, and Utilities. No significant impacts were identified for the topic of Recreation. With the implementation of mitigation measures, the Airport Specific Plan EIR found that the following topical areas would result in significant and unavoidable impacts: Air Quality and Transportation.

1.4 Conclusion

The Locust Avenue and Lowell Street Development Project Addendum to the Rialto Airport Specific Plan Program EIR finds that potential impacts associated with this proposed Project would be less than or the same as those described in the Airport Specific Plan EIR for buildout of the Specific Plan area. As discussed in this Addendum, these conclusions are supported by substantial evidence, including project-specific analyses of potential impacts.

Consistent with CEQA Guidelines Section 15162, based upon the analysis of potential environmental consequences anticipated to occur from implementation of the proposed Project as provided in Section 3, *Evaluation of Environmental Impacts*, the proposed Project would not result in any new or more severe impacts that were not disclosed, analyzed, and mitigated for in the Airport Specific Plan EIR. As demonstrated in this Addendum, the proposed Project's potential impacts would either be the same or less than those anticipated for the approved project as evaluated in the Airport Specific Plan EIR. In addition, there are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Airport Specific Plan EIR, nor has any new information regarding the potential for new or more severe significant environmental impacts been identified. Consistent with CEQA Guidelines Section 15162(a)(3)(C), no new information of substantial importance shows that mitigation measures or alternatives that were previously found not to be feasible or that are considerably different from those analyzed for the Airport Specific Plan EIR would substantially reduce one or more significant effects on the environment.

Therefore, in accordance with State CEQA Guidelines Section 15126 and Section 15164, this Addendum to the previously certified Airport Specific Plan EIR is the appropriate environmental documentation for the proposed Project. In taking action on any of the approvals, the decision-making body must consider the whole of the data presented in the Airport Specific Plan EIR, as augmented by this Addendum. Therefore, preparation of a subsequent EIR is not required and the appropriate CEQA document for the

proposed Project is this Addendum to the Airport Specific Plan EIR. No additional environmental analysis or review is required for the proposed Project. This document will be maintained in the administrative record files at the City of Rialto offices.

2 DESCRIPTION OF PROPOSED PROJECT

2.1 Project Setting and Location

The project site (Assessor Parcel Number [APN] 0239-192-12-0-000) is located in the City of Rialto, California. The City encompasses approximately 22 square miles in San Bernardino County. The site is in the northern area of the City, approximately one mile north of SR-210. Specifically, the project site is located at the northwest corner of the intersection of Locust Avenue at Lowell Street within the Rialto Airport Specific Plan (Airport Specific Plan) area. **Exhibit 1: Regional Vicinity Map** and **Exhibit 2: Site Vicinity Map** depict the project site in a regional and local context, respectively.

As proposed, the Locust Avenue and Lowell Street Development Project (Project or proposed Project) would allow for an industrial warehouse on 5.02 gross acres. The proposed Project is required to dedicate an 11-foot-wide area along the Locust Avenue project site frontage to allow for the future widening of Locust Avenue by the City.[1] Per the City of Rialto and the Airport Specific Plan, a ten-foot-wide Sidewalk and Public Utility Easement adjacent to the right-of-way along the Lowell Street project site frontage is required for public access, sidewalk, and public utilities. As such, the development area of the project site after the proposed dedication and easement would be 4.78 acres. Therefore, the size of the project site is referred herein as 4.78 acres.

There are no buildings on the project site. The site has been used since 2008/2009 for construction equipment storage. The project site is partially paved to provide a drive aisle from the gated driveway on Locust Avenue to the gated driveway on Lowell Street. The site is enclosed by concrete masonry walls along Locust Avenue and Lowell Street, as well as along the eastern property boundary. The property is separated from the property to the north by a combination of chain link fencing, wood fencing, and a concrete masonry wall. With the exception of the paved drive aisle, the remainder of the fenced enclosure is packed dirt. Security lighting is provided within the fenced area. Ornamental landscaping is provided along the project site frontage on Locust Avenue and Lowell Street. A sidewalk is located between the landscape area and the edge of curb. The sidewalk terminates on Lowell Street at the eastern property boundary. Light standards are located adjacent to the project site along Locust Avenue and Lowell Street. Overhead utility lines are also located along the project frontage on Locust Avenue. Vegetation is limited to ornamental landscaping along the street frontages. The on-site topography is generally flat, and elevations range from approximately 1,638 to 1,621 feet above mean sea level (msl), sloping from the northwest corner of the site to the southeast corner.

[1] Locust Avenue is classified in the General Plan as a secondary arterial road with an ultimate half-width right-of-way of 44 feet. In existing conditions, the existing half-width right-of-way is 33 feet and as such, the project is required to dedicate an additional 11 feet for compliance with the secondary arterial road classification.

Table 2-1: Existing Land Uses summarizes the land uses on and surrounding the project site, which predominantly consist of industrial and warehouse uses. Single-family residences are located further to the east.

Table 2-1. Existing Land Uses

Direction	Land Uses
Project Site	Developed property used for construction equipment storage
North	Plastics Recycling facility
South	Lowell Street and vacant land designated for General Industrial south of Lowell Street
East	Locust Avenue. A truck trailer storage yard and an industrial warehouse (trucking, rigging, and logistics solutions) east of Locust Avenue
West	Pipe manufacturing facility

2.2 Existing Land Use Designations

The City's General Plan Land Use Plan Map depicts the City's land use designations and indicates that the project site has a Business Park land use designation with a Specific Plan Overlay. The Business Park land use designation allows for a mix of commercial, office, research and development, laboratories, and light industrial uses.

The City's Zoning Map identifies the project site as Rialto Airport Specific Plan. The Airport Specific Plan was adopted in 1997. The Rialto Municipal Airport ceased operations in 2014 and the former airport property and much of the properties adjacent to the Rialto Municipal Airport were removed from the Rialto Airport Specific Plan and incorporated into the Renaissance Specific Plan, which was adopted by the City in 2010. The Rialto Airport Specific Plan serves as zoning for the remaining properties within the Specific Plan area. The Airport Specific Plan identifies the project site as General Manufacturing (I-GM). Development standards for the General Manufacturing (I-GM) zone are identified in Chapters 5.5 and 6.25 of the Rialto Airport Specific Plan.

2.3 Project Objectives

The Airport Specific Plan identified goals for the implementation of the development within the Specific Plan area.

Goal 1: A balanced development which provides for a variety of uses, as appropriate.

Goal 2: The market potential for the Specific Plan area maximized.

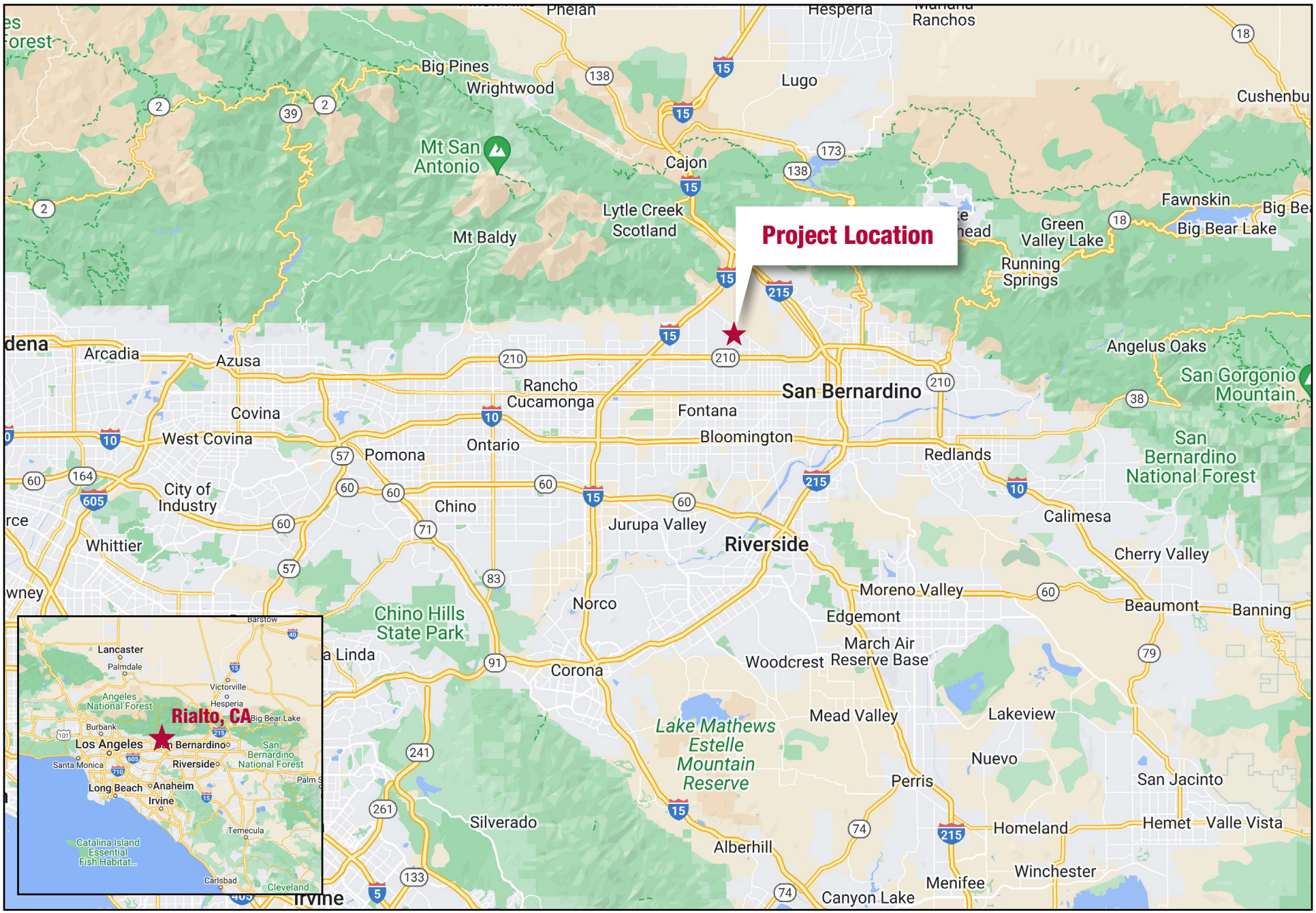
Goal 3: Adjacent land uses that are compatible with one another.

Goal 4: A workable and implementable plan.

Goal 5: Aesthetically pleasing development to enhance property values.

Goal 6: A safe and efficient circulation system within, and through, the study area.

Goal 7: Provision of public services and utilities to Specific Plan area developments.



Source: Google Maps, 2022

EXHIBIT 1: Regional Vicinity Map
Locust Avenue and Lowell Street Development Project

This Page Intentionally Left Blank



Source: Nearmap, 2022

EXHIBIT 2: Local Vicinity Map
Locust Avenue and Lowell Street Development Project

Kimley»Horr

This Page Intentionally Left Blank

Project objectives proposed by the Applicant are as follows:

Objective 1: Create a new quality industrial facility, consistent with the intent of the Rialto Airport Specific Plan and Rialto Airport Specific Plan EIR.

Objective 2: Improve the current aesthetics of the site. Replace an old, low value contractor yard facility with no visual appeal with a state of the art, contemporary facility with quality architecture and improved landscaped areas surrounding the facility.

Objective 3: Incorporate green technologies and construction best management practices in the design and construction of the facility, to reduce the impact on the environment relative to those contemplated at the time of the Specific Plan.

Objective 4: Bring new quality employers to the property, who will in turn create new jobs.

Objective 5: Bring additional economic benefit to the City of Rialto, by bringing substantial new investment to the City, increasing the property valuation and associated property tax rolls.

2.4 Project Characteristics

Site Development

The environmental analysis provided for this Addendum is based on the development of a 100,880-sf warehouse on a 4.78-acre project site. The warehouse building would be oriented north-to-south and would include 91,880 sf of warehouse space and 9,000 sf of ancillary office space, the latter on two levels, and 12 dock doors and one drive thru door on the north side of the building. The building would be rectangular with dimensions of approximately 412 feet wide (east-to-west) by 332 feet long (north-to-south); the maximum building elevation would be 35 feet. Employee parking and landscaping would be provided along the property boundaries and building frontages. Trucks and passenger vehicles would access the project site from three driveways; one on Locust Avenue and two on Lowell Street. A 14-foot wall east of the gated entry from the Locust Avenue driveway would screen views of the truck court from Locust Avenue. **Exhibit 3: Site Plan**, depicts the proposed development. **Table 2-2: Land Use Summary**, summarizes the proposed Project's characteristics.

Table 2-2. Land Use Summary

Site (sf)	Office Level 1 (sf)	Office Level 2 (sf)	Warehouse (sf)	Total Building (sf)	Dock Doors	Drive Thru Door	Automobile Parking Stalls	
							Required	Provided
208,131	4,500	4,500	91,880	100,880	12 doors	1	87	87

The proposed Project is currently planned as a "speculative project". Therefore, the future tenants of the building are not currently known. Without knowing who the future tenants will be, an exact number of future employees or hours of operation cannot be determined. Therefore, this Addendum and associated technical reports use approximate potential on-site employees, hours of operation, and vehicular traffic generation based on the Project's proposed square footage and use as a warehouse.

Architecture, Landscaping, and Lighting

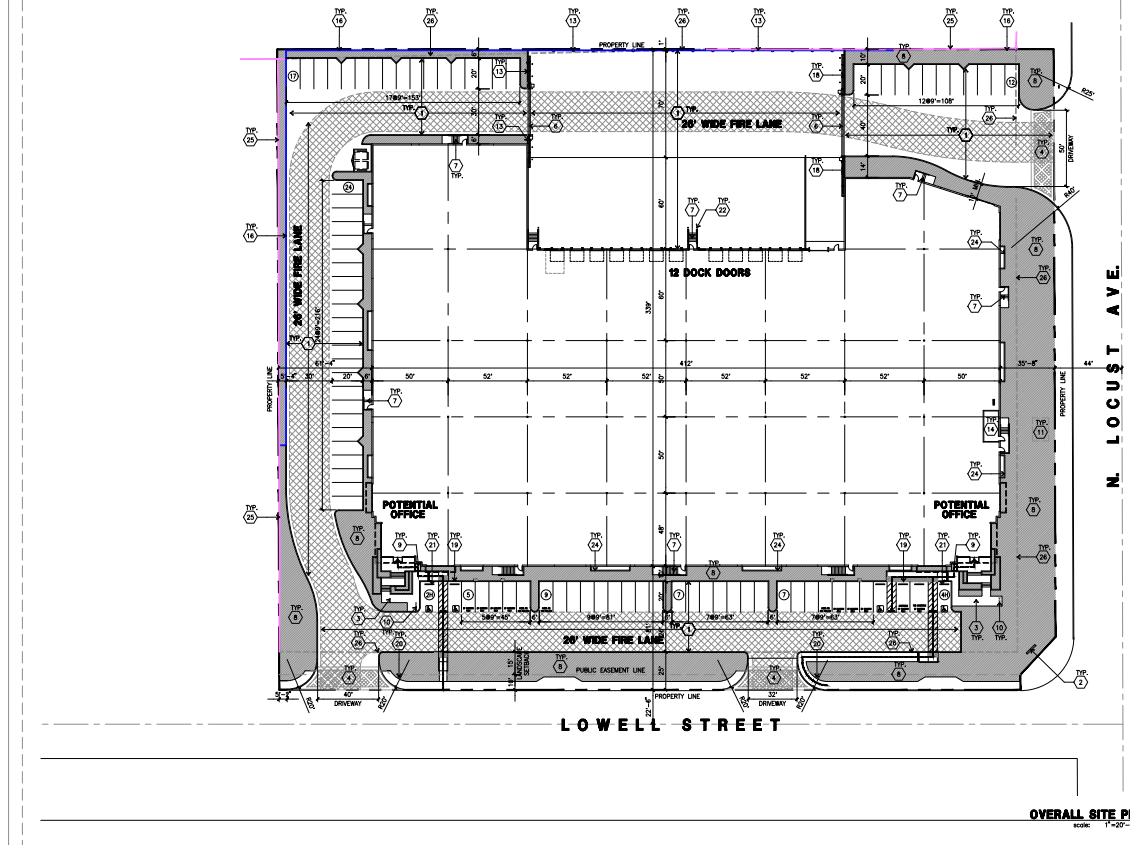
As shown in **Exhibit 4: Conceptual Exterior Elevations**, the conceptual architectural design for the project assumes concrete tilt-up panels with architectural treatments, such as panel reveals and articulation, to provide visual interest to the building facades. The exterior elevations would be white and shades of grey accents. The southwest and southeast corners of the building at its entrance would have additional architectural articulation through the use of windows with blue glazing and black anodized mullions, full building height tile (simulating wood), as well as metal canopies. Rooftop screening of mechanical equipment is assumed as a part of the warehouse building.

A 12-foot-high solid material screen wall would be constructed on either side of the on-site drive aisle accessed from Locust Avenue. In compliance with the City of Rialto Municipal Code (Municipal Code) Section 18.112.050(E), the wall is provided to screen trucks and trailers within the trailer court from public views.

Exhibit 5: Conceptual Landscape Plan depicts the proposed landscaping plan for the project site. Of the 4.78-acre project site, approximately 29,218 sf (or approximately 14%) of the project site would be landscaped. The Airport Specific Plan identifies an average minimum width of landscaping from the property line for properties designated I-GM would be 20 feet; the proposed Project would exceed this average. Municipal Code Section 18.61.250 and Section 18.61.270, address landscaping and buffering for land uses in the City and Commercial and Industrial uses, respectively, including the City's requirements for the efficient use of water in the landscape design plan.

Existing on-site landscaping would be removed and replaced. Landscaping would be provided along the Locust Avenue and Lowell Avenue frontages, along a portion of the western and northern project boundaries, as well as adjacent to the warehouse building and the surface parking area. Landscaping along Locust Avenue and Lowell Avenue would include a mix of trees (blue palo verde, desert willow, London plane, Chilean mesquite) and a mix of shrubs and groundcover plants. The driveway entrances on both roadways would have stamped decorative concrete and be bordered by Chilean mesquite trees. Landscaping adjacent to the northern property boundary would be a mix of Brisbane box trees, Chilean mesquite trees, as well as shrubs and groundcover. Landscaping along the western property boundary would include shrubs and groundcover, and a desert willow and Chilean willow trees. Adjacent to the building and in the surface parking area, landscaping would be a mix of shrubs, groundcover, and Brisbane box trees.

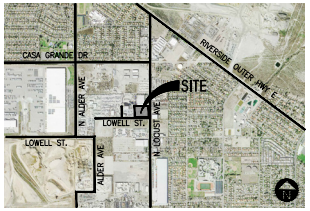
Site lighting would be used to provide adequate lighting for circulation, safety, and security. The proposed Project would include outdoor security lighting on the building and in the parking lots, which would be directed downward onto the project site and installed in accordance with applicable City ordinances, including Municipal Code Section 18.61.140, which requires that lighting not exceed one footcandle at any nonresidential property line. The Project assumes that night lighting would be provided seven days per week.



OVERALL SITE PLAN

SCALE: 1" = 30'-0"

VICINITY MAP



PROJECT DATA

SITE AREA	
In s.f. (Less pedestrian easement)	208,131 s.f.
In acres	4.78 ac
BUILDING AREA	
Office	4,500 s.f.
Office 2nd floor	4,500 s.f.
Warehouse	91,880 s.f.
TOTAL	100,880 s.f.
COVERAGE	48.5%
AUTO PARKING REQUIRED	
Office: 1/250 s.f.	36 stalls
Whse: 1st 10'k @ 1/1000 s.f.	10 stalls
w hse: above 10'k @ 1/2000 s.f.	41 stalls
TOTAL	87 stalls
AUTO PARKING PROVIDED	
Standard (9' x 20')	87 stalls
ZONING ORDINANCE FOR CITY	
Zoning Designation - Rialto Airport Specific Plan - I-GM (General Manufacturing)	
MAXIMUM BUILDING HEIGHT ALLOWED	
Height - 35' w ith 1:1 Setback Ratio	
MAXIMUM FLOOR AREA RATIO	
FAR - 3:1	

SETBACKS

Building	Landscape
Locust Ave/Front - 25'	15'
Low ell St/Side - 15'	15'
Rear - 0'-15'	0

PROPERTY OWNER

THRIFTY OIL CO.
13116 IMPERIAL HIGHWAY
SANTA FE SPRINGS CA 90670
TEL: 562-921-3581
ATTN: STEPHANE WANDEL

ADDRESS OF THE PROPERTY

TBD

ASSESSOR'S PARCEL NUMBER

0232-192-12-0-000

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF RIALTO, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL NO. 5 OF PARCEL MAP NO. 7173, IN BERNARDINO, STATE OF CALIFORNIA, AS PER INCLUSIVE OF PARCEL MAPS, IN THE OFFICE THE CITY OF RIALTO, COUNTY OF SAN MAP RECORDED IN BOOK 77 PAGES 64 TO 68 OF THE COUNTY RECORDER OF SAID COUNTY.

APN: 0239-192-12-0-000

ZONING

ZONING DESIGNATION – RIALTO AIRPORT SPECIFIC PLAN
– I-GM (GENERAL MANUFACTURING)

APPLICANT

THRIFTY OIL CO.
13116 IMPERIAL HIGHWAY
SANTA FE SPRINGS CA 90670
TEL: 562-921-3581
ATTN: STEPHANE WANDEL

APPLICANT'S REPRESENTATIVE

HPA, INC.
18831 BARDEEN AVE SUITE 100
IRVINE CA 92612
TEL: 949-862-2137
ATTN: JOSEPH KIM

SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONC. PAVEMENT.
2. FUTURE MONUMENT SIGN
3. CONCRETE WALKWAY
4. DRIVEWAY APRONS TO BE CONSTRUCTED PER "L" DRAWINGS.
5. 5'-6"X5'-6"X4" MIN. THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. SLOPE TO BE 1/4" : 12" MAX. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY W/ 1/20 MAX. AS REQ. BY CITY INSPECTOR.
6. PROVIDE METAL, MANUAL OPERATED GATES W/ KNOX-PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
7. EXTERIOR CONC. STAIR.
8. LANDSCAPE. SEE "L" DWGS.
9. ACCESSIBLE LIFT.
10. BIKE RACK.
11. APPROXIMATE LOCATION OF TRANSFORMER.
12. NOT USED.
13. 8'H WROUGHT IRON FENCE
14. ELECTRICAL ROOM
15. SITE LIGHT FIXTURE
16. PROPOSED RETAINING WALL.
17. TRASH ENCLOSURE PER CITY STANDARD.
18. 12'H CONCRETE TILT SCREEN WALL
19. HANDICAPPED PARKING STALL SIGN
20. HANDICAPPED ENTRY SIGN
21. PRE-CAST CONC. WHEEL STOP
22. CONC. FILLED GUARD POST "6 DIA. U.N.O. 42" H.
23. EMPLOYEE BREAK AREA WITH TRELLIS
24. NON-STRUCTURAL ARCHITECTURAL TREATMENT WITH SMOOTH PLASTER FINISH
25. EXISTING RETAINING WALL TO REMAIN.
26. EXISTING RETAINING WALL TO BE DEMOLISHED

SITE LEGEND

- LANDSCAPED AREA
- CONCRETE PAVING SEE "C" DRWGS. FOR THICKNESS
- STANDARD PARKING STALL (9' X 20')
- HANDICAP PARKING STALL (12' X 20')
- 26' FIRE LANE.
- PROPERTY LINE
- PATH OF TRAVEL

SITE PLAN GENERAL NOTES

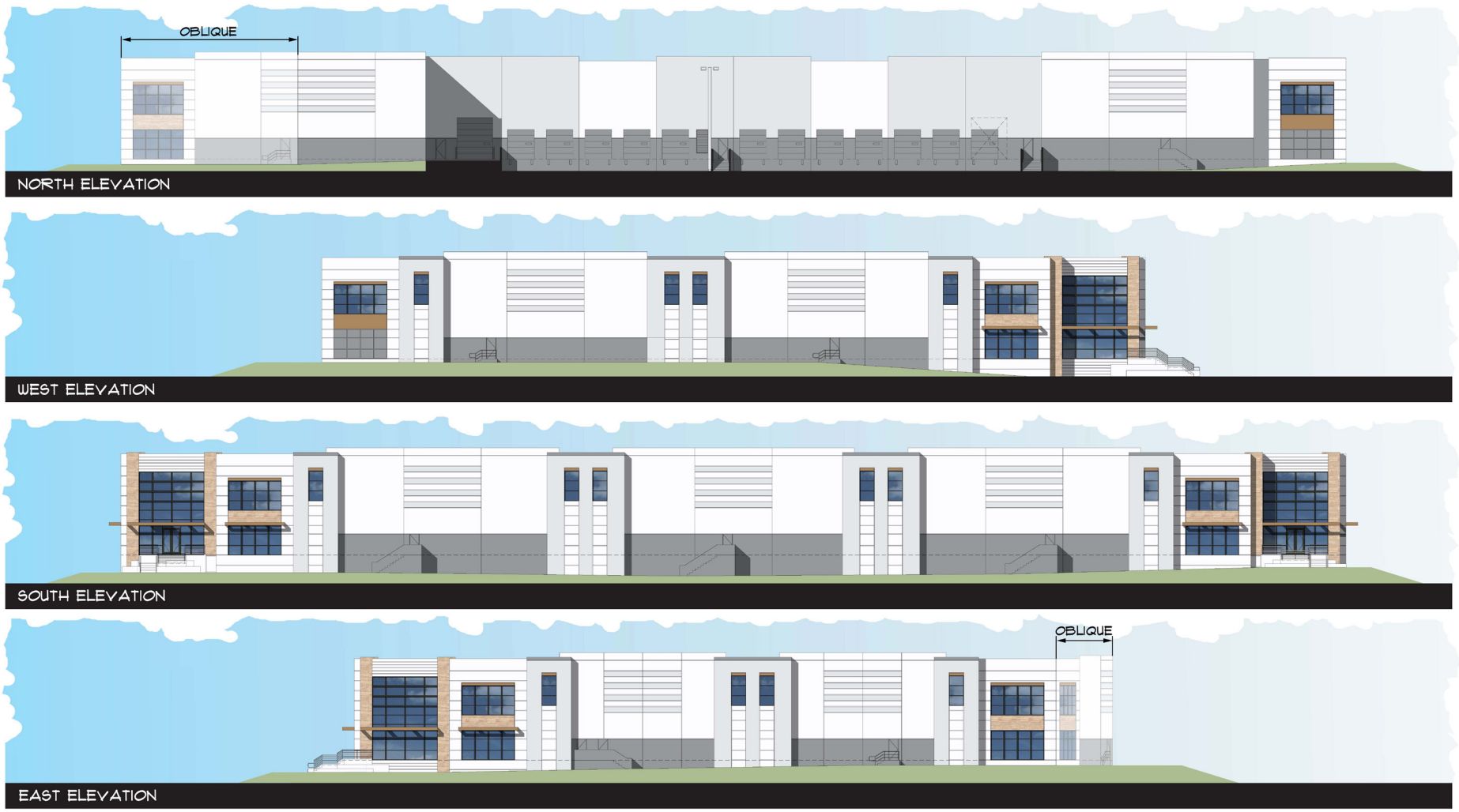
1. THE SOILS REPORT PREPARED BY _____ SHOULD BE A PART OF THESE CONTRACT DOCUMENTS.
2. IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE.
3. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINE U.N.O.
4. SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES. DETAILS ON SHEET AD.1 ARE MINIMUM STANDARDS.
5. THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM, PRIOR TO INSTALLATION & AT LEAST 60 DAYS BEFORE BLDG. COMPLETION.
6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
9. SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.
10. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY W/ 1:20 MAX. SLOPE. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4". SEE "L" DRAWINGS FOR FINISH.
11. PROVIDE TWO FIRE HYDRANT ON THE SITE. FINAL LOCATION WILL DETERMINATE IN DURING SUBMITTAL.
12. PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.
13. CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND IRRIGATION OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
14. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
15. NOT USED
16. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
17. NOT USED.
18. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB
19. APPROVED CONCEPTUAL LANDSCAPE PLAN PRIOR TO GRADING PERMIT

OFFICIAL USE ONLY

Source: HPA Architecture

EXHIBIT 3: Site Plan
Locust Avenue and Lowell Street Development Project

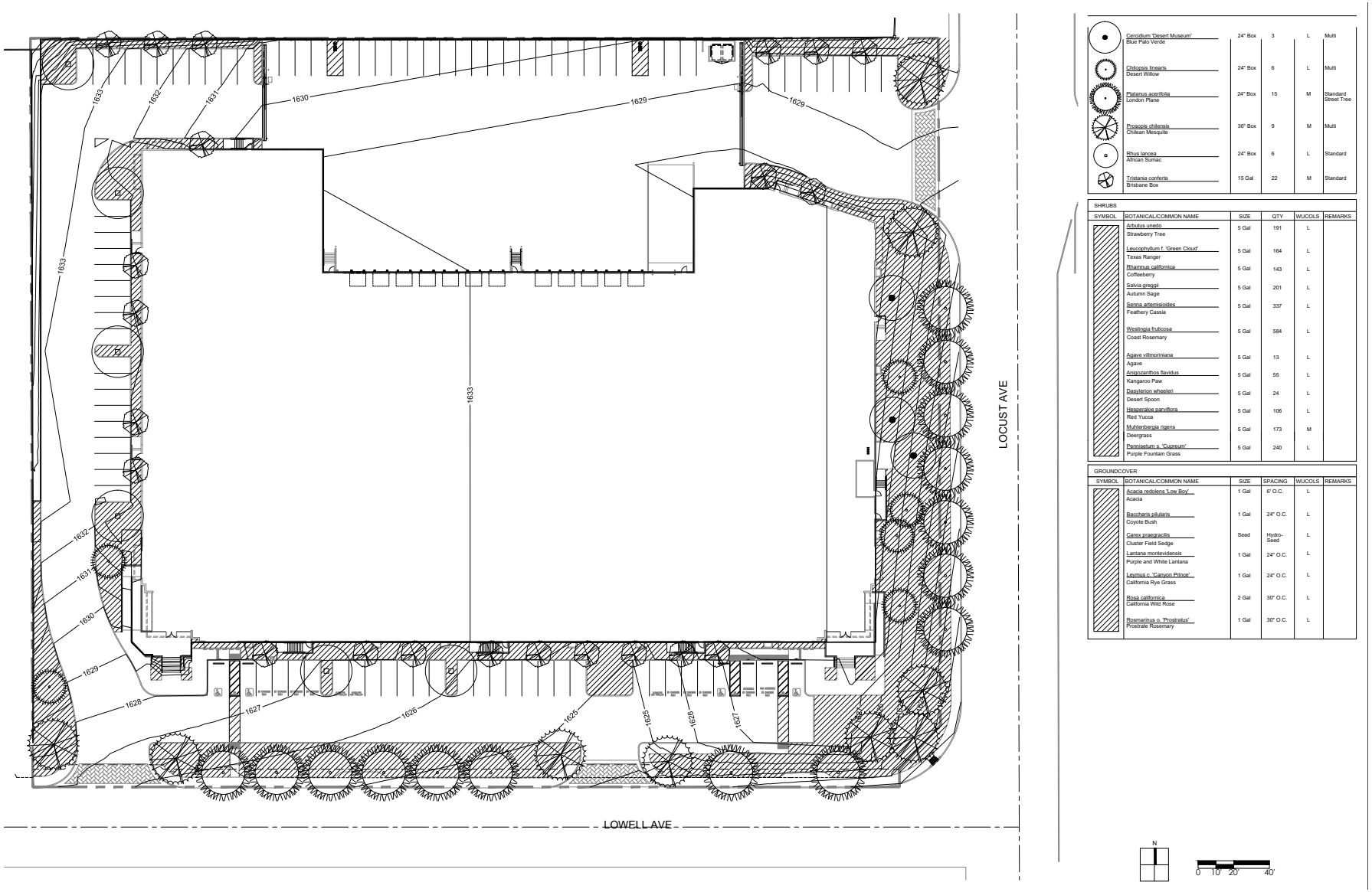
This Page Intentionally Left Blank



Source: HPA Architecture

EXHIBIT 4: Conceptual Exterior Elevations
Locust Avenue and Lowell Street Development Project

This Page Intentionally Left Blank



Cercidium 'Desert Museum' Blue Palo Verde	24" Box	3	L	Multi	
Chilopsis linearis Desert Willow	24" Box	6	L	Multi	
Platanus acerifolia London Plane	24" Box	15	M	Standard Street Tree	
Prosopis chilensis Chilean Mesquite	36" Box	9	M	Multi	
Rhus lancea African Sumac	24" Box	6	L	Standard	
Tristania conferta Brisbane Box	15 Gal	22	M	Standard	

SHRUBS

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	REMARKS
	Arbutus unedo Strawberry Tree	5 Gal	191	L	
	Leucophyllum f. 'Green Cloud' Texas Ranger	5 Gal	164	L	
	Rhamnus californica Coffeeberry	5 Gal	143	L	
	Salvia greggii Autumn Sage	5 Gal	201	L	
	Senna artemisioides Feathery Cassia	5 Gal	337	L	
	Westringia fruticosa Coast Rosemary	5 Gal	584	L	
	Agave villmoriniana Agave	5 Gal	13	L	
	Anigozanthos flavidus Kangaroo Paw	5 Gal	55	L	
	Dasylerion wheeleri Desert Spoon	5 Gal	24	L	
	Hesperaloa parviflora Red Yucca	5 Gal	106	L	
	Muhlenbergia rigens Deergrass	5 Gal	173	M	
	Pennisetum s. 'Cupreum' Purple Fountain Grass	5 Gal	240	L	

GROUNDCOVER

SYMBOL	BOTANICAL/COMMON NAME	SIZE	SPACING	WUCOLS	REMARKS
	Acacia redolens 'Low Boy' Acacia	1 Gal	6' O.C.	L	
	Baccharis pilularis Coyote Bush	1 Gal	24" O.C.	L	
	Carex praegracilis Cluster Field Sedge	Seed	Hydro-Seed	L	
	Lantana montevidensis Purple and White Lantana	1 Gal	24" O.C.	L	
	Leymus c. 'Canyon Prince' California Rye Grass	1 Gal	24" O.C.	L	
	Rosa californica California Wild Rose	2 Gal	30" O.C.	L	
	Rosmarinus o. 'Prostratus' Prostrate Rosemary	1 Gal	30" O.C.	L	

Source: Hunter Landscape

EXHIBIT 5: Conceptual Landscaping Plan
Locust Avenue and Lowell Street Development Project

This Page Intentionally Left Blank

Site Access and Parking

The Project would have three points of access: one driveway on Locust Avenue near the northern boundary of the project site, and two driveways on Lowell Street. The Locust Avenue driveway would be 50 feet wide, unsignalized, and would provide full movement access for truck and passenger vehicles to the project site. The eastern 32-foot-wide driveway on Lowell Street would be unsignalized and would provide full movement access for passenger vehicles into the surface parking lot area. The western 40-foot-wide driveway on Lowell Street would be unsignalized and would provide full movement access for trucks and passenger vehicles to the site. Drive aisles along the northern, southern and western frontages would range from 26 to 40 feet in width.

The warehouse development requires, and would provide, 87 passenger vehicle parking stalls, inclusive of standard parking stalls, Americans with Disabilities (ADA) stalls, clean air/van pool/electric vehicle (EV) parking stalls, and electric vehicle charging "ready" stalls. In compliance with Section 18.58.030 of the City's Municipal Code, the Project would provide 12 dock doors, more than the minimum three loading spaces required. Due to the smaller scale of the warehouse building, the operator would likely not maintain their own truck trailer fleets and would use dock door locations for truck parking as needed.

Omnitrans provides public transportation throughout San Bernardino County, including the City of Rialto. There are several transit stops near the project site on Casa Grande Drive and Locust Avenue. The nearest transit stop is directly east of the project site along Locust Avenue on the Route 22 line.

Utility Infrastructure

Project implementation would require construction of new on-site utility infrastructure. The Project would connect utilities to existing utility infrastructure in adjacent roadways, with the final sizing and design of on-site facilities occurring during final building design and plan check.

Water and Sewer. The project site is within the service area of West Valley Water District for the provision of water; sewer treatment is provided by the City of Rialto. The proposed Project would connect to the existing municipal water system and the existing sewer infrastructure in Locust Avenue and Lowell Street; see **Exhibit 6: Utility Plan**.

Drainage and Water Quality. As depicted on **Exhibit 7: Water Quality Plan**, the Project's proposed drainage and water quality features for the project site. Proposed drainage improvements would include two on-site underground infiltration basins. One basin would be located along the project site frontage along Lowell Street between the two proposed driveways. One basin would be located in truck trailer lot on the north side of the project site. The proposed basins would both treat and detain storm water to minimize the peak flow rates by infiltrating all captured runoff from the project site. The project's 100-year overflows would be discharged into the existing 102-inch reinforced concrete pipe storm drain in Locust Avenue.

Dry Utilities and Solid Waste Management. Southern California Edison (SCE) provides electrical power to the area, inclusive of the project site and the Southern California Gas Company (SoCalGas) provides natural gas to the area. The proposed Project would connect to existing utility lines, with new electrical and communication utility lines placed underground along the project site frontage. The City of Rialto's Waste Management Office provides environmental services to City residents and businesses. The Waste Management Office oversees the City's refuse and recycling service contract provided by Burrtec Disposal.

2.5 Construction Activities

Project construction is anticipated to begin in fall 2022 with a construction duration of approximately nine months. Construction would occur in a single phase. Based on information provided by the Applicant, total excavation is anticipated to require 16,187cubic yards (cy) of cut and 7,794 cy of fill, with approximately 9,200 cy of soil to be exported.

2.6 Intended Uses of the Addendum

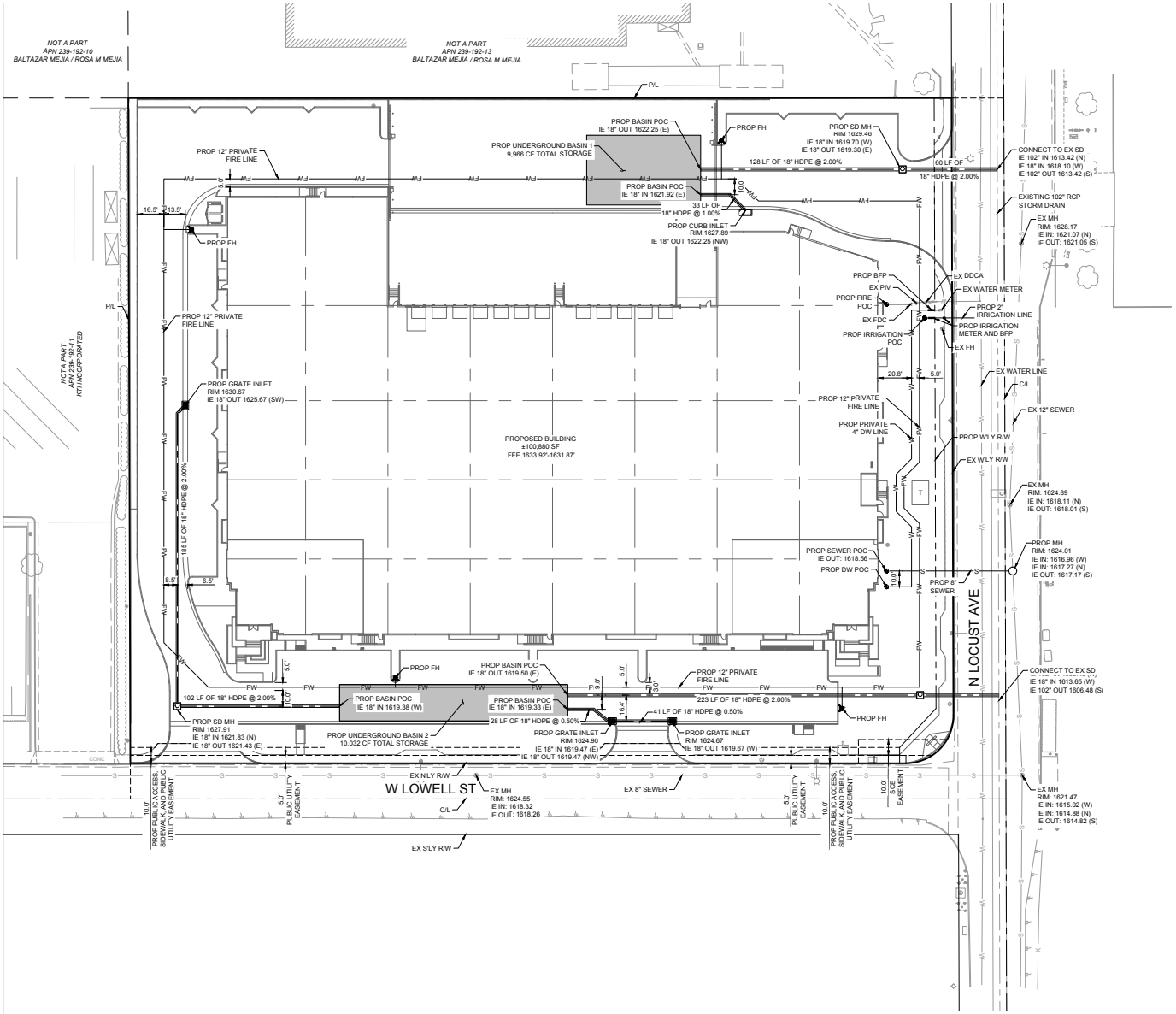
City of Rialto

The City of Rialto is the Lead Agency as set forth in CEQA Section 21067 and is responsible for reviewing and approving the Locust Avenue and Lowell Street Development Project. The City of Rialto Planning Commission will consider the following discretionary approvals for the Project:

- **Conditional Development Permit No. 2021-0040** to allow the development of a warehouse, which is considered a conditionally permitted use in industrial zones within the City.
- **Precise Plan of Design No. 2021-0055** for the development and operation of a 100,880-sf warehouse building and associated loading area, paving, screening, landscaping, lighting, storm water retention, etc. on 4.78 acres (APN 0239-192-12-0-000) located at the northwestern corner of the Locust Avenue at Lowell Street intersection within the General Manufacturing (I-GM) zone of the Rialto Airport Specific Plan. PPD No. 2021-0055 includes a right-of-way easement along the Lowell Avenue project site frontage.

Responsible Agencies

- **Santa Ana Regional Water Quality Control Board (RWQCB):** Issuance of a National Pollution Discharge Elimination System (NPDES) Permit and Construction General Permit.



LEGEND

PROPERTY BOUNDARY	
PROPERTY LINE / RIGHT-OF-WAY	
CENTERLINE	
EASEMENT	
SETBACK	
PROPOSED CONTOUR	1390
EXISTING CONTOUR	1390
GRADE BREAK	GB GB
RETAINING WALL	
VALLEY GUTTER	
FENCE TUBULAR STEEL	
STORM LINE	
SEWER	S S
WATER	W W
FIRE WATER	FW FW
EX. BLOCK WALL	
STORM DRAIN MANHOLE	
SEWER MANHOLE	S
POINT OF CONNECTION	
BACKFLOW PREVENTOR	
FIRE HYDRANT	
FIRE DEPARTMENT CONNECTION	
POST INDICATOR VALUE	
METER	
CURB INLET	
GRATE INLET	

ABBREVIATIONS

AC	ACRES	GB	GRADE BREAK
APN	ASSESSOR'S PARCEL NUMBER	IE	INVERT ELEVATION
BLDG	BUILDING	LP	LOW POINT
BW	BOTTOM OF WALL	MH	MANHOLE
C&G	CURB AND GUTTER	P/V	POST INDICATOR VALVE
CON	CONCRETE	PL	PROPERTY LINE
CU. YD	CUBIC YARD	POC	POINT OF CONNECTION
DCDA	DOUBLE CHECK DETECTOR ASSEMBLY	PROP	PROPOSED
E'LY	EASTERLY	PVMT	PAVEMENT
EG	EXISTING GRADE	R/W	RIGHT-OF-WAY
ESMT	EASEMENT	RET	RETAINING
EX	EXISTING	S/W	SIDEWALK
FDC	FIRE DEPARTMENT CONNECTION	SD	STORM DRAIN
FF	FINISHED FLOOR ELEVATION	SF	SQUARE FEET
FG	FINISHED GRADE	TC	TOP OF CURB
FH	FIRE HYDRANT	TW	TOP OF WALL
FL	FLOW LINE	TYP	TYPICAL
FS	FINISHED SURFACE	W'LY	WESTERLY
FW	FIRE WATER		

UTILITY INFORMATION

STORM:	SB COUNTY DEPT. OF PUBLIC WORKS	(909) 387-7910
SEWER:	CITY OF RIALTO WATER SERVICES	(909) 820-2546
TELECOMM:	AT&T	(510) 645-2929
WATER:	WESTERN VALLEY WATER DISTRICT	(909) 875-1804
ELECTRIC:	SOUTHERN CALIFORNIA EDISON	(800) 611-1911
GAS:	SOUTHERN CALIFORNIA GAS	(800) 423-1391

NORTH

GRAPHIC SCALE IN FEET
0 15 30 60

EXHIBIT 6: Utility Plan

Locust Avenue and Lowell Street Development Project

Kimley»Horn

This Page Intentionally Left Blank

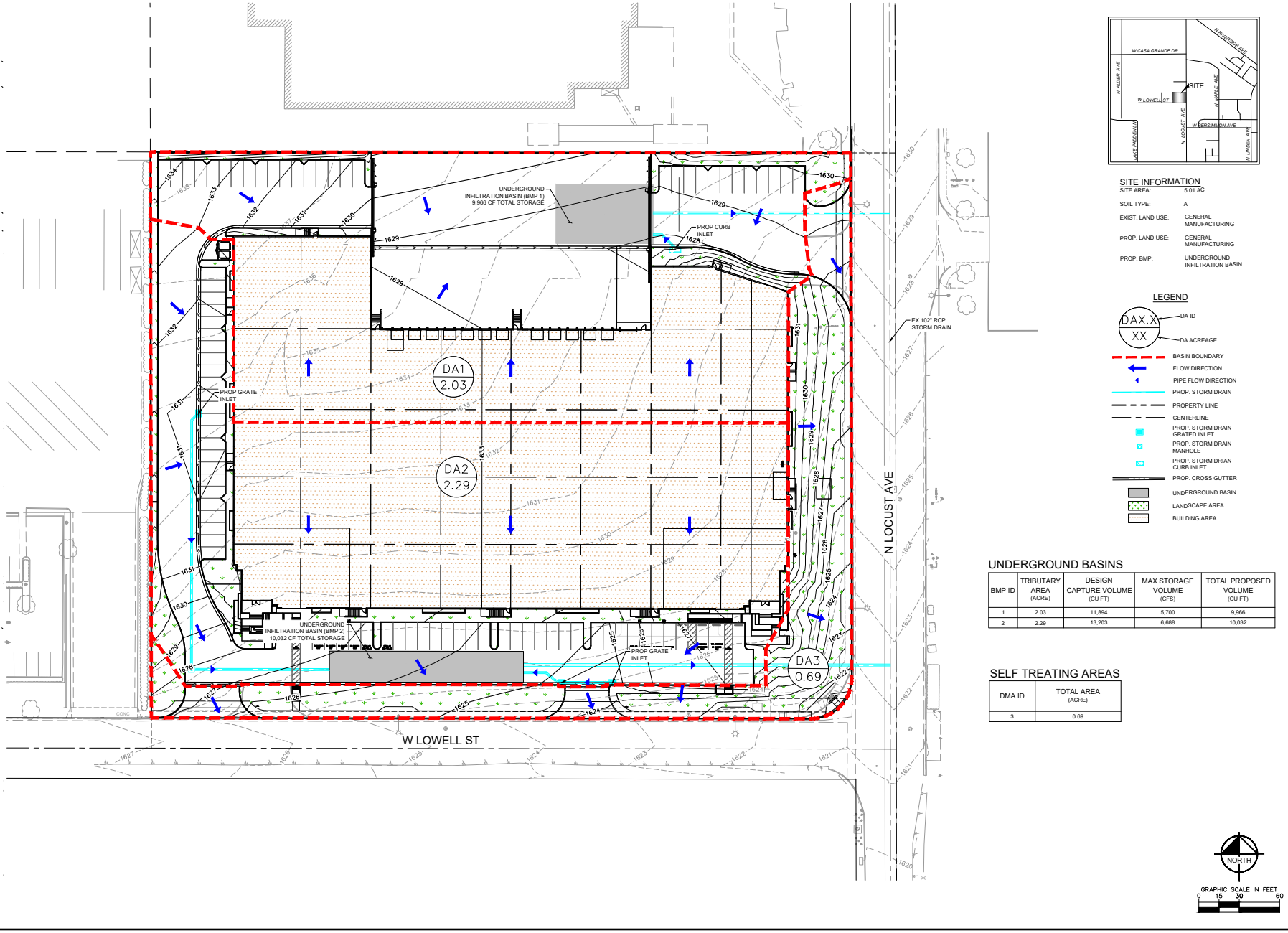


EXHIBIT 7: Water Quality Plan

Locust Avenue and Lowell Street Development Project

This Page Intentionally Left Blank

3 EVALUATION OF ENVIRONMENTAL IMPACTS

The scope of the City's review of the proposed Locust Avenue and Lowell Street Project is governed by provisions set forth in CEQA and the State CEQA Guidelines (Title 14, CCR §§15000 et seq.). This review is limited to evaluating the environmental effects associated with the proposed Project to the environmental effects of the Rialto Airport Specific Plan as set forth in the Rialto Airport Specific Plan EIR. This Addendum also reviews new information, if any, of substantial importance that was not known and could not have been known with the exercise of reasonable due diligence at the time the Rialto Airport EIR was certified. This evaluation includes a determination as to whether the changes proposed for the Project would result in any new significant impacts or a substantial increase in a previously identified significant impact.

Although State CEQA Guidelines Section 15164 does not stipulate the format or content of an Addendum, the topical areas in the CEQA Guidelines environmental checklist were used as guidance for this Addendum. This comparative analysis provides the City with the factual basis for determining whether any changes in the Project, any changes in circumstances, or any new information since the Rialto Airport Specific Plan EIR was certified would require additional environmental review or preparation of a Subsequent EIR or Supplemental EIR.

As previously discussed, pursuant to PRC Section 21166 and State CEQA Guidelines Section 15162, when an EIR has been previously certified for a project, no subsequent or supplemental EIR shall be prepared for the project unless the lead agency determines that one or more of the following three conditions are met: changes in the proposed Project result in new or substantially more severe impacts than were disclosed in the previous EIR; changes in the circumstances surrounding the project result in new or substantially more severe impacts than were disclosed in the previous EIR; or new information has come to light showing that new or substantially more severe impacts than were disclosed in the previous EIR.

3.1 Aesthetics

Threshold (a) Would the project have a substantial adverse effect on a scenic vista?

Threshold (b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

Threshold (c) Would the project conflict with applicable zoning and other regulations governing scenic quality?

Threshold (d) Would the project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Summary of Impacts Identified in the Airport Specific Plan EIR

The Initial Study for the Airport Specific Plan EIR noted that there were no scenic vistas or scenic highways within Specific Plan area. The Airport Specific Plan EIR characterized the Airport Specific Plan area as vacant property often littered with debris and not maintained resulting in visual blight. The area lacks continuity in signage, streetscape treatments, pedestrian environment, and a sense of place. The Airport Specific Plan EIR determined that the conversion of open space to urban uses would alter views in the area; however, implementation of the Design Guidelines and Development Standards in the Airport Specific Plan would ensure aesthetic quality of development. The Airport Specific Plan EIR includes Mitigation Measure 5.14-1 that requires the review of conformance with the City's policies and guidelines to reduce potential impacts to a less than significant level. The Airport Specific Plan also found that implementation of the Specific Plan would introduce new sources of light and glare. Airport Specific Plan EIR Mitigation Measure 5.14-2 requiring a lighting plan would ensure that lighting is shielded to protect adjacent residential uses in the evening hours. The Airport Specific Plan EIR notes that ensuring that new projects conform with City regulations, policies and guidelines. and the Development Regulations and Design Guidelines in the Airport Specific Plan that address visual quality and scenic resources, would reduce potential aesthetic impacts to a less than significant level and create beneficial impacts.

Project-Specific Analysis and Significance Determination: No new impacts; no substantial change from previous analysis.

The proposed Project would allow for an industrial warehouse development. The project site is located in a predominately industrial area. The land uses bordering the project site consist of a plastics recycling facility to the north; Lowell Street and vacant land designated for General Industrial uses to the south; Locust Avenue, a truck trailer storage yard, and an industrial warehouse to the east; and a manufacturing facility to the west. Residential development is located approximately 735 feet east of the project site, with Locust Ave and several industrial parcels between the project site and the residential area. The residential area is accessed from North Maple Avenue.

With respect to scenic vistas, the General Plan encourages the protection of scenic resources and views of the San Gabriel and San Bernardino Mountains, and the La Loma Hills, Jurupa Hills, Box Spring Mountains, Moreno Valley, and Riverside by limiting building heights[2]. The Initial Study for the Airport Specific Plan EIR noted that there were no scenic vistas or scenic highways within Specific Plan area.

[2] City of Rialto. (2010). *Rialto General Plan.* https://www.yourrialto.com/DocumentCenter/View/1494/2010-General-Plan. Accessed February 28, 2022.

As noted in the Airport Specific Plan EIR, there are no State scenic highways adjacent to or proximate to the project site[3] nor is it visible from any officially designated or eligible scenic highway. Additionally, there are no rock outcroppings, historic buildings, or any other scenic resources on the project site.

With respect to zoning and other regulations governing scenic quality, the Airport Specific Plan identifies the project site as General Manufacturing (I-GM). Development standards for the General Manufacturing zone are identified in Chapters 5.5, Non-Residential, and 6.2.5, Industrial (I-AR, I-PID and I-GM), of the Airport Specific Plan. Title 18 of the Municipal Code functions as the City's Zoning Ordinance, which identifies the permitted land uses on all parcels in the City through assigned land use designations and associated land use regulations and development standards. The purpose of Title 18 is also to promote the consistent aesthetic character of the City and balance that character with continued development. Title 18 also contains provisions to manage light and glare levels in the City.

The Airport Specific Plan limits building heights on properties zoned I-GM to 35 to 75 feet, depending on the distance between the use and the nearest residentially zoned property. Buildings in I-GM zoned areas may not exceed 75 feet in height if they are more than 200 feet from the nearest residential zone[4]. The project site is approximately 735 feet away from the nearest residential zone to the east. Therefore, the permitted height limit on the project site is 75 feet. The proposed warehouse would not exceed 36 feet.

Views of scenic resources and views from the project site are already partially obscured by intervening development including structures, landscaping, and overhead utility lines. Implementation of the proposed Project would partially obscure long distant views of the San Gabriel Mountains and foothills to the north and northwest of the project site. However, due to existing and planned development in the project area, implementation of the proposed Project consistent with the Airport Specific Plan would not substantially impact scenic vistas. The change is not considered a significant impact that would substantially affect the aesthetic nature of the project site, area, or the views from the project site. While the proposed Project would change the visual character of the site and alter views from some surrounding areas, these changes would further not be considered to have a significant impact on a scenic vista.

The proposed Project would change the site appearance from a storage yard used for construction equipment to one with an industrial warehouse. The aesthetic appearance of the site would be consistent with the intent of the Airport Specific Plan, specifically Section 5.5.2, Development Standards, which outlines the development standards for I-GM zoned areas. Compliance with the design guidelines would create a uniform and consistent theme within the overall plan area. Therefore, although the visual characteristics of the site would change, the proposed Project would be consistent with the intent of the Airport Specific Plan and with adopted development regulations. The Airport Specific Plan EIR identified that development within the Specific Plan area would be a beneficial aesthetic impact. Compliance and/or exceedance of the applicable development standards would ensure that the proposed Project would not substantially impact the visual quality of the project site or its surroundings. Implementation of the proposed Project would be considered a beneficial aesthetic impact.

With respect to light and glare, the existing development includes security lighting within the fenced area. The proposed Project would introduce additional sources of lighting to illuminate the outside of the

[3] California Department of Transportation. (2018). *California State Scenic Highway System Map*. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed February 28, 2022.

[4] City of Rialto. (1997a). *Rialto Airport Specific Plan.* https://www.yourrialto.com/DocumentCenter/View/570/Rialto-Airport-Specific-Plan-PDF. Accessed February 28, 2022.

warehouse building, building entrance areas, signage, and the parking areas. Project lighting would be consistent with existing sources of nighttime lighting in the area associated with the existing industrial uses bordering and near the project site, as well as street lighting along Locust Avenue and Lowell Street. Project lighting would be designed in accordance with the City's Zoning Code and would comply with all applicable development standards in Specific Plan Section 6.2.5, Industrial (I-AR, I-PID, and I-GM). New sources of lighting would be oriented to avoid impacts on surrounding properties. For instance, freestanding light standards would not exceed 25 feet in height with no light spillage beyond property lines. General Plan Policy 2-14.3 requires the use of building materials that do not produce glare, such as polished metals or reflective windows. The Project would comply with General Plan Policy 2-14.3 as well as the development lighting guidelines identified in Section 6.2 of the Specific Plan Design Guidelines, and therefore would preclude significant impacts from the project site related to light and glare. Incorporation of these design features would ensure that the introduction of the new sources of light associated within the proposed Project would be less than significant.

Accordingly, no new impacts relative to adverse effects related to scenic vistas, scenic highways, regulations governing scenic quality, or light and glare would substantially increase the severity of a previously identified impact evaluated in the Airport Specific Plan EIR would occur. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Specific Plan EIR was certified is available that would impact the prior finding of less than significant with the incorporation of mitigation.

Cumulative Impacts

As identified in the Airport Specific Plan EIR, implementation of the Specific Plan was considered a beneficial impact to the visual quality of the area. Lighting impacts would be mitigated to a less than significant level by existing City regulations. As discussed above, the proposed Project would not cause a new significant adverse aesthetic impact to occur. Therefore, the proposed Project would not cause a new cumulative impact to occur. Implementation of the proposed Project would not alter the conclusions of the Airport Specific Plan EIR analysis and would not result in a new or substantially more severe project-specific or cumulative aesthetic impact than those already analyzed.

Mitigation Program

Mitigation Measures 5.14-1 and 5.14-2 from the Airport Specific Plan EIR are applicable to the proposed Project.

MM 5.14-1 As part of the Precise Plan of Design review process for new projects, the City shall evaluate projects for conformance with the policies, guidelines, and regulations contained in the Specific Plan, as well as the Open Space/Conservation Element.

MM 5.14.-2 A lighting plan shall be required as part of the Precise Plan of Design review process. The lighting plan shall be reviewed to ensure that lighting is shielded to protect adjacent residential uses during the evening hours.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to adverse aesthetic impacts or a substantial increase in the severity of a previously identified impact evaluated in the Airport Specific Plan EIR would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the Project would not result in any new impacts or increase the severity of the

previously identified impacts with respect to aesthetics. There are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Airport Specific Plan EIR. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would impact the prior finding of less than significant with mitigation. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.2 Agricultural and Forestry Resources

Threshold (a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use; and

Threshold (b) Conflict with existing zoning for agricultural use, or a Williamson Act contract; and

Threshold (c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

Threshold (d) Would the project result in the loss of forest land or conversion of forest land to non-forest use; or

Threshold (e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

Summary of Impacts Identified in the Airport Specific Plan EIR

At the time that the Airport Specific Plan EIR was prepared, the CEQA Appendix G checklist did not evaluate the loss or conversion of forest land or conversion of farmland to non-agricultural use. However, no agricultural lands or forest land were present in the Airport Specific Plan area. The Initial Study for the Airport Specific Plan EIR stated that there were no agricultural resources in the Specific Plan area nor were there any agricultural operations currently in existence in the area. No significant impacts were identified and mitigation was not required.

Project-Specific Analysis and Significance Determination: No impact; no substantial change from previous analysis.

There are no agricultural resources in the Airport Specific Plan area or proximate to the project site. No Prime Farmland, Unique Farmland, or Farmland of Statewide or Local Importance is mapped in the vicinity of the project site; the project site is designated Urban and Built-Up Land[5]. Further, the project site is not the subject of a Williamson Act Contract.

The project site does not include forestry resources, including timberlands. No impacts related to the loss of farmland would occur. The Airport Specific Plan EIR did not propose agricultural or forestry land uses on the project site[6]. Accordingly, no new impact relative to agricultural or forestry resources or a substantial increase in the severity of a previously identified significant impact evaluated in the Airport Specific Plan EIR would occur. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would impact the prior finding of no significant impact.

Cumulative Impacts

Because the project site does not contain agricultural or forestry resources nor does it have a land use designation that would allow for these uses, the proposed Project would not cumulatively contribute to any impact to agriculture or forestry resources. Therefore, the proposed Project would not cause either a

[5] California Department of Conservation. (2016) *California Important Farmland Finder*. https://maps.conservation.ca.gov/dlrp/ciff/. Accessed February 28, 2022.

[6] City of Rialto. (1997b). *Rialto Airport Specific Plan Program Environmental Impact Report*. Page 5.6-10.

new cumulative impact to occur. Implementation of the proposed Project would not alter the conclusions of the Airport Specific Plan EIR analysis and would not result in a new or substantially more severe project-specific or cumulative impact than those already analyzed.

Mitigation Program

No mitigation measures are required.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to agricultural or forestry resources would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the proposed Project would not result in any new impacts with respect to agricultural and forestry resources. There are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Airport Specific Plan EIR. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would impact the prior finding of no impact. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.3 Air Quality

Threshold (a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Threshold (b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard?

Threshold (c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Threshold (d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Summary of Impacts Identified in the Airport Specific Plan EIR

Regional Plan Consistency. The Airport Specific Plan EIR concluded that Airport Specific Plan implementation would result in a significant unavoidable impact with respect to consistency with the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP) and the Southern California Association of Governments' (SCAG) 1995 Regional Comprehensive Plan and Guide (RCPG). The Specific Plan would substantially exceed the amount of traffic assumed in the City's General Plan for the Specific Plan area. Since traffic and growth projections from the General Plan were used in AQMP and RCPG projections, buildout of the Specific Plan would exceed growth/traffic projections anticipated in regional growth management plans and would not be consistent with local or regional growth documents. Therefore, the Airport Specific Plan EIR concluded that a significant unavoidable impact would occur.

Construction. The Airport Specific Plan EIR determined that air quality short-term impacts would occur from construction activities, including exhaust emissions from construction equipment and trucks hauling materials to and from sites. Specifically, the Airport Specific Plan EIR identified the total estimated pollutant emissions generated during construction assuming a 19-year buildout period. The EIR noted that Specific Plan construction activities would generate 448 pounds per day of reactive organic gases (ROG), 6,581 pounds per day of nitrogen oxides (NOx), 1,431 pounds per day of carbon monoxide (CO) and 467 pounds per day of particulate matter with a diameter of 10 microns or less (PM_{10}). Construction emissions were determined to exceed South Coast Air Quality Management District (SCAQMD) thresholds for all four pollutants (ROG, NOx, CO, and PM_{10}), with mitigation. Mitigation Measures 5.9-1A through 5.9-1H were identified in the Airport Specific Plan EIR to reduce short-term air emissions from implementation of the Airport Specific Plan. Airport Specific Plan implementation would result in significant unavoidable short-term air quality impacts.

Operations. The Airport Specific Plan EIR noted that the Specific Plan would substantially exceed SCAQMD operational emission thresholds, except for PM_{10}. Specifically, total mobile (vehicular) source and stationary source (natural gas and power plant) emissions would result in the following estimated net daily pollutant generation at Specific Plan buildout: 26,237 pounds of CO, 5.323 pounds of NOx, 1,075 pounds of ROG, and 114 pounds of PM_{10}. The mixed-use nature of the Specific Plan and the implementation of quantifiable mitigation measures (Mitigation Measures 5.9-2A and 5.9-2B)_ would reduce long-term air quality impacts but they would remain significant and unavoidable.

Project-Specific Analysis and Significance Determination: No new impacts/reduced impacts; change from previous analysis.

The land use designation for the project site in the Airport Specific Plan is General Manufacturing (I-GM). Warehouses are a permitted use in the I-GM. Based on the land use designation and the maximum FAR of 1, the maximum allowable development of the site could be 208,217 sf. As such, the proposed development would generate fewer vehicular trips and generate less emissions than assumed for the project site in the Airport Specific Plan EIR. Accordingly, air quality impacts associated with the proposed Project would be less than those assumed for the project site in the Airport Specific Plan EIR.

Regional Plan Consistency. With respect to whether the proposed Project would be consistent with the AQMP, AQMPs use regional growth projections that are based on the land use designations in the local General Plans. Therefore, the land uses assumed and the growth anticipated in the Airport Specific Plan EIR would are incorporated into the current 2016 AQMP, which supersedes the prior AQMP.

Criteria for determining consistency with the AQMP are defined by the following indicators:

- **Consistency Criterion No. 1**: Whether a project will result in an increase in the frequency or severity of existing air quality violations, or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.
- **Consistency Criterion No. 2**: Whether a project will exceed the assumptions in the AQMP or increments based on the year of project buildout phase.

With respect to the first criterion, based on the air quality modeling analysis conducted for the proposed Project and summarized later in this Addendum section, the Project would not exceed any SCAQMD thresholds for construction or operations. Therefore, the Project would not increase the frequency or severity of existing air quality violations. The proposed Project would be consistent with the first criterion and would not result in an increase in the frequency or severity of existing air quality violations or delay timely attainment of air quality standards (see Table 3.3-1 and Table 3.3-2).

Concerning Consistency Criterion No. 2, the 2016 AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Therefore, the SCAQMD's second criterion for determining project consistency focuses on whether the proposed Project exceeds the assumptions used in preparing the forecasts presented in the 2016 AQMP.

The Project's proposed industrial warehouse use would comply with the allowable uses identified in the Airport Specific Plan and assumes less square footage than is permitted in the Specific Plan for the project site. The Project is consistent with the City's land use designations and no change would be required. Therefore, the Project would not exceed the population or job growth projections used by the SCAQMD to develop the AQMP. The Project is also consistent with the second criterion. On a project-specific basis, the proposed Project would be consistent with the AQMP. Project implementation would not result in new or increase the severity of impacts as it pertains to consistency with the AQMP and the City General Plan. Therefore, there are no changes or new significant information that would require preparation of subsequent CEQA documentation.

Construction Emissions. Construction associated with the Project would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern are O_3-precursor pollutants (i.e., ROG and NO_X) and PM_{10} and $PM_{2.5}$. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SCAQMD's thresholds of significance.

Construction results in the temporary generation of emissions resulting from site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water.

The duration of construction activities associated with the Project is estimated to last approximately nine months. Construction-generated emissions associated the Project were calculated using the California Air Resources Board (CARB)-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. With regard to fugitive dust, the Project would be required to implement SCAQMD Rules 402 and 403 (prohibition of nuisances, watering of inactive and perimeter areas, track out requirements, etc.) and therefore fugitive dust suppression has been accounted for in CalEEMod. The table shows that all criteria pollutant emissions would remain below their respective thresholds and impacts would be less than significant. See **Appendix A** for more information regarding the construction assumptions used in this analysis. Predicted maximum daily construction-generated emissions for the Project are summarized in **Table 3.3-1: Construction-Related Emissions**.

Table 3.3-1: Construction-Related Emissions

Construction Year	Maximum Pounds Per Day					
	ROG	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
2022	3.26	38.28	22.43	0.10	9.55	5.50
2023	55.32	15.72	17.61	0.04	1.19	0.80
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

ROG = reactive organic gases; NOx = nitrogen oxide; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter

Notes: SCAQMD Rule 403 Fugitive Dust applied. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stockpiles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied. Refer to Appendix A for Model Data Outputs.

Source: CalEEMod version 2020.4.0.

Operational Emissions. The Project's operational emissions would be associated with area sources (e.g., landscape maintenance equipment, architectural coatings, off-road equipment, etc.), energy sources, mobile sources (i.e., motor vehicle use), and off-road equipment. Primary sources of operational criteria pollutants are from motor vehicle use and area sources. Long-term operational emissions attributable to the Project are summarized in **Table 3.3-2: Operational Emissions**. The operational emissions sources are described below.

- **Area Source Emissions.** Area source emissions would be generated due to on-site equipment, architectural coating, and landscaping that were previously not present on the site.
- **Energy Source Emissions.** Energy source emissions would be generated due to electricity and natural gas usage associated with the Project. Primary uses of electricity and natural gas by the Project would be for miscellaneous warehouse equipment, space heating and cooling, water heating, ventilation, lighting, appliances, and electronics.
- **Mobile Source.** Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern. NO_X and ROG react with sunlight to form O_3, known as photochemical smog. Additionally, wind currents readily transport PM_{10} and $PM_{2.5}$. However, CO tends to be a localized pollutant, dispersing rapidly at the source.

  Project-generated vehicle emissions are based on the trip generation within the Project's Traffic Memorandum and incorporated into CalEEMod as recommended by the SCAQMD. Per the Project Trip Generation and VMT Screening Memorandum, the Project would generate 173 daily trips.
- **Off-Road Equipment Emissions.** Because the Project is a speculative warehouse development and the final end user is not known, to be conservative it was assumed that the Project would operate five electric forklifts for 12 hours per day.

Table 3.3-2: Operational Emissions

Source	Maximum Pounds Per Day					
	ROG	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area Source Emissions	2.30	<0.01	0.01	0.00	<0.01	<0.01
Energy Emissions	<0.01	0.06	0.05	<0.01	<0.01	<0.01
Mobile Emissions	0.49	11.13	6.22	0.07	2.98	0.88
Off-Road Emissions	0.00	0.00	0.00	0.00	0.00	0.00
Total Emissions	**2.80**	**11.19**	**6.28**	**0.07**	**2.99**	**0.89**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

ROG = reactive organic gases; NOx = nitrogen oxide; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter

Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.

Localized Construction Significance Analysis. The nearest sensitive receptors are the single-family residences located approximately 735 feet to the east. To identify impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003; revised 2008) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific emissions.

Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, **Table 3.3-3: Equipment-Specific Grading Rates**, is used to determine the maximum daily disturbed acreage for comparison to LSTs. The appropriate SRA for the localized significance thresholds is the Central San Bernardino Valley (SRA 34)

since this area includes the project site. LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. The SCAQMD produced look-up tables for projects that disturb areas less than or equal to 5 acres in size. Project construction is anticipated to disturb a maximum of 3.5 acres in a single day.

Table 3.3-3: Equipment-Specific Grading Rates

Construction Phase	Equipment Type	Equipment Quantity	Acres Graded per 8-Hour Day	Operating Hours per Day	Acres Graded per Day
Site Preparation	Tractors	4	0.5	8	2
	Graders	0	0.5	8	0
	Dozers	3	0.5	8	1.5
	Scrapers	0	1	8	0
				Total Acres Graded per Day	**3.5**

Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.

The SCAQMD's methodology states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs." Therefore, only emissions included in the CalEEMod "on-site" emissions outputs were considered. The nearest sensitive receptors are the residences located approximately 735 feet (224 meters) east of the site. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. The SCAQMD recommends that the 25-meter LSTs should be used for receptors located approximately 25 meters away or less. Therefore, the LSTs for receptors located at 225 meters, the thresholds for 200 meters were used. **Table 3.3-4: Localized Significance of Construction Emissions**, presents the results of localized emissions during construction. The table shows that emissions of these pollutants on the peak day of construction would not result in significant concentrations of pollutants at nearby sensitive receptors. Significant impacts would not occur concerning LSTs during construction.

Table 3.3-4: Localized Significance of Construction Emissions

Construction Activity	Maximum Pounds Per Day			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Demolition (2022)	25.72	20.59	3.20	1.45
Site Preparation (2022)	33.08	19.70	9.28	5.42
Grading (2022)	20.86	15.27	3.73	2.21
Building Construction (2022)	15.62	16.36	0.81	0.76
Building Construction (2023)	14.38	16.24	0.70	0.66
Paving (2023)	8.79	12.19	0.44	0.40
Architectural Coating (2023)	1.30	1.81	0.07	0.07
SCAQMD Localized Screening Threshold (2 acres at 200 meters)	*378*	*6,346*	*83*	*26*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**

NOx = nitrogen oxide; CO = carbon monoxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter
Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.

Localized Operational Significance Analysis. According to the SCAQMD LST methodology, LSTs apply to the operational phase of a project only if it includes stationary sources or attracts mobile sources that

may spend long periods queuing and idling at the site (e.g., warehouse facilities). Since the Project is a warehouse, the operational phase LST protocol is conservatively applied to the area source and all the mobile source emissions. As the nearest receptors are located approximately 735 feet (224 meters) from the project site, the 200-meter LSTs for SRA 34 were used. Although the site is 4.38 acres, the 2-acre operational LST thresholds were conservatively used because the LSTs increase with the size of the site.

The LST analysis only includes on-site sources. However, the CalEEMod model outputs do not separate on-site and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions shown in **Table 3.3-5: Localized Significance of Operational Emissions**, conservatively include all on-site project-related stationary sources and 100 percent of the project-related vehicle emissions in spite that only a portion of mobile sources would include vehicles maneuvering and idling on-site. The table shows that the maximum daily emissions of these pollutants during operations would not result in significant concentrations of pollutants at nearby sensitive receptors. Therefore, significant impacts would not occur concerning LSTs during operational activities.

The Project operator may be required to implement additional emission reduction strategies. Conservatively, this analysis is not taking credit for these potential reductions.

Table 3.3-5: Localized Significance of Operational Emissions

Activity	Maximum Pounds Per Day			
	NO_x	**CO**	**PM_{10}**	**$PM_{2.5}$**
On-Site and Mobile Source Emissions[1]	11.19	6.28	2.99	0.89
SCAQMD Localized Screening Threshold: (2 acres at 200 meters)	*378*	*6,346*	*20*	*7*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**

NOx = nitrogen oxide; CO = carbon monoxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter

1. Includes on-site emissions and 100 percent of mobile source emissions

Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.

Criteria Pollutant Health Impacts. On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (*Sierra Club v. County of Fresno* [Friant Ranch, L.P.] [2018] Cal.5th, Case No. S219783). The SCAQMD has set its CEQA significance thresholds based on the FCAA, which defines a major stationary source (in extreme ozone nonattainment areas such as the South Coast Air Basin) as emitting 10 tons per year. The thresholds correlate with the trigger levels for the federal New Source Review (NSR) Program and SCAQMD Rule 1303 for new or modified sources. The NSR Program[7] was created by the FCAA to ensure that stationary sources of air pollution are constructed or modified in a manner that is consistent with attainment of health-based federal ambient air quality standards. The federal ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, projects that do not exceed the SCAQMD's LSTs and mass emissions thresholds would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts.

[7] Code of Federal Regulation (CFR) [i.e., PSD (40 CFR 52.21, 40 CFR 51.166, 40 CFR 51.165 (b)), Non-attainment NSR (40 CFR 52.24, 40 CFR 51.165, 40 CFR part 51, Appendix S).

As previously discussed, Project emissions would be less than significant and would not exceed SCAQMD thresholds (refer to Table 3.3-1 and Table 3.3-2). Localized effects of on-site project emissions on nearby receptors were also found to be less than significant (refer to Table 3.3-4 and Table 3.3-5). The LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or State ambient air quality standard. The LSTs were developed by the SCAQMD based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. The ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect public health, including protecting the health of sensitive populations such as asthmatics, children, and the elderly. As shown above, project-related emissions would not exceed the regional thresholds or the LSTs, and therefore would not exceed the ambient air quality standards or cause an increase in the frequency or severity of existing violations of air quality standards. Therefore, sensitive receptors would not be exposed to criteria pollutant levels in excess of the health-based ambient air quality standards.

Carbon Monoxide Hotspots. A CO hot spot is an area of localized carbon monoxide pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. The purpose of the analysis is to verify that a project would not cause or contribute to a violation of the CO standard at intersections for which a significant impact would occur. It should be noted that the Air Basin is designated as an attainment area for State and federal CO standards; and that there has been a decline in CO emissions even though vehicle miles traveled on urban and rural roads have increased. The SCAQMD studied the four most congested intersections within the Air Basin in 2003 in order to support their CO "attainment" demonstration to the U.S. Environmental Protection Agency (U.S. EPA). The modeled intersections experienced more than 100,000 average daily trips, and SCAQMD found that even these highly-congested intersections would not cause a CO hot spot to result. Therefore, it can be reasonably inferred that CO hot spots would not be experienced at any vicinity intersections as a result of 173 additional vehicle trips attributable to the Project. Therefore, impacts would be less than significant.

Health Risk Assessment. According to the Health Risk Assessment[8], combined construction and operations would result in a maximum cancer risk of 1.45 in one million, which would not exceed the SCAQMD threshold of 10 in one million. The highest maximum chronic and acute hazard index associated with unmitigated DPM emissions from the Project would be 0.0014 and 0.17, respectively, which are within SCAQMD's acceptable limits. Therefore, impacts associated with carcinogenic risk and non-carcinogenic hazards are less than significant. It should be noted that the impacts assess the Project's incremental contribution to health risk impacts, consistent with the SCAQMD guidance and methodology. The SCAQMD has not established separate cumulative thresholds and does not require combining impacts from cumulative projects. The SCAQMD considers projects that do not exceed the project-specific thresholds to generally not be cumulatively significant.[9] Therefore, impacts related to health risk from the Project would be less than significant.

Other Emissions. The SCAQMD *CEQA Air Quality Handbook* identifies certain land uses as sources of odors. These land uses include agriculture, wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Project would not include any of the land uses that have been identified by the SCAQMD as odor sources. During

[8] Kimley-Horn and Associates, *Locust Avenue and Lowell Street Development Project Health Risk Assessment*, May 2022.

[9] South Coast Air Quality Management District, *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution*, August 2003.

construction-related activities, some odors (not substantial pollutant concentrations) that may be detected are those typical of construction vehicles (e.g. diesel exhaust from grading and construction equipment). These odors are a temporary short-term impact that is typical of construction projects and would disperse rapidly. The Project would not include any of the land uses that have been identified by the SCAQMD as odor sources. Therefore, the Project would not create objectionable odors.

Cumulative Impacts

The significance threshold for cumulative air quality impacts is the same as for project-specific impacts. Projects that do not exceed project-specific thresholds are considered by the SCAQMD to not have a cumulatively significant impact.[10] The Project would not result in significant operational air quality impacts including nonattainment criteria pollutants. The Project would not exceed SCAQMD construction thresholds. The Project would be consistent with the Airport Specific Plan and not required any land use designation changes, and would therefore comply with the 2016 AQMP, which is intended to bring the Air Basin into attainment for all criteria pollutants. Therefore, the Project's contribution to regional pollutant concentrations would not be cumulatively considerable. As discussed above, the proposed Project would not cause a new air quality impact to occur. Therefore, the proposed Project would not result in cumulatively considerable impacts.

Mitigation Program

The Airport Specific Plan EIR includes measures to reduce potential impacts associated with the implementation of the Airport Specific Plan. Mitigation Measures 5.9-1A through 5.9-1H, 5.9-2A, and 5.9-2B are applicable to the proposed Project.

MM 5.9-1A The project shall comply with State, City, and Uniform Building Code dust control regulations, so as to prevent the soil from being eroded by wind, creating dust, or blowing onto a public road or roads or other public or private property.

MM 5.9-1B Adequate watering techniques shall be employed to partially mitigate the impact of construction-generated dust particulates. Portions of the project site that are undergoing earth moving operations shall be watered such that a crust will be formed on the ground surface and then watered again at the end of the day. Unpaved construction roads shall be watered at least three times a day.

MM 5.9-1C SCAQMD Rule 403, as amended, as well as City of Rialto Ordinance No. 649, Section 18, shall be adhered to, ensuring the clean up on the construction-related dirt on approach routes to the site, and the application of water and/or chemical dust retardants that solidify loose soils shall be implemented for construction vehicle access, as directed by the City Engineer. This shall include covering, watering or otherwise stabilizing all inactive soil piles (left more than 10 days) and inactive graded areas (left more than 10 days).

MM 5.9-1D Any vegetative ground cover to be utilized on-site shall be planted as soon as possible to reduce the amount of open space subject to wind erosion. Irrigation shall be installed as soon as possible to maintain the ground cover and minimize blows.

[10] South Coast Air Quality Management District, *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution*, August 2003. http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper-appendix.pdf?sfvrsn=4

MM 5.9-1E Grading activity shall be suspended when local winds exceed 25 miles per hour and during first and second stage smog alerts.

MM 5.9-1F All trucks shall maintain a minimum of two feet of freeboard.

MM 5.9-1G All trucks hauling dirt, soil or other loose dirt material shall be covered.

MM 5.9-1H All construction roads with more than 50 daily trips shall be paved.

MM 5.9-2A In order to reduce emissions from the power plant providing electricity to the site and from natural gas consumed by the project's users, on-site buildings shall, at a minimum, be constructed to comply with State Energy Efficiency Standards (Title 24).

MM 5.9-2B The commercial use tenants shall comply with applicable SCAQMD employer trip reduction regulations and the City's Transportation Demand Ordinance. The project shall, at a minimum, consider the following:

- Bicycle racks, lockers and secure storage areas for bicycles
- Marked pedestrian lanes and driver warning signs
- Transit access, including bus turnouts
- Preferential parking zone, free parking and/or parking limits
- Site access shall avoid queuing in driveways
- Mulch, groundcover and native vegetation to reduce energy for pumping water

Conclusion

Based on the comparative analysis set forth in this Addendum, air quality impacts associated with the proposed Project would be less than those assumed for the project site in the Airport Specific Plan EIR. No new impacts relative to adverse air quality impacts or a substantial increase in the severity of a previously identified significant impact evaluated in the Airport Specific Plan EIR would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the Project would not result in any new impacts, or increase the severity of the previously identified impacts, with respect to air quality. There are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Airport Specific Plan EIR. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would impact the prior finding of significant unavoidable impact. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.4 Biological Resources

Threshold (a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Threshold (b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Threshold (c) Would the project have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Threshold (d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Threshold (e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Threshold (f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?

Summary of Impacts Identified in the Airport Specific Plan EIR

The Airport Specific Plan EIR included field surveys and documentation of sensitive species in and around the Specific Plan area. No listed or candidate sensitive plant species were observed on or around the Specific Plan area. One special status animal, the San Diego Horned Lizard, was observed within the Specific Plan area. Two other sensitive species, the Orange-Throated Whiptail and California Gnatcatcher, were recorded within two miles of the boundaries of the Airport Specific Plan study area. Neither the San Diego Horned Lizard or the Orange-Throated Whiptail status met the criteria for listing as threatened or endangered; therefore, impacts to these species pursuant to CEQA were found to be less than significant. Potential impacts to the California Gnatcatcher, a federally threatened species and a California Species of Concern, were found to be less than significant with the incorporation of Mitigation Measure 5.6-3, which requires that presence/absence surveys be conducted for listed for candidate species potentially occurring within the boundaries of a proposed development, where applicable.

The Airport Specific Plan EIR did not include jurisdictional delineation of waters or wetlands but included Mitigation Measures 5.6-4a and 5.6-4b requiring developers to obtain applicable regulatory approvals from the California Department of Fish and Wildlife (CDFW) , State Water Resources Control Board (SWRCB), and the U.S. Army Corps of Engineers (USACE)as required under Section 404 of the federal Clean Water Act, where applicable for sites within the Specific Plan area that contain wetlands.

The Airport Specific Plan EIR determined that the Airport Specific Plan area is not connected to, or part of, a distinct wildlife movement corridor. Therefore, mitigation was not required related wildlife movement corridors.

Project-Specific Analysis and Significance Determination: No new impacts/reduced impact; no substantial change from previous analysis.

With respect to the project site, the Airport Specific Plan EIR did not identify the presence of sensitive biological resources, including wetlands and riparian habitat. The proposed Project is consistent with the development contemplated in the Airport Specific Plan EIR, and therefore the proposed project will not have any impacts on biological resources that are any different than those considered and addressed in the Airport Specific Plan EIR. The land use designation for the project site in the Airport Specific Plan is General Manufacturing (I-GM). Therefore, the biological resources analysis in the Airport Specific Plan EIR assumed that the site would be developed. Further, the site has been graded and partially paved and has been used since 2008/2009 for construction equipment storage. There are no biological resources on the project site. The proposed Project would not have an effect, either directly or through habitat modifications, on any species identified as a candidate, as a sensitive, or as a special-status species in local or regional plans, policies, or regulations, or by the CDFW or U.S. Fish and Wildlife Service (USFWS). The project site is a partially paved lot with limited vegetation consisting of ornamental landscaping along the street frontages. There are no natural habitats on the site. Because of the disturbed nature of the project site, there is no suitable habitat for any protected species.

Additionally, because the project site has been disturbed by prior grading and paving, there are no drainages, riparian habitat, aquatic features, or jurisdictional waters or wetlands on the project site.

Consistent with the findings of the Airport Specific Plan EIR, the Airport Specific Plan area is not connected to, or part of, a distinct wildlife movement corridor. The project site is located in a predominately industrial and commercial area and is not suitable as a wildlife movement corridor.

Further, the proposed Project would not conflict with any local policies or ordinances protecting biological resources, as the site has been previously developed and there are no identified biological resources that are subject to such regulation. The project site is not subject to a habitat conservation plan (HCP) or Natural Community Conservation Plan (NCCP) since it is a developed site with no biological resources subject to regulation. Therefore, Mitigation Measures 5.6-3, 5.6-4A, and 5.6-4B are not applicable to the proposed Project because the project site does not include suitable habitat for candidate species or potentially jurisdictional waters or wetlands.

Accordingly, no new impacts relative to adverse effects related to biological resources would substantially increase the severity of a previously identified impact evaluated in the Airport Specific Plan EIR would occur. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would impact the prior finding of less than significant with mitigation incorporated.

Cumulative Impacts

Proposed projects are required to implement measures, as set forth in their respective CEQA documents, consistent with federal, State, and local regulations to avoid adverse effects to existing biological resources or to mitigate for significant impacts to these resources. The types of measures required for projects impacting protected habitat, species, and regulated resources can include avoidance, project design features, regulatory approvals, and mitigation measures. As it applies to the proposed Project, the project site does not contain riparian habitat or any other water resources. Additionally, the site does not contain sensitive habitat or sensitive species or waters, including wetland waters, that are subject to federal jurisdiction under Section 404 of the Clean Water Act. The site is not located within an HCP or

NCCP, which may support species and habitats that are sensitive and rare within the region or may function as a migration corridor for wildlife. Therefore, the Project would not contribute to a cumulative effect on biological resources including sensitive species, protected habitat, or wetland resources. The proposed Project would not cause a new biological impact to occur, nor an increase in the severity of a biological impact previously disclosed in the Airport Specific Plan EIR. Implementation of the proposed Project would not alter the conclusions of the Airport Specific Plan EIR analysis and would not result in a new or substantially more severe project-specific or cumulative biological resources impact than those already analyzed.

Mitigation Program

Mitigation Measures 5.6-3, 5.6-4A, and 5.6-4B are not applicable to the proposed Project because the project site does not contain any biological resources, suitable habitat for protected species, or jurisdictional waters or wetlands.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to biological resources or a substantial increase in the severity of a previously identified significant impact evaluated in the Airport Specific Plan EIR would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the Project would not result in biological impacts, or increase the severity of the previously identified impacts for the Airport Specific Plan area. There are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Airport Specific Plan EIR. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would impact the prior finding. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.5 Cultural and Tribal Cultural Resources

Threshold (a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Threshold (b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Threshold (c) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Summary of Impacts Identified in the Airport Specific Plan EIR

The Airport Specific Plan EIR included an archaeological assessment to locate, record, and evaluate potentially significant historic and archaeological resources in the Airport Specific Plan area. The assessment did not identify previously recorded prehistoric archaeological or Native American tribal sites within the Airport Specific Plan area. However, the Airport Specific Plan EIR determined that development under the Airport Specific Plan could result in the disturbance of unknown prehistoric archaeological or Native American tribal sites. The Airport Specific Plan also noted that unknown historic archaeological sites could be disturbed as a result of implementation.

Accordingly, Mitigation Measures 5.7-2A, 5.7-2B, 5.7-3A, 5.7-3B, and 5.7-3C address archaeological and tribal cultural resources. These measures include monitoring during grading in areas identified as having archaeologic sensitivities, and retention of a qualified archaeologist to conduct field reconnaissance to determine if cultural remains of historical or prehistorical origin are present on-site and protocols in the event that cultural resources of historic or prehistoric origin are exposed during grading or construction and to perform inspections of excavations. The Airport Specific Plan EIR found that implementation of these mitigation measures reduced potential impacts to prehistoric and historic archaeological resources to a less than significant level.

Project-Specific Analysis and Significance Determination: No new impacts; no substantial change from previous analysis.

The proposed Project is consistent with the assumptions set forth in the Airport Specific Plan EIR, which assumed development of the project site with general manufacturing-related uses. Although the project site has been disturbed, consistent with the findings of the Airport Specific Plan EIR, there is a potential for previously unknown archeological and tribal cultural resources to be uncovered during ground-disturbing activities. Mitigation Measures 5.7-2A, 5.7-2B, 5.7-3A, 5.7-3B, and 5.7-3C are applicable.

The project site is not located within a known or suspected cemetery and there are no known human remains within the project site. However, this does not preclude the discovery of human remains during project-related ground disturbance. In compliance with State regulations, should any human remains be encountered during construction activities, State Health and Safety Code Section 7050.5 states that no further disturbances shall occur in the immediate area until the County Coroner has made the necessary findings as to origin and disposition pursuant to California PRC Section 5097.98. In addition, in accordance with State and local guidelines, if the Coroner determines the remains to be of a Native American, the Coroner must contact the Native American Heritage Commission within 24 hours for identification of the most likely descendent of the deceased Native American. Additionally, if the remains are determined to be Native American, the City would work with local Native American representatives to ensure that the remains and any associated artifacts are treated in a respectful and dignified manner. Although the

potential for disturbance of undiscovered resources during grading and excavation activities is considered low, incorporation of the Specific Plan EIR mitigation measures below would reduce this potential impact to a level considered less than significant.

Accordingly, no new known impacts relative to adverse effects related to archeological and tribal cultural resources would substantially increase the severity of a previously identified potential impact evaluated in the Specific Plan EIR would occur. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Specific Plan EIR was certified is available that would impact the prior finding of less than significant with mitigation.

Cumulative Impacts

As discussed above, the proposed Project would not cause a new cultural resources impact to occur, nor an increase in the severity of a potential archeological or tribal cultural resources impact previously disclosed in the Airport Specific Plan EIR, with adherence to State and local regulations and mitigation measures discussed in this section. Implementation of the proposed Project would not alter the conclusions of the Airport Specific Plan EIR analysis and would not result in a new or substantially more severe project-specific or cumulative cultural resources impact than those already analyzed.

Mitigation Program

Mitigation Measures 5.7-2A, 5.7-2B, 5.7-3A, 5.7-3B, and 5.7-3C from the Airport Specific Plan EIR are applicable to the proposed Project.

MM 5.7-2A As part of the project review process for development projects in the Specific Plan area, the City shall require a Cultural Resources Impact Analysis. This analysis shall address prehistoric and historic archaeological resources, as well as potential historic structures, and shall include mitigation measures, if necessary.

MM 5.7-2B Archaeologic monitoring shall be required during grading in those areas identified archaeologic sensitivities, per the requirements of the City and/or County.

MM 5.7-3A Prior to the issuance of grading permits, project applicants shall retain a qualified archaeologist to conduct a complete field reconnaissance to determine if cultural remains of historical or prehistorical origin are present on-site. If additional sites are found, the archaeologist shall recommend measures to reduce impacts to less than significant levels which may include salvaging, restoration, etc. The report shall be submitted to the City of Rialto Development Services Department for review and approval.

MM 5.7-3B If cultural resources of historic or prehistoric origin are exposed during grading or construction, a qualified archaeologist, at the discretion of the City of Rialto, shall be allowed to divert or direct grading in the area so as to facilitate salvage and evaluation.

MM 5.7-3C A qualified archaeologist shall be retained to perform inspections of excavations and, if necessary, salvage exposed cultural resources. The frequency of inspections will depend on the rate of excavation, the materials being excavated, and the abundance of cultural resources. Initially, monitoring shall be full-time during grading.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to cultural or tribal cultural resources or a substantial increase in the severity of a previously identified potential significant impact evaluated in the Airport Specific Plan EIR would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the Project would not result in any new impacts, or increase the severity of the previously identified potential impacts. There are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Airport Specific Plan EIR. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would impact the prior finding of less than significant with mitigation. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.6 Energy

Threshold (a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Threshold (b) Would the project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Summary of Impacts Identified in the Airport Specific Plan EIR

Impacts related to energy were not analyzed in the Airport Specific Plan EIR because they were not on the State CEQA Guidelines' Appendix G checklist until January 1, 2019, which was subsequent to the certification of the Airport Specific Plan EIR. Therefore, the analysis of energy is new in this Addendum. Energy modeling calculations are provided in **Appendix B**.

However, the Airport Specific Plan EIR did include an analysis of the impacts on other public services and utilities, which included electricity and natural gas. Specifically, the analysis was in Section 5.12, Public Utilities, of the Airport Specific Plan EIR. As concluded in the Airport Specific Plan EIR, impacts to electricity and natural gas services were found to be less than significant with implementation of Mitigation Measure 5.12-6. The electricity and natural gas analysis in the Airport Specific Plan EIR did not address the specific questions now included in Appendix G of the State CEQA Guidelines. However, the analysis, as applicable, is carried through to this new energy section for context, discussion, and comparison purposes.

Project-Specific Analysis and Significance Determination: No new impacts; no substantial change from previous analysis.

Energy consumption associated with the proposed Project is summarized in **Table 3.6-1: Project and Countywide Energy Consumption.** Estimated project energy consumption has been compared to Countywide consumption because energy conservation plans and goals are generally discussed on a regional level. This comparison is included for informational purposes to provide context on the Project's potential demand in relation to local and regional energy supplies and is not the basis for the significance determination. As shown in the table, the Project's increase in electricity usage would constitute an approximate 0.0019 percent increase in typical annual electricity usage. The proposed Project does not assume the use of natural gas or the extension of natural gas infrastructure to the project site. Construction-related off-road automotive fuel consumption (i.e., fuel consumed during construction) would result in a 0.0121 percent increase in diesel and 0.0003 percent increase in gasoline consumption. During operations, on-road automotive fuel consumption (i.e., fuel consumed from operational vehicle trips to and from the project site) would result in a 0.0611 percent increase in diesel and 0.0062 percent increase in gasoline over Countywide automotive fuel consumption.

The land use designation for the project site in the Airport Specific Plan is General Manufacturing (I-GM). Warehouses are a permitted use in the I-GM. As discussed above, impacts related to energy were not analyzed in a separate section of the Airport Specific Plan EIR. Based on the land use designation and the maximum FAR of 1, allowable development of the site in the Airport Specific Plan could be 208,217 sf. As such, the proposed development would require less fuel (due to the generation of fewer trips) and require less energy to operate than assumed for the project site in the Airport Specific Plan EIR. Accordingly, energy impacts associated with the proposed Project would be less than those assumed for the project site in the Airport Specific Plan EIR.

Construction-Related Energy

During construction, the Project would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Fossil fuels used for construction vehicles and other energy-consuming equipment would be used during grading, paving, and building construction. Fuel energy consumed during construction would be temporary in nature and would not represent a significant demand on energy resources. Some incidental energy conservation would occur during construction through compliance with State requirements that equipment not in use for more than five minutes be turned off. Project construction equipment would also be required to comply with the latest U.S. EPA and California Air Resources Board engine emissions standards. These emissions standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption. Due to increasing transportation costs and fuel prices, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction.

Table 3.6-1: Project and Countywide Energy Consumption

Energy Type	Project Annual Energy Consumption	San Bernardino County Annual Energy Consumption[1,2]	Percentage Increase Countywide
Operational Electricity and Natural Gas			
Electricity Consumption	295,572 kWh	15,968,515,536 kWh	0.0019%
Automotive Fuel Consumption[3]			
Project Construction[4,5]			
Diesel	33,524 gallons	276,240,500 gallons	0.0121%
Gasoline	2,626 gallons	867,249,800 gallons	0.0003%
Project Operations			
Diesel	1,231,457 gallons	276,240,500 gallons	0.0611%
Gasoline	53,783 gallons	867,249,800 gallons	0.0062%

1. The Project increases in electricity and natural gas consumption are compared with the total consumption in San Bernardino County in 2020.
2. The Project increases in automotive fuel consumption are compared with the countywide fuel consumption (projected) in 2022.
3. Countywide fuel consumption is from the California Air Resources Board EMFAC2021 model.
4. Construction fuel consumption is based equipment and load factors from California Emissions Estimator Model (CalEEMod version 2020.4.0).
5. The estimated construction fuel consumption is based on the Project's construction equipment list timing/phasing, and hours of duration for construction equipment, as well as vendor, hauling, and construction worker trips.

Refer to Appendix B: Energy Data for assumptions used in this analysis.

The California Air Resources Board (CARB) adopted the Airborne Toxic Control Measure (ATCM) to Limit Diesel-Fueled Commercial Motor Vehicle Idling (Title 13 CCR §2485) in 2004 and the In-Use Off-Road Diesel-Fueled Fleets regulation in 2007. Compliance with these goals has shown energy savings in the form of reduced fuel consumption from more fuel-efficient engines. Project construction equipment would be required to comply with the latest U.S. EPA and CARB engine emissions standards. These emissions standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption. Due to increasing transportation costs and fuel prices, contractors and

owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction.

As indicated in Table 3.6-1, the overall diesel fuel consumption during construction of the Project would be 33,524 gallons and gasoline consumption would be 2,626 gallons, which would result in a nominal increase (0.0121 percent and 0.0003 percent, respectively) in fuel use in the County. As such, Project construction would have a minimal effect on the local and regional energy supplies and is anticipated to be less than the assumptions for development of the project site as set forth in the Airport Specific Plan EIR because less development is proposed and increased fuel efficiency standards for on-road and off-road vehicles. Since the certification of the Airport Specific Plan EIR, the U.S. EPA and CARB have implemented off-road equipment emissions standards. These emissions standards have been phased in since 1996 in four distinct tiers. Each tier establishes new and more stringent emissions standards. The tier of an engine depends on the model year and horsepower rating; generally, the newer a piece of equipment is, the greater the tier it is likely to have. Beginning in 2011, new off-road mobile engines sold that are equal to or greater than 175 horsepower and non-emergency stationary engines less than 10 liters per cylinder and equal to or greater than 175 horsepower were required to meet Tier 4 Interim. Beginning in 2014, new off-road mobile engines sold that are equal or greater than 130 horsepower were required to meet Tier 4 Final standards (40 Code of Federal Regulations, Part 1039). Construction equipment that now meets these standards are also more fuel efficient because they are more precise and allow for more complete and efficient combustion. The construction equipment fleet associated with Project construction would be newer than what was anticipated in the 1997 Airport Specific Plan EIR and would therefore be more fuel efficient. It is noted that construction fuel use is temporary and would cease upon completion of construction activities. There are no unusual Project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or State. Therefore, construction fuel consumption would not be inefficient, wasteful, or unnecessary compared with other similar development projects of this nature. A less than significant impact would occur.

Operational Energy: Energy Demand

Transportation Energy Demand. Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic and Safety Administration is responsible for establishing additional vehicle standards and for revising existing standards. Compliance with federal fuel economy standards is not determined for each individual vehicle model. Rather, compliance is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. Table 3.6-1 provides an estimate of the daily fuel consumed by vehicles traveling to and from the project site. As indicated in the table, Project operations are estimated to consume approximately 1,231,457 gallons of diesel fuel and 53,783 gallons of gasoline fuel per year, which would increase Countywide automotive fuel consumption by 0.0611 percent and 0.0062 percent, respectively. The Project would not result in any unusual characteristics that would result in excessive long-term operational fuel consumption. Fuel consumption associated with vehicle trips generated by the Project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

Building Energy Demand. Operations of the proposed Project would require approximately 295,872 kWh of electricity per year and approximately 2,155 therms of natural gas per year. The proposed Project would be required to comply with Title 24 Building Energy Efficiency Standards, which provide minimum

efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Implementation of the Title 24 standards significantly reduces energy usage. Furthermore, the electricity provider, SCE, is subject to California's Renewables Portfolio Standard (RPS). The RPS requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020 and to 50 percent of total procurement by 2030. Renewable energy is generally defined as energy that comes from resources which are naturally replenished within a human timescale such as sunlight, wind, tides, waves, and geothermal heat. The increase in reliance of such energy resources further ensures projects will not result in the waste of the finite energy resources.

Operational energy consumption would represent an approximate 0.0019-percent increase in electricity consumption over the current Countywide usage (refer to Table 3.6-1). The Project would adhere to all federal, State, and local requirements for energy efficiency, including the Title 24 standards. Title 24 of the California Code of Regulations contains energy efficiency standards for residential and non-residential buildings based on a State mandate to reduce California's energy demand. Specifically, Title 24 addresses a number of energy efficiency measures that impact energy used for lighting, water heating, heating, and air conditioning, including the energy impact of the building envelope such as windows, doors, skylights, wall/floor/ceiling assemblies, attics, and roofs. As such, the Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

The City of Rialto Climate Action Plan (CAP) establishes a series of energy efficiency related goals intended to reduce greenhouse gas (GHG) emissions based on the Assembly Bill (AB) 32 Scoping Plan. Those applicable to the Project are Renewables Portfolio Standard for Building Energy Use, AB 1109 Energy Efficiency Standards for Lighting, Electricity Energy Efficiency, and Commercial Energy Efficiency Requirements.

The Project would not conflict with any of the federal, State, or local plans for renewable energy and energy efficiency. Because the Project would comply Title 24 and with City of Rialto CAP measures, no conflict with existing energy standards and regulations would occur. Therefore, impacts associated with renewable energy or energy efficiency plans would be considered less than significant.

Cumulative Impacts

As discussed above, the proposed Project would not cause an energy impact to occur. Implementation of the proposed Project would not result in significant unavoidable energy impacts and would therefore not result in a new or substantially more severe project-specific or cumulative energy impact than those already analyzed. The Project's contribution to energy use would less than cumulatively considerable.

Mitigation Program

Mitigation Measure 5.12-6 of the Airport Specific Plan EIR related to energy conservation is applicable to the Project.

MM 5.12-6 All construction shall be done within the guidelines established by State building regulations and the Uniform Building Code (UBC) as they relate to energy conservation including such measures as solar heating for water and the use of landscaping to shade buildings.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to energy or a substantial increase in the severity of a previously identified significant impact evaluated in the Airport Specific Plan EIR would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the Project would not result in any new impacts, or increase the severity of the previously identified impacts. There are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Airport Specific Plan EIR. Additionally, no new information of substantial importance is known that would impact the prior finding of less than significant with mitigation. The proposed Project would have a less than significant impact on energy. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.7 Geology and Soils

Threshold (a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving the:

- **i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**
- **ii) Strong seismic ground shaking?**
- **iii) Seismic-related ground failure, including liquefaction?**
- **iv) Landslides?**

Threshold (b) Would the project result in substantial soil erosion or the loss of topsoil?

Threshold (c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Threshold (d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?

Threshold (e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Threshold (f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Summary of Impacts Identified in the Airport Specific Plan EIR

Geology and soil resources are addressed in Section 5.3, Geology, Soils and Seismicity, of the Airport Specific Plan EIR. The Airport Specific Plan EIR noted that there are no faults across the Airport Specific Plan area. However, Rialto, like most areas of Southern California, is located in a seismically active region. The presence of several active faults in Southern California could result in strong seismic shaking (horizontal ground accelerations). The Airport Specific Plan EIR included Mitigation Measures 5.3-1A through 5.3-1D that require future development comply with the seismic design requirements of the Uniform Building Code (subsequently referred to as the California Building Code) and conduct a geotechnical investigation. Impacts were determined to be less than significant with mitigation.

Impacts related to liquefaction were not identified as a potential hazard due to the depth of the water table. Potential impacts related to soil erosion were reduced to a less than significant level with implementation of Mitigation Measure 5.3-2A requiring future development provide approved Erosion Control Plans with measures such as the placement of sandbags if grading is set to occur from October to March, minimizing the length of time that soil is exposed, and using hydroseeding or other similar methods to encourage revegetation of graded areas planed for development in subsequent phases. Implementation of measures related to compliance with seismic design parameters from the California Building Code would reduce impacts. Additional measures include the preparation of a geotechnical investigation, a requirement that building plans are reviewed for seismic design by a qualified

professional, and a requirement that building plans are reviewed and approved by the City's Building and Safety Department.

At the time that the Airport Specific Plan EIR was prepared, the State CEQA Guidelines checklist addressed paleontological resources as a part of Cultural Resources. Paleontological resources are addressed in Section 5.7, Cultural Resources, of the Airport Specific Plan EIR. The Airport Specific Plan EIR noted that the Airport Specific Plan area is underlain by surficial deposits of varying thickness of Older Quaternary Alluvium and Recent Alluvium. The paleontological sensitivity of Older Quaternary Alluvium is moderate to high and the paleontological sensitivity of and Recent Alluvium is low. The Airport Specific Plan found that potentially fossiliferous geologic units underlie the entire Airport Specific Plan area and excavations in and at all depths of the quaternary deposits should be expected to produce significant vertebrate fossils.

Accordingly, the Airport Specific Plan EIR identified pre-construction measures, Mitigation Measures 5.7-1A, 5.7-1B, and 5.7-1C, which require the retention of a Certified Vertebrate Paleontologist (CVP), preparation of a paleontological resource monitoring program, and the presence of the CVP at a pre-grading conference to explain the procedures related to the paleontological resource monitoring program. Mitigation Measures 5.7-1D through 5.7-1J, identify procedures related to paleontological field monitoring and protocols in the event of fossil discovery during construction. Mitigation Measures 5.7-1K and 5.7-1L require projects to provide a Final Paleontological Resources Report of Findings. The Airport Specific Plan EIR found that implementation of these mitigation measures reduced potential impacts to paleontological resources to a less than significant level.

Project-Specific Analysis and Significance Determination: No new impact; no substantial change from previous analysis.

The Airport Specific Plan and Airport Specific Plan EIR assumed the development of the project site with general manufacturing-related land uses. As such, the findings for the proposed Project are consistent with the Airport Specific Plan EIR. According to the Geotechnical report prepared for the proposed Project (see **Appendix C**), the project site is not located within an Alquist-Priolo Earthquake Fault Zone and there are no known active faults in the project vicinity. Several active faults are near the project site, including the San Jacinto Fault, approximately 1.6 miles from the project site; the Cucamonga Fault, approximately 2.6 miles from the site; the South San Andreas Fault, located approximately 4.9 miles from the site; and the Red Hill Fault, approximately 5.9 miles from the site. The Geotechnical report noted that potential for surface fault rupture is low.

Project construction would be required to conform to the seismic design requirements of the 2019 California Building Code and California Health and Safety Code (or applicable adopted codes at the time of plan submittal or grading and building permit issuance for construction). The building and safety standards established by these codes have been developed to address structural integrity during a seismic event. State laws and local ordinances require that, prior to construction, potential seismic hazards be identified and mitigated, as needed, to protect public health and safety from substantial risks through appropriate engineering practices. Impacts related to strong seismic ground shaking could be potentially significant; however, compliance with City and State regulatory requirements would reduce impacts to a less than significant level. Additionally, the Project would need to comply with the City of Rialto Municipal Code, Chapter 11.12, Excavations and Fills, which requires approval of a soil engineering and engineering geology report. The Excavation and Grading Code also requires that recommendations included in the

reports and approved by the development services and public works departments be incorporated in the grading plans or specifications.

The project site is not located within the areas susceptible to liquefaction and related ground failure[11]. The Geotechnical report indicated that the liquefaction potential of the site is considered to be low due to the dense soil and absence of shallow groundwater conditions. There are no known geologic conditions on the project site that would render development infeasible. Compliance with the City's Municipal Code would reduce the risk associated with seismic-related ground failure and associated liquefaction, lateral spreading, or subsidence to a less than significant level. The proposed Project would not result in a new specific impact or an increase in the severity of an impact that was identified in the Airport Specific Plan EIR and would therefore be consistent with the effects of implementation of the Airport Specific Plan.

The project site is located at an elevation of approximately 1,638 to 1,621 feet above msl, sloping from the northwest corner of the site to the southeast corner. The Geotechnical Report indicated that there are no known landslides at the site, nor is the site in the path of any known or potential landslides. The project site is not subject to the potential for a landslide. According to the Earthquake Zones of Required Investigation Map, the site is not located within a landslide zone nor a liquefaction landslide overlap zone[12]. The proposed Project would be required to comply with all applicable building code regulations and engineering design standards related to shaking hazards and geologic stabilization. Therefore, the proposed Project would not result in a new impact or an increase in the severity of an impact that was identified in the Airport Specific Plan EIR and would therefore be consistent with the effects of implementation of the Airport Specific Plan.

The project site has been disturbed and a portion of the site is paved. Consistent with the assumptions of the Airport Specific Plan EIR, disturbance of the ground surface at the project site would occur during grading of the site. The project site would be graded, and foundation excavation would require 16,187 cy of cut and 7,794 cy of fill, with approximately 9,200 cy of soil to be exported. Grading and earthwork activities during construction would expose soils to potential short-term erosion by wind and water. However, the increased erosion rates and the consequent downslope and downwind movement of sediment can be mitigated by proper and strict erosion control measures enacted during grading.

All demolition and construction activities within the City would be required to comply with California Building Code standards, which would ensure implementation of appropriate measures during grading activities to reduce soil erosion. In addition, all new developments would be subject to regional and local regulations pertaining to construction activities. Specifically, development that is greater than five acres would be required to comply with the provisions of the General Construction Activity Stormwater Permit adopted by the SWRCB, which would require the employment of best management practices (BMPs) to limit the extent of eroded materials from a construction site. All development that is between one and five acres is required to comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Phase II regulations concerning the discharge of eroded materials and pollutants from construction sites. Compliance with policies in the Airport Specific Plan would further ensure that the proposed Project would not result in substantial soil erosion or loss of topsoil. Further, compliance with the NPDES permit would minimize effects from erosion and ensure consistency with the Regional Water

[11] Department of Conservation. (2022). *Earthquake Zones of Required Investigation.* https://maps.conservation.ca.gov/cgs/EQZApp/app/. Accessed March 25, 2022.

[12] Department of Conservation. (2022). *Earthquake Zones of Required Investigation.* https://maps.conservation.ca.gov/cgs/EQZApp/app/. Accessed March 25, 2022.

Quality Control Board (RWQCB) Water Quality Control Plan. The proposed Project's impact on soil erosion would be less than significant, similar to those impacts previously analyzed in the Airport Specific Plan EIR.

The proposed Project would be required to comply with City of Rialto Municipal Code, Chapter 11.12, Excavations and Fills, which requires approval of a soil engineering and engineering geology report that includes analysis of expansive soils at the project site. The Excavation and Grading Code requires that recommendations included in the reports and approved by the Development Services and Public Works Departments be incorporated in the grading plans or specifications. Compliance with the Municipal Code and California Building Code regulations related to expansive soils would reduce impacts related to expansive soils to less than significant level.

The Project would connect to utility infrastructure and would not use septic tanks. As a result, no impacts associated with the use of septic tanks would occur as part of the proposed Project's implementation.

With respect to paleontological resources, potentially fossiliferous geologic units underlie the project site. There is a probability that scientifically significant vertebrate fossils would be uncovered during subsurface excavation. Consistent with the Airport Specific Plan EIR, the Applicant would be required to cease grading if any artifacts are discovered and to report the find to a qualified institution. Therefore, impacts would be less than significant, and there are no changes or new significant information that would require preparation of subsequent CEQA documentation.

Accordingly, no new impacts relative to adverse effects related to geology, soils, or paleontological resources would substantially increase the severity of a previously identified impact evaluated in the Specific Plan EIR would occur. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Specific Plan EIR was certified is available that would impact the prior finding of less than significant.

Cumulative Impacts

As discussed above, the proposed Project would not cause a new geologic or paleontological impact to occur, nor an increase in the severity of an impact previously disclosed in the Airport Specific Plan EIR. As such, the Project would not cumulatively contribute to a cumulatively considerable impact related to geologic or paleontological resources.

Mitigation Program

Mitigation Measures 5.3-1A, 5.3-1B, 5.3-1C, 5.3-1D, and 5.3-2A from the Airport Specific Plan EIR associated with geology and soils are applicable to the proposed Project. With respect to paleontological resources, Mitigation Measures 5.7-1A through 5.7-1L are applicable.

MM 5.3-1A Subsequent developments shall be required to comply with the standards set forth in the Uniform Building Code (most recent edition) to assure seismic safety to the satisfaction ‹if the Building and Safety Department.

MM 5-3-1B Prior to issuance of building permits, a structural engineer, civil engineer or architect, experienced with earthquake-resistant design, shall sign off on all building plans to determine the adequacy of seismic criteria for project structures, and to recommend appropriate design changes, if needed.

MM 5.3-1C Prior to issuance of building permits, the Building and Safety Department, shall review and approve building plans to assure compliance with the latest Building Code as adopted by the City of Rialto.

MM 5.3-1D Prior to the issuance of the first grading permit within each Specific Plan Planning Area (excluding the Neighborhood Commercial and residential areas), the developer shall contract with a qualified geotechnical engineer to conduct a geotechnical investigation into the soil conditions and properties for the Planning Area and shall prepare a geotechnical conditions report in a manner meeting the approval of the Building and Safety Department.

MM 5.3-2A Erosion Control Plans shall be prepared and approved by the Building and Safety Department, prior to issuance of a grading permit, for projects over five acres in size. The Erosion Control Plan Shall outline methods that shall be implemented to control erosion from graded or cleared portions of the site. The erosion control measures may include one or more of the following.

- Placing sandbags along the perimeter of the project site prior to initial grading if grading is to be undertaken during the rainy season (October to March).
- Minimizing the length of time that soils lie exposed.
- Revegetating (landscaping, hydro seeding or any other method of providing vegetation cover) graded areas, in a manner approved by the City if determined to be required for erosion control in areas not planned for development until subsequent phases. Landscaping and hydro-seeding should be under the direction of a licensed landscape architect and approved by the City.

MM 5.7-1A Prior to the issuance of a grading permit, the project applicant shall direct a Certified Vertebrate Paleontologist (CVP) to provide written evidence (letter of verification) indicating that a CVP has been retained to monitor all earth-disturbing construction-related activities, and salvage, prepare, catalogue an4 document significant fossil finds as appropriate.

MM 5.7-IB Prior to initiation of construction activity, the CVP shall prepare a paleontological resource program and procedure plan which details methods for paleontological resource surveillance (monitoring) which includes: a schedule for grading monitoring to be maintained when earth-disturbing constructi0n-related activities are being conducted within fossiliferous geologic units; assessing the significance of and need to mitigate (salvage) fossil finds; and actions to be taken in the event that significant fossils, requiring mitigation are discovered.

MM 5.7-1C The City shall require that a CVP be present at the pre-grading conference to establish and explain procedures for paleontological resource surveillance, procedures for temporarily and long-term halting or redirecting work to permit sampling, identification, and evaluation of the fossils, and explain the roles and responsibilities of the CVP, field supervisors, and paleontological field monitors (staff paleontologists).

MM 5.7-1D Paleontologic monitoring, supplemented by-weekly periodic in-grading supervisory inspections by the CVP (usually 1/8 of monitoring hours), shall be maintained when earth-

disturbing, construction-related activities occur in any previously undisturbed Quaternary geologic unit within the study area. The monitoring levels shall be in accordance with the recommendations below. Variations (increases/decreases) in the levels of mitigation monitoring can only be determined by CVP in consultation with the City.

- Older Quaternary Alluvium - Half-time monitoring; full-time when concentrations of significant fossils are encountered.
- Recent Alluvium - 1/8 time; full-time when concentrations of significant fossils are encountered.

MM 5.7-1E When earth-disturbing, construction-related activities are being conducted concurrently in more than one area, more than 1/4 mile apart, an additional monitor shall be necessary for each separate earth- disturbing construction area.

MM 5.7-1F Paleontological field monitors shall be equipped to : salvage minor concentrations of fossils as they are unearthed to avoid construction delays, and/or be able to direct the removal of sediments samples which are likely to contain the remains of small and/or micro-vertebrate fossils.

MM 5.7-1G Regardless of the paleontological sensitivity assigned to fossiliferous sediments, the area around all fossil localities (recorded and unrecorded) discovered during the pre-construction literature and records search or established during pre-construction surveys, quarrying operations, geotechnical investigations, or during mitigation monitoring of construction activities, shall be monitored on a full-time basis during any construction activity until the fossil locality is completely mitigated. As determined by the CVP, the area to be monitored around each fossil locality may include an area up to a maximum of 500 feet on all sides of the fossil locality, within the project grading limits.

MM 5.7-1H If significant concentrations of fossils are encountered, which cannot be collected by the paleontological field monitor during normal monitoring time, salvage operations shall be initiated and completest as quickly as feasible. The salvage operations shall be conducted under the direction of the CVP, or his/her designated representative, and coordinated with the on-site grading foreman. As soon as it is feasible and reasonable, the property developer and/or City shall be notified regarding the need for, and initiation of, any paleontologic salvage operation.

MM 5.7-1I If any fossil microfauna are encountered in on-site sediments (specifically small fossil vertebrates), 6,000 pounds of representative sediment samples shall be screen-washed, “floated” and/or “picked” in accordance with current SVP/SBCM protocols to recover small and/or micro-paleontologic resources.

MM 5.7-1J Fossils collected during salvage and/or screen washing activities shall be curated to the point of identification. Curation involves such activities as the removal of excess matrix, specimen stabilization, time numbering, identification, cataloging, etc.) and temporary storage by the CVP until they are accessioned to the City-designated institution for permanent protection.

MM 5.7-1K Prior to the issuance of a precise grading permit, a Final Paleontological Resources Report of Findings shall be prepared for submission, review and approval by the City and/or SBCM. The report shall include grading dates, methodologies, an itemized inventory of specimens, and analysis of the significance of encountered fossils, to the SBCM or another suitable repository with a retrievable storage system.

MM 5.7-1L Upon approval of the Final Paleontological Resources Report of Findings, a copy of the final report and all curated fossils shall be accessioned to a City-designated institution, such as the SBCM, for permanent protection where they will be available for research. Accessioning of the fossils Signifies completion of the program to mitigate impacts to paleontological resources.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to geology and soils or paleontological resources or a substantial increase in the severity of a previously identified significant impact evaluated in the Airport Specific Plan EIR would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the Project would not result in any new impacts, or increase the severity of the previously identified impacts. There are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Airport Specific Plan EIR. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would impact the prior finding of less than significant with mitigation. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.8 Greenhouse Gas Emissions

Threshold (a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Threshold (b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Airport Specific Plan EIR

The Airport Specific Plan EIR did not evaluate the effects of greenhouse gas (GHG) emissions. At the time of the Airport Specific Plan EIR's certification in 1997, the State CEQA Guidelines did not require this topic to be analyzed. On March 18, 2010, amendments to the State CEQA Guidelines took effect which set forth requirements for the analysis of GHG emissions under CEQA. Since the Airport Specific Plan EIR has already been certified, the determination of whether GHG emissions and climate change needs to be analyzed for this specific development is governed by the law on supplemental or subsequent EIRs (PRC §21166 and CEQA Guidelines §§15162 and 15163). GHG emissions and climate change are not required to be analyzed under those standards unless it constitutes "new information of substantial importance, which was not known and could not have been known at the time" the Airport Specific Plan EIR was certified (State CEQA Guidelines §15162(a)(3)).

The issue of GHG emissions and climate change impacts is not new information that was not known or could not have been known at the time of the certification of the Airport Specific Plan EIR. The U.S. EPA publishes an annual GHG inventory (Inventory of U.S. Greenhouse Gas Emissions and Sinks),[13] which tracks the national trend in GHG emissions and removals back to 1990.

Therefore, the fact that GHG emissions could have a significant adverse environmental impact was known at the time the Specific Plan was approved and the Airport Specific Plan EIR was certified. Consistent with the statutory language, the courts have repeatedly held that new information that "was known" or "could have been known with the exercise of reasonable diligence" at the time of EIR certification does not trigger the supplemental EIR standard (*Citizens for Responsible Equitable Environmental Development v. City of San Diego* (2011) 196 Cal.App.4th 515, 532 ("CREED II"); ALARM, supra, 12 Cal.App.4th at 1800–1803).

Although the City finds that GHG impacts and climate change is not "new information" under PRC Section 21166, the following analysis for the proposed Project is provided for informational purposes.

Global Climate Change

Addressing GHG emissions generation impacts requires a lead agency to determine what constitutes a significant impact. The State CEQA Guidelines specifically allow lead agencies to determine thresholds of significance that illustrate the extent of an impact and are a basis from which to apply mitigation measures. This means that each agency is left to determine whether a project's GHG emissions would have a "significant" impact on the environment. The guidelines direct that agencies are to use "careful judgment" and "make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" the project's GHG emissions (14 CRC §15064.4(a)).

Due to the nature of global climate change, it is not anticipated that any single development project would have a substantial effect on global climate change. GHG emissions from a project would combine with

[13] A greenhouse gas "sink" is a process, activity, or mechanism that absorbs more greenhouse gases than it releases.

emissions emitted across California, the United States, and the world to cumulatively contribute to global climate change.

South Coast Air Quality Management District Thresholds

On December 5, 2008, the SCAQMD Governing Board adopted a 10,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) industrial threshold for projects where the SCAQMD is the lead agency. The SCAQMD formed a GHG CEQA Significance Threshold Working Group (Working Group) to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. This Working Group was formed to assist SCAQMD's efforts to develop a GHG significance threshold and included a wide variety of stakeholders including the State Office of Planning and Research (OPR), CARB, the Attorney General's Office, a variety of city and county planning departments in the Air Basin, various utilities such as sanitation and power companies throughout the Air Basin, industry groups, and environmental and professional organizations. However, the SCAQMD has not announced when a GHG thresholds for land use projects will be presented to the governing board where the SCAQMD is not the lead agency.

The Working Group proposed a tiered approach to evaluating GHG emissions for development projects where SCAQMD is not the lead agency, wherein projects are evaluated sequentially through a series of "tiers" to determine whether the project is likely to result in a potentially significant impact due to GHG emissions. With the tiered approach, a project is compared against the requirements of each tier sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt from SB 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold.

As noted above, the SCAQMD has adopted a threshold of 10,000 $MTCO_2e$ per year for industrial projects. A 3,000 $MTCO_2e$ threshold was proposed for non-industrial projects but has not been adopted. During Working Group Meeting #7, it was explained that the 10,000 $MTCO_2e$ threshold was derived using a 90 percent capture rate of a large sampling of industrial facilities. The SCAQMD concluded that projects with emissions less than the screening threshold would not result in a significant cumulative impact. During Meeting #8, the Working Group defined industrial uses as production, manufacturing, and fabrication activities or storage and distribution (e.g., warehouse, transfer facility, etc.). Additionally, the Working Group specified that a warehouse is considered to be an industrial project.[14] Further, the Working Group indicated that the 10,000 $MTCO_2e$ per year threshold applies to both emissions from construction and operational phases plus indirect emissions (electricity, water use, etc.). During the GHG CEQA Significance Threshold Working Group Meeting #15, the SCAQMD noted that it was considering extending the industrial GHG significance threshold for use by all lead agencies.

Tier 4 consists of three decision tree options. Under the Tier 4 first option, SCAQMD initially outlined that a project would be excluded if design features and/or mitigation measures resulted in emissions 30 percent lower than business as usual emissions. However, the Working Group did not provide a recommendation for this approach. The Working Group folded the Tier 4 second option into the third option. Under the Tier 4 third option, a project would be excluded if it was below an efficiency-based threshold of 4.8 $MTCO_2e$ per service population per year. Tier 5 would exclude projects that implement

[14] South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #8*, 2009.

off-site mitigation (GHG reduction projects) or purchase offsets to reduce GHG emission impacts to less than the proposed screening level.

Tier 3 Screening Thresholds. When the tiered approach is applied to a proposed project, and the project is found not to comply with Tier 1 or Tier 2, the project's emissions are compared against a screening threshold, as described above, for Tier 3. The screening threshold formally adopted by SCAQMD is an "interim" screening threshold for stationary source industrial projects where the SCAQMD is the lead agency under CEQA. The threshold was termed "interim" because, at the time, SCAQMD anticipated that CARB would be adopting a statewide significance threshold that would inform and provide guidance to SCAQMD in its adoption of a final threshold. However, no statewide threshold was ever adopted, and the interim threshold remains in effect.

For projects for which SCAQMD is not a lead agency, no screening thresholds have been formally adopted. However, as noted above, the SCAQMD Working Group has recommended a threshold of 10,000 $MTCO_2e$/year for industrial projects and 3,000 $MTCO_2e$/year for residential and commercial projects. SCAQMD determined that these thresholds would "capture" 90 percent of GHG emissions from these sectors, "capture" meaning that 90 percent of total emissions from all new projects would be subject to some type of CEQA analysis (i.e., found potentially significant).[15]

The numeric bright line and efficiency-based thresholds were developed to be consistent with CEQA requirements for developing significance thresholds, are supported by substantial evidence, and provide guidance to CEQA practitioners and lead agencies with regard to determining whether GHG emissions from a proposed project are significant.

In *Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 62 Cal. 4th 2014, 213, 221, 227, following its review of various potential GHG thresholds proposed in an academic study, [Crockett, *Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World* (July 2011), 4 Golden Gate U. Envtl. L. J. 203], the California Supreme Court identified the use of numeric bright-line thresholds as a potential pathway for compliance with CEQA GHG requirements. The study found numeric bright-line thresholds designed to determine when small projects were so small as to not cause a cumulatively considerable impact on global climate change was consistent with CEQA. Specifically, California PRC Section 21003(f) provides it is a policy of the State that "[a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment." The California Supreme Court-reviewed study noted, "[s]ubjecting the smallest projects to the full panoply of CEQA requirements, even though the public benefit would be minimal, would not be consistent with implementing the statute in the most efficient, expeditious manner. Nor would it be consistent with applying lead agencies' scarce resources toward mitigating actual significant climate change impacts." (Crockett, *Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World* (July 2011), 4 Golden Gate U. Envtl. L. J. 203, 221, 227.)

The City of Rialto has not adopted GHG significance thresholds but may set a project-specific threshold based on the context of each particular project, including using the SCAQMD Working Group expert

[15] SCAQMD, "Staff Report: Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans," December 5, 2008, Attachment E: "Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold," October 2008, p. 3-2.

recommendation, for this Project because: (1) it is in the same air quality basin that the experts analyzed; (2) it is an industrial project; and, (3) as previously addressed, there is a factual basis to support why the experts believe that projects with less than 10,000 $MTCO_2e$/yr would have less than significant contributions to GHG emissions.

As the project involves the construction of a new warehouse building, the 10,000 $MTCO_2e$ per year industrial screening threshold has been selected as the significance threshold, as it is most applicable to the proposed Project. This threshold is selected because the proposed Project is analogous to an industrial use much more closely than any other land use such as commercial or residential in terms of its expected operating characteristics. Typical industrial zoned areas include storage facilities, warehouses, plants, and airports, while commercial land uses are generally designated as businesses that have some kind of interaction with the public and typically include offices, retail stores, hotels, or restaurants. Additionally, to ensure that the threshold is conservative in its application, although the SCAQMD uses their adopted 10,000 $MTCO_2e$ threshold to determine the significance of stationary source emissions for industrial projects, the 10,000 $MTCO_2e$ threshold used in the analysis is conservatively applied to all sources of project-related GHG emissions whether stationary source, mobile source, area source, or other.

As noted in the academic study, *Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World* (Crockett, 2011), the fact that small projects below a numeric bright line threshold are not subject to CEQA-based mitigation does not mean such small projects do not help the State achieve its climate change goals. Even small projects participate in or comply with non-CEQA-based GHG reduction programs, such constructing development in accordance with statewide GHG-reducing energy efficiency building standards (CalGreen or Title 24 energy-efficiency building standards).[16] Moreover, as workers buy cars and gasoline and as future tenants of the industrial building buy trucks and diesel from manufacturers regulated by the State to reduce GHG emissions, the GHG generated by a project often reduces over time, as demonstrated in the GHG modeling addressed later in this section.[17]

As noted above, the 2017 CARB Scoping Plan details how the State will reduce GHG emissions to meet the 2030 target set by Executive Order B-30-15 and codified by SB 32. The 2017 Scoping Plan includes various goals for reducing GHG emissions from energy generation, transportation fuel, the extension of the Cap and Trade program, among others. For example, the 2017 Scoping Plan includes the SB 350 renewable portfolio standard requirement of 50 percent by 2030, increased stringency in the low carbon fuel standard, cleaner technology and fuel mobile source strategy, sustainable freight action plan, short-lived climate pollutant reduction strategy, increased stringency of SB 375 targets, extension of the Cap and Trade program, refinery sector reductions, and development of an Integrated Natural and Working Lands Action Plan to create carbon sinks. Additionally, SB 100 increased California's renewable electricity

[16] Crockett, *Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World,* July 2011, 4 Golden Gate U. Envtl. L. J. 203, 221, 227, 229-235).

[17] On pages 3-2 and 3-3 of the SCAQMD's *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* (October 2008), the SCAQMD notes that a GHG significance threshold based on a 90 percent emission capture rate may be more appropriate to address the long-term GHG impacts. Further, a 90 percent emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. This assertion is based on the fact that the SCAQMD estimates that these GHG emissions would account for less than one percent of future 2050 statewide GHG emissions target (85 $MMTCO_2e$/yr). In addition, these small projects would be subject to future applicable GHG control regulations that would further reduce their overall future contribution to the statewide GHG inventory.

portfolio from 50 to 60 percent by 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045.

Project-Specific Analysis and Significance Determination: Less Than Significant Impact

Short-Term Construction Greenhouse Gas Emissions. The Project would result in direct emissions of GHGs from construction activities. The approximate quantity of daily GHG emissions generated by construction equipment for the Project is identified in **Table 3.8-1: Construction-Related Greenhouse Gas Emissions**. As shown, the Project would result in the generation of approximately 363.41 $MTCO_2e$ over the course of construction. Construction GHG emissions are typically summed and amortized over a 30-year period, then added to the operational emissions.[18] The amortized Project construction emissions would be approximately 12.11 $MTCO_2e$ per year. Once construction is complete, the generation of these GHG emissions would cease.

Table 3.8-1: Construction-Related Greenhouse Gas Emissions

Category	$MTCO_2e$
2022 Construction	134.10
2023 Construction	229.31
Total Construction Emissions	363.41
30-Year Amortized Construction	12.11

Source: CalEEMod version 2020.4.0. Refer to Appendix D for model outputs.

Long-Term Operational Greenhouse Gas Emissions. Operational or long-term emissions occur over the life of the Project. GHG emissions would result from direct emissions such as project-generated vehicular traffic, on-site combustion of natural gas, and operation of any landscaping equipment. Operational GHG emissions would also result from indirect sources such as off-site generation of electrical power, the energy required to convey water to, and wastewater from the Project, the emissions associated with solid waste generated from the Project, and any fugitive refrigerants from air conditioning or refrigerators.

Total GHG emissions associated with the Project are summarized in **Table 3.8-2: Project Greenhouse Gas Emissions**. As shown in the table, the Project would generate approximately 1,483.35 $MTCO_2e$ annually from both construction and operations. Project-related GHG emissions would not exceed the 10,000 $MTCO_2e$ per year threshold and impacts would be less than significant.

[18] Amortization period is based on the standard 30-year assumption of the South Coast Air Quality Management District (South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13,* August 26, 2009).

Table 3.8-2: Project Greenhouse Gas Emissions	
Emissions Source	**CO_2e Emissions, metric tons/year**
Area	<0.01
Energy	64.31
Mobile	1,226.48
Energy for Cargo Handling Equipment	46.73
Waste	47.64
Water	86.07
Subtotal Total	1,471.24
Amortized Construction Emissions	12.11
Total Annual Project GHG Emissions	**1,483.35**
Threshold	10,000
Exceeds Threshold?	**No**
Source: CalEEMod version 2020.4.0. Refer to Appendix D for model outputs.	

Consistency with the City of Rialto Climate Adaptation Plan. The City of Rialto Climate Adaptation Plan (Rialto CAP) [19]outlines goals to reduce energy consumption and GHG emissions to become a more sustainable community. Goals include:

- Prevent truck routes from disproportionately impacting disadvantaged communities;
- Create a clean air checklist for new development of sensitive land uses;
- Increase use of low-emission and electric vehicles where feasible;
- Adopt building and maintenance standards that reflect the regional best practices in reducing urban heat island effect.

The Rialto CAP focuses on municipal measures that the City would implement to prepare the City and its residents for the expected impacts of climate change. The Rialto CAP evaluates Rialto's vulnerabilities and capabilities and propose policy around four climate-related hazards: air pollution, extreme heat, wildfire, and flooding. The Rialto CAP does not include project specific GHG thresholds or policies for individual development projects. The CAP builds on the City's existing General Plan Safety Element and Local Hazard Mitigation Plan. The proposed Project would be consistent with the Rialto CAP through compliance with applicable energy efficiency standards and the preparation of an Air Quality Assessment, the latter which has been prepared as a part of this Addendum and finds that impacts to sensitive receptors would be less than significant.

The proposed Project would be required to comply with all building codes in effect at the time of construction which include energy conservation measures mandated by Title 24 of the California Building Standards Code – Energy Efficiency Standards and the California Green Building Standards. Because Title 24 standards require energy conservation features in new construction (e.g., high-efficiency lighting, high-efficiency heating, ventilating, and air-conditioning (HVAC) systems, thermal insulation, double-glazed windows, water-conserving plumbing fixtures), these standards indirectly regulate and reduce GHG emissions. California's Building Energy Efficiency Standards are updated on an approximately three-year

[19] Rialto Climate Adaption Plan. https://www.yourrialto.com/DocumentCenter/View/1761/Rialto-Climate-Adaptation-Draft-Plan-July-2021.

cycle. The most recent 2019 standards went into effect January 1, 2020. As discussed in Section 3.6, *Energy*, the Project's energy impacts would be less than significant.

Further, the Project would comply with the City's General Plan policies and State Building Code provisions designed to reduce GHG emissions. The proposed Project would also comply with all SCAQMD applicable rules and regulations during construction of the operational phase and would not interfere with the State's goals of reducing GHG emission to 1990 levels by 2020 as stated AB 32.

The GHG emissions associated with the proposed Project would be minimal when compared to those associated with the land uses in the Airport Specific Plan area and would be reduced through compliance with statewide measures, such as State Building Code provisions, Title 24 Energy Efficiency Standards, and California Green Building Standards. In addition, the Project would be consistent with Title 24, AB 32, SB 32, and the Rialto CAP. Therefore, the proposed Project would have a less than significant impact with regard to GHG emissions, and would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing GHG emissions. Impacts related to GHG emissions would be less than significant. Therefore, there are no changes or new significant information that would require preparation of subsequent CEQA documentation.

Cumulative Impacts

Due to the global nature of climate change, most projects will not result in GHG emissions that are individually significant. Therefore, it is accepted as very unlikely that any individual development project would have GHG emissions of a magnitude to directly impact global climate change. GHG emissions from the proposed Project would combine with emissions emitted across California, the United States, and the world to cumulatively contribute to global climate change. The Project's cumulative contribution of GHG emissions would be less than significant and the Project's cumulative GHG impacts would also be less than cumulatively considerable and potential impacts are considered less than significant.

Mitigation Program

No mitigation measures are required.

Conclusion

As discussed above, impacts related to GHG emissions were not analyzed in the Airport Specific Plan EIR. Based on the land use designation and the maximum FAR of 1, allowable development of the site in the Airport Specific Plan could be 208,217 sf. As such, the proposed development would generate fewer mobile source GHG emissions (due to the generation of fewer trips) and generate less energy emissions than assumed for the project site in the Airport Specific Plan EIR. Accordingly, impacts related to GHG emissions associated with the proposed Project would be less than when compared to the allowable uses for the project site assumed in the Airport Specific Plan EIR. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the Project would not result in any new significant impacts. Additionally, no new information of substantial importance is known that would result in significant effects not addressed in the Airport Specific Plan EIR. The proposed Project would have a less than significant impact on GHG emissions. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.9 Hazards and Hazardous Materials

Threshold (a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Threshold (b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?

Threshold (c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Threshold (d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and as a result, would create a significant hazard to the public or the environment?

Threshold (e) Would the project be located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area?

Threshold (f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Threshold (g) Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas?

Summary of Impacts Identified in the Airport Specific Plan EIR

The Airport Specific Plan EIR found the historical presence of hazardous material contamination in the Specific Plan area ranges from moderate to high, depending on the location within the Airport Specific Plan (i.e., Mid-Valley Sanitary Landfill, fireworks manufacturers, Rialto Municipal Airport, and industrial uses). These uses, in addition to illegal dumping in the southwest portion of the Airport Specific Plan area, have the ability to create an adverse environmental condition. The Airport Specific Plan EIR also determined that existing and future industries and businesses would continue to use, produce, and transport hazardous substances and waste. The Airport Specific Plan area is no longer proximate to any airports or within an airport land use plan. Airport Specific Plan EIR Mitigation Measures 5.13-1 and 5.13-2 require site-specific developments within or adjacent to the Industrial area along Locust Avenue and the Mid-Valley Sanitary Landfill to prepare parcel-specific assessments and provide protocols in the event that unknown waste is discovered during construction. Mitigation Measures 5.13-3A, 5.13-3B, and 5.13-3C provide requirements related to renovation or demolition of any on-site structures. Implementation of these mitigation measures reduces potential impacts to hazards and hazardous to less than significant levels.

Project-Specific Analysis and Significance Determination: No new impact; no substantial change from previous analysis.

Development of the project site with general manufacturing-related uses was contemplated in the Airport Specific Plan EIR. Therefore, impacts associated with the proposed Project would be similar to or less than those evaluated in the Airport Specific Plan EIR.

Exposure of the public or the environment to hazardous materials can occur through transportation accidents; environmentally unsound disposal methods; improper handling of hazardous materials or hazardous wastes (particularly by untrained personnel); and/or emergencies, such as explosions or fires. The severity of these potential effects varies by type of activity, concentration and/or type of hazardous materials or wastes, and proximity to sensitive receptors.

The proposed Project, similar to all development pursuant to the Airport Specific Plan, would be required to comply with regulations and standards established by applicable regulatory agencies, including the Department of Toxic Substances Control (DTSC), the U.S. EPA, and the Occupational Safety and Health Administration (OSHA). Compliance with applicable laws and regulations governing the use, storage, transportation, and disposal of hazardous materials would ensure that the proposed Project would not create a significant hazard to the public or the environment through the routine transport, storage, production, use, or disposal of hazardous materials.

Construction of the Project would involve the transport, use, and disposal of hazardous materials on and off of the project site, which include fuels, paints, mechanical fluids, and solvents, but would not be present in such a quantity or used in such a manner that would pose a significant hazard to the public. The routine transport, use, and disposal of these materials must adhere to federal, State, and local regulations for transport, handling, storage, and disposal of hazardous substances. Compliance with the regulatory framework would ensure Project construction would not create a significant hazard to the public or the environment.

The proposed Project is a warehouse facility and is not anticipated to result in releases of hazardous materials into the environment. The proposed facility would be expected to use limited hazardous materials and substances which would include cleaners, paints, solvents, and fertilizers and pesticides for site landscaping. The proposed Project would not create a significant impact through the transport, use, or disposal of hazardous materials since the facilities are required to comply with all applicable federal, State, and regional regulations which are intended to avoid impacts to the public and environment. These regulations ensure that hazardous materials/waste users, generators and transporters provide operational safety and measures to reduce threats to public health and safety.

A Phase I Environmental Site Assessment (ESA) was prepared by National Assessment Corporation (NAC) (see **Appendix E**) for the project site. No recognized environmental conditions at the project site were identified. The project site is not identified on the Cortese List, which is the list of hazardous materials sites that is compiled pursuant to Section 65962.5 of the California Government Code (https://dtsc.ca.gov/dtscs-cortese-list; accessed May 10, 2022). In addition to the Cortese List, federal, State, and local governmental agencies maintain other lists of sites where hazardous materials may be present or used. Further, the Phase I ESA did not identify the project site on databases that record properties with known or suspected releases of hazardous materials. The project site is not listed on the Geotracker database (http://geotracker.waterboards.ca.gov; accessed May 10, 2022) or the Envirostor website (http://www.envirostor.dtsc.ca.gov/public; accessed May 10, 2022). The project site does not appear on any databases that record leaks, spills, or other hazardous waste violations.

Per Envirostor and Geotracker, there are between 32 to 40 fireworks and pyrotechnic companies located off-site that are believed to have contributed to area-wide perchlorate contamination of the ground water. As a result, groundwater in this basin is no longer used for potable water. Both the Envirostor website and Geotracker database identified open cases north of the project site, referred to as the

"Rockets, Fireworks, and Flares" (RFF) site (formerly known as the B.F. Goodrich site) at 3196 N. Locust Avenue. The RFF site is a 160-acre area that also includes a six-mile long area of groundwater contamination downgradient of the 160-acre area in Rialto where volatile organic compounds (VOCs) and perchlorate have contaminated soil and groundwater. The 160-acre area is bordered by West Casa Grande Drive on the north, Locust Avenue on the east, Alder Avenue on the west, and an extension of Summit Avenue on the south. A map made available by the City of Rialto and the Regional Water Quality Control Board (**Appendix E**), indicates that the perchlorate plume extends beneath the project site. Site investigations and cleanup are ongoing.

The 160-acre area was part of a larger area acquired by the United States Army in 1942 to develop an inspection, consolidation, and storage facility for rail cars transporting ordnance to the Port of Los Angeles. Since the federal government sold the property in 1946, a portion of the property has been used by defense contractors, fireworks manufacturers, and other businesses that used perchlorate salts and/or solvents in their manufacturing processes or products. In 1956 and 1957, West Coast Loading Corporation manufactured and tested two products, photoflash flares and "ground-burst simulators," containing potassium perchlorate. From about 1957 to 1962, B.F. Goodrich Corporation conducted research, development, testing, and production of solid-fuel rocket propellant containing ammonium perchlorate, and used solvents in the manufacturing process. Since the 1960s, the 160-acre area has been used by a number of companies that manufactured or sold pyrotechnics, including Pyrotronics, Pyro Spectaculars, and American Promotional Events.

In 2002, the SWRCB began actively working with Potentially Responsible Parties and property owners to investigate soil and groundwater contamination at the B.F. Goodrich site and in surrounding areas. The U.S. EPA began assisting the SWRCB in 2002, providing technical, enforcement, and financial assistance. In 2008, after the SWRCB's efforts were stalled by legal challenges, the U.S. EPA increased its efforts at the site. In September 2009, the U.S. EPA added the B.F. Goodrich site to the Superfund National Priorities List.

Between 2003 and 2013, numerous investigations have been conducted to determine the extent of soil and groundwater contamination. The studies have included the collection and analysis of soil samples, the collection and analysis of soil gas samples, the installation of groundwater monitoring wells, and/or the collection and analysis of groundwater samples. The studies were overseen by the SWRCB, the U.S. EPA , and the DTSC.

Investigations carried out by U.S. EPA between 2008 and 2012 included a groundwater pump-and-treat system intended to intercept and remove contaminated groundwater spreading from the 160-acre source area. The 160-acre source area is where most or all of the contaminants entered the groundwater and testing has identified the highest levels of groundwater contamination. A second groundwater remedy was constructed between 2015 and 2021 to remove perchlorate from extracted groundwater; pipelines and pumps to convey the treated water from the treatment plant to the City of Rialto's water distribution system for use as drinking water supply; and a groundwater monitoring program. In January 2022, the U.S. EPA proposed a second groundwater cleanup remedy to address contaminated groundwater in the "mid-basin" area which has moved past downgradient of 160-acre area. Eleven multi-level groundwater monitoring wells were installed; testing is ongoing.

The Phase I ESA prepared for the project site indicates that groundwater is typically encountered at depths of between 250 and 400 feet below surface grade (bsg) in the site vicinity. Perched groundwater is

occasionally encountered at depths of approximately 100 feet bsg; therefore, it is not considered a threat to surface development. Given that the plume is known, responsible parties identified, and is not likely to impact surface development, the perchlorate plume is not considered an environmental concern for the proposed Project.

The Airport Specific Plan EIR required the preparation of a parcel-specific ESA prior to development activities. The documentation provided in this Addendum satisfies this measure. As prescribed in the mitigation, the Applicant shall prepare a soil management plan that would identify appropriate measures to be followed if contaminants are encountered during excavation. The appropriate measures shall identify personnel to be notified, emergency contacts, and a sampling protocol. The plan would include a provision stating at what point it is safe to continue with the excavation, and identify the person authorized to make that determination. Any removal, transportation, and disposal of impacted soil or groundwater would be performed in accordance with applicable federal, State, and local laws, regulations, and ordinances. Adherence with regulatory requirements and mitigation would reduce potential impacts to a less than significant level.

There are no schools within 0.25 mile of the project site. Accordingly, no new impacts relative to proximity to schools or a substantial increase in the severity of a previously identified significant impact evaluated in the Airport Specific Plan EIR would occur.

The former Rialto Municipal Airport, which was located approximately 1.5 miles southwest of the project site, closed in September 2014 and has since been demolished. The closest airport is the Flabob Airport, located approximately 11 miles south of the project site. Accordingly, the proposed Project is not located within the vicinity of a public use airport and would not create a safety hazard or excessive noise for people at the project site.

The proposed Project would not impair or physically interfere with an adopted emergency response or evacuation plan. Primary access to all major roads would be maintained during construction of the proposed Project. Adherence to all applicable regulations and General Plan policies would result in a less than significant impact with respect to interference with an adopted emergency response plan or emergency evacuation plan. Wildland fires are discussed in Section 3.19, *Wildfire*.

Similar to the Airport Specific Plan EIR, hazards and hazardous materials related impacts would be less than significant and there are no changes or new information requiring preparation of subsequent CEQA documentation. No new impact would result, nor would the impact previously identified be any more severe as a result of the proposed Project. Therefore, the proposed Project would be consistent with the effects of implementation of the Airport Specific Plan.

Cumulative Impacts

Impacts associated with hazardous materials are often site-specific and localized. The RFF site is a 160-acre area that also includes a six-mile long area of groundwater contamination downgradient of the 160-acre area in Rialto where VOCs and perchlorate have contaminated soil and groundwater. The perchlorate plume extends beneath the project site. Site investigations and cleanup are ongoing. The Phase I ESA prepared for the project site indicates that groundwater is typically encountered at depths of between 250 and 400 feet bsg in the site vicinity. Given that the plume is known, responsible parties identified, and is not likely to impact surface development, the perchlorate plume is not considered an environmental concern for the proposed Project. Therefore, the proposed Project would not cumulatively contribute

known groundwater contamination. Therefore, the proposed Project would not result in incremental effects to hazards or hazardous materials that could be compounded or increased when considered together with similar effects from cumulative projects.

Mitigation Program

Mitigation Measures 5.13-1 and 5.13-2 from the Airport Specific Plan EIR are applicable to the proposed Project. Mitigation Measures 5.13-3A, 5.13-3B, and 5.13-3C from the Airport Specific Plan EIR are not applicable to the proposed Project because there are no on-site structures, and therefore no demolition of structures would be conducted as a part of the proposed Project.

MM 5.13-1 Site-specific developments within or adjacent to the Industrial area along Locust Avenue and the Mid-Valley Sanitary Landfill shall prepare parcel-specific assessments, prior to development activities.

MM 5.13-2 The following is a cautionary measure to be implemented during grading activities. If unknown waste is discovered during construction by the contractor which he/she believes may involve hazardous waste materials, the contractor shall:

- Immediately stop work in the vicinity of the suspected contaminant, removing workers and the public from the area;
- Notify the Project Engineer of the implementing Agency;
- Secured the area as directed by the Project Engineer; and
- Notify the implementing agency's Hazardous Waste/Materials Coordinator.

Conclusion

Based on the analysis set forth in this Addendum, the proposed Project would not cause a new hazardous materials impact to occur, nor an increase in the severity of a hazardous material impact previously disclosed in the Airport Specific Plan EIR. Therefore, the proposed Project would not cause either a new cumulative impact to occur, nor an increase in the severity of a cumulative impact previously disclosed. There are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Airport Specific Plan EIR. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would impact the prior finding less than significant impact with mitigation. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.10 Hydrology and Water Quality

Threshold (a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Threshold (b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Threshold (c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

- **i) Result in a substantial erosion or siltation on- or off-site.**
- **ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.**
- **iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.**
- **iv) Impede or redirect flood flows.**

Threshold (d) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Threshold (e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Summary of Impacts Identified in the Airport Specific Plan EIR

Water quality and hydrology are discussed in Section 5.5, Water Resources, of the Airport Specific Plan EIR. The Airport Specific Plan EIR found that implementation of the Specific Plan would result in decreased infiltration to groundwater reserves, thereby creating increased surface runoff generated in the Airport Specific Plan area. However, implementation of the proposed storm drainage system identified in the Airport Specific Plan would reduce these impacts to less than significant levels. The Airport Specific Plan EIR also determined that construction runoff from disturbed areas within the Specific Plan area may contain silt and debris, resulting in short-term increases in the sediment load in the storm drain system serving the Specific Plan area. The Airport Specific Plan EIR also identified that general grading activities, including those related to demolition and construction (then regulated by Chapters 29 and 70 of the Uniform Building Code), which required erosion control. Further, development in the Airport Specific Plan area would be required to comply with NPDES permit regulations for erosion, siltation and contaminated runoff control. The Airport Specific Plan EIR determined that water quality may be impacted within the groundwater storage area due to the addition of chemicals, such as oils, grease, detergents, and fertilizers from urbanization. The Airport Specific Plan EIR also found that erosion and sedimentation during grading and construction of individual projects would occur only if adequate erosion control measures were not applied during and after the earthwork stage when disturbed soil is left temporarily unprotected.

Implementation of Mitigation Measures 5.5-1A, 5.5-1B, 5.5-2, and 5.5-3 require individual developments to pay a pro-rata share of the storm drain improvements; use stepping stones/bricks set in pervious materials for walkways, divert water to landscaped areas, and provide pervious paving wherever possible; comply with NPDES rules and regulations; and adherence of the adopted master plans of the Rialto Public

Works Department (Water Division), Fontana Water Company, and the West San Bernardino County Water District, as well as the guidelines and plans for the San Bernardino Flood Control District (SBCFCD). Implementation of these mitigation measures was found to mitigate the degradation of storm water and urban runoff associated with increased development to a less than significant level.

With respect to flood hazards, tsunamis, and seiches, the Initial Study for the Airport Specific Plan EIR noted that there are no large water bodies in the area. Therefore people and property would not be exposed to water-related hazards such as seiches or tsunamis. The Airport Specific Plan EIR found that the Specific Plan area was not within a 100-year flood zone.

Project-Specific Analysis and Significance Determination: No new impact; no substantial change from previous analysis.

The Airport Specific Plan EIR assumed that the project site would be developed and potential impacts associated with drainage and water quality were addressed. The land use designation for the project site in the Airport Specific Plan is General Manufacturing (I-GM). Therefore, the Airport Specific Plan EIR evaluated potential drainage and water quality impacts assuming that the project site would be developed with uses permitted under the I-GM land use designation, which includes manufacturing and warehousing uses. It is also noted that the site has been graded and partially paved and has been used since 2008/2009 for construction equipment storage. As such, potential effects associated with the proposed Project would be similar to or less than those evaluated in the Airport Specific Plan EIR.

Drainage and Preliminary Water Quality Management Plan reports were prepared for the proposed Project and are provided as **Appendix F** and **Appendix G**, respectively, to this Addendum. The proposed Project would meet stormwater treatment requirements in the San Bernardino MS4 Permit. Stormwater generated by the proposed development would be captured and conveyed to two on-site underground infiltration basins through a network of underground piping. The proposed basin would serve as both a water quality Best Management Practice (BMP) as well as an underground storage facility to detain and mitigate the peak flow rate. The Project would also construct swales between existing and proposed walls along the western and northern property lines to convey any ancillary off-site stormwater run-on from the adjacent properties to Locust Avenue and Lowell Street. The proposed Project would discharge 100-year overflows into the existing 102-inch reinforced concrete pipe (RCP) storm drain in Locust Avenue. Runoff would eventually flow to Cactus Basin #3, part of a network of detention basins located between Cactus Avenue and Ayala Drive, and then conveyed to the Rialto Channel.

To minimize water quality impacts during construction of the proposed Project, construction activities would be required to comply with a Stormwater Pollution Prevention Plan (SWPPP) consistent with the General Permit for Stormwater Discharge Associated with Construction Activity (Construction Activity General Permit). The SWPPP would incorporate BMPs such as gravel bags, silt fence, and fiber rolls. The proposed Project would create additional impervious surfaces. Similar to the development assumed under the Airport Specific Plan, the proposed Project would occur on a partially paved site and would not substantially decrease groundwater recharge. The proposed Project is consistent with the Airport Specific Plan and zoning designations and therefore the development envisioned for the project site would have been accounted for in the water supply estimates included in the General Plan. Further, there are no public water wells located on the project site and groundwater is not drawn from the area.

The proposed Project would not substantially alter the existing drainage patterns of the project site. The proposed condition would mimic the existing southeasterly drainage pattern. Runoff would drain to an

on-site underground infiltration system. The underground infiltration system would lengthen the time of concentration to mimic the existing conditions. The project site does not contain any streams or rivers; therefore, none would be altered by the proposed Project. The proposed Project is located over 40 miles east of the Pacific Ocean. There is no risk of exposure to inundation by seiche or tsunami. Accordingly, there is no significant risk of release of pollutants due to Project inundation.

The Project does not propose to use groundwater and as discussed above, the majority of the drainage would use underground infiltration retention systems, which would retain and treat water prior to discharging into the public storm drain system. Therefore, the proposed Project would not obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts to hydrology and water quality would be less than significant and there are no changes or new information on requiring preparation of subsequent environmental documentation.

Cumulative Impacts

As discussed above, the proposed Project would not cause a new drainage or water quality impact to occur, nor an increase in the severity of a drainage or water quality impact previously disclosed in the Airport Specific Plan EIR. As such, the proposed Project would not cumulatively contribute to a cumulatively significant impact related to water quality and drainage.

Mitigation Program

Mitigation Measures 5.5-1A, 5.5-1B, 5.5-2, 5.5-3, and 5.5-4 from the Airport Specific Plan EIR are applicable to the proposed Project.

MM 5.5-1A Individual developments shall be required to pay a pro-rata share of the storm drain improvements identified on Exhibit 22 and on Table 5-17.

MM 5.5-1B Individual development projects shall be required to reduce runoff by using stepping stones/bricks set in pervious materials for walkways, divert water to landscaped areas, and provide pervious paving wherever possible. Reduce landscape irrigation waste and runoff by water conserving irrigation systems, moisture sensing devices and avoidance of rounded landscaped areas.

The need to implement these types of runoff control measures shall be determined during individual project design review.

MM 5.5-2 For individual development projects, require compliance with NPDES rules and regulations, as well as applicable permits.

MM 5.5-3 The adopted master plans of the Rialto Public Works Department (Water Division), Fontana Water Company, and the West San Bernardino County Water District, as well as the guidelines and plans for the SBCFCD shall be adhered to in order to ensure continued water availability to the inhabitants of the City.

MM 5.5-4 The City shall support the development of reclaimed water facilities in the study area in an effort to decrease demands on the water resources of the groundwater basin.

Conclusion

Based on the comparative analysis provided in this Addendum, no new impacts relative to hydrology and water quality or an increase in the severity of a previously identified significant impact evaluated in the

Airport Specific Plan EIR would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the Project would not result in any new impacts, or increase the severity of the previously identified impacts. On-site drainage improvements would decrease the potential for water quality impacts and uncontrolled runoff. There are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Airport Specific Plan EIR. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would impact the prior finding of less than significant impact. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.11 Land Use and Planning

Threshold (a) Would the project physically divide an established community?

Threshold (b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Summary of Impacts Identified in the Airport Specific Plan EIR

The Rialto Municipal Airport ceased operations in 2014 and the former airport property and much of the properties proximate to the Rialto Municipal Airport that were suited to accommodate development were removed from the Airport Specific Plan and incorporated into the Renaissance Specific Plan, which was adopted by the City in 2010. Although the Rialto Municipal Airport no longer exists, the City's Rialto Airport Specific Plan serves as the zoning ordinance for parcels in the Airport Specific Plan area that were not removed from the Airport Specific Plan, primarily located northwest, west, and east of the former airport.

The Airport Specific Plan EIR identified the potential for land use conflicts between the proposed industrial, office, and retail uses adjacent to residential uses and airport uses. Several measures were identified to restrict activities in industrial and airport-related uses from sensitive uses through the use of buffers to screen different land uses and restrictions within Runway Protection Zones or Airport Safety Zones to reduce land use conflicts. Potential impacts related to inconsistencies with existing land use regulations were reduced to a less than significant level with the adoption of a General Plan Amendment and a Zone Change as part of the actions proposed with the Airport Specific Plan.

Project-Specific Analysis and Significance Determination: No new impact; no substantial change from previous analysis.

The land use designation for the project site in the Airport Specific Plan is General Manufacturing (I-GM). At the time that the Airport Specific Plan EIR was certified, the project site was vacant and was subsequently graded and partially paved and has been used since 2008/2009 for construction equipment storage. The proposed Project would not include any roadway extensions or other development features through currently developed areas. Therefore, the proposed Project, consistent with the assumptions in the Airport Specific Plan, would not physically divide an established community and there would be no impacts. Therefore, there are no changes or new significant information that would require preparation of subsequent CEQA documentation.

The City's General Plan Land Use Plan Map depicts the City's land use designations and indicates that the project site has a Business Park land use designations with a Specific Plan Overlay. The Business Park land use designation allows for a mix of commercial, office, research and development, laboratories, and light industrial uses. The City's Zoning Map identifies the project site as Airport Specific Plan. The Rialto Airport Specific Plan was adopted in 1997, although many portions of the Airport Specific Plan area were replaced by the adoption of the Renaissance Specific Plan. The Rialto Airport Specific Plan identifies the project site as General Manufacturing (I-GM). The Project's proposed industrial warehouse use would comply with the allowable uses identified in the Airport Specific Plan. The proposed Project is consistent with the pertinent land use planning and policy documents, including the General Plan, the City's Zoning Ordinance, and the Airport Specific Plan. Therefore, the proposed Project, similar to development pursuant to the General Plan, would not physically divide an established community and there would be

no impacts. Therefore, there are no changes or new significant information that would require preparation of subsequent CEQA documentation.

Cumulative Impact

The Project is consistent with applicable land use goals and policies. Although other changes in land use plans and regulations may have occurred with past and present projects in the area and may be necessary for individual future projects, such changes have been, and would be, required to demonstrate consistency with General Plan and other City policies such that no significant adverse cumulative impact has occurred or would occur from such changes. Given that the proposed Project is consistent with the land use policies of the applicable plans, the Project would not cumulatively contribute to cause an adverse land use impact based on a conflict with a plan or policy. Any associated physical impacts are covered in the individual topic sections. It is also anticipated that regional growth would be subject to review for consistency with adopted land use plans and policies by the County of San Bernardino, City of Rialto, and other cities in San Bernardino County, in accordance with the requirements of CEQA, the State Zoning and Planning Law, and the State Subdivision Map Act, all of which require findings of plan and policy consistency prior to approval of entitlements for development. Therefore, the proposed Project would not cumulatively contribute to any cumulative land use impacts.

Mitigation Program

Mitigation Measures 5.1-1A and 5.1-1B from the Airport Specific Plan EIR are not applicable because the Rialto Municipal Airport is no longer operational and the project site is not located in what would have been a Runway Protection Zone or Airport Safety Zone. Mitigation Measure 5.1-2 is not applicable because the Project is not related to a landfill expansion. Mitigation Measure 5.1-4 is not applicable because the project site is not on a boundary of the Rialto Airport Specific Plan area. Mitigation Measures 5.1-5 and 5.1-6 have already been implemented by the City of Rialto.

Conclusion

Based on the comparative analysis provided in this Addendum, no new impacts relative to land use or a substantial increase in the severity of a previously identified significant impact evaluated in the Airport Specific Plan EIR would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the Project would not result in any new impacts, or increase the severity of the previously identified impacts. There are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Airport Specific Plan EIR. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would impact the prior finding of less than significant with mitigation incorporated. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.12 Mineral Resources

Threshold (a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Threshold (b) Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Summary of Impacts Identified in the Airport Specific Plan EIR

The Airport Specific Plan EIR addressed mineral resources impacts in Section 5.4, *Natural Resources*. The Airport Specific Plan area includes three mineral resource sectors; however no mining activities were operational within these sectors at the time of the Airport Specific Plan analysis. The Airport Specific Plan EIR assumed that the site would be developed and did not identify the presence of or the potential for use of the site for mineral resource excavation. Accordingly, the Airport Specific Plan EIR determined that implementation of the Airport Specific Plan would result in a less than significant impact resulting from a loss of opportunity to extract aggregate resources in the Specific Plan area. Aggregate extraction within the mineral resource sectors was considered not feasible due to the small size of one of the sectors, existing uses and multiple ownership patterns, and uses planned by other agencies including a Fontana Water Company reservoir and a County Flood Control District facility. The Airport Specific Plan EIR also included mitigation measures to reduce potential impacts from mining operations.

Project-Specific Analysis and Significance Determination: No new impact; no substantial change from previous analysis.

The land use designation for the project site in the Airport Specific Plan is General Manufacturing (I-GM). Therefore, the Airport Specific Plan EIR assumed that the site would be developed and did not identify the presence of or the potential for use of the site for mineral resource excavation.

The State of California Department of Conservation, Geologic Energy Management Division (CalGEM) oversees the drilling, operation, maintenance, and plugging and abandonment of oil, natural gas, and geothermal energy wells. CalGEM maintains a mapping system that shows the location of all oil and gas wells in California. According to the mapping system, the closest active well used for oil and gas production is approximately 5.9 miles northeast of the project site. No wells are mapped on the project site and there is no known history of oil or gas wells having been drilled at the site.[20]

The project site does not have a history of known mining or quarry operations. The Surface Mining and Reclamation Act of 1975 (SMARA) requires the State Geologist to classify land in California according to its potential to contain mineral resources. Exhibit 2.7 of the City of Rialto General Plan, identifies mineral resource zones (MRZ) for the City based on the SMARA. According to the General Plan, the project site is located within the MRZ-2 zone, indicating that significant Portland Cement Concrete-Grade (PCC) aggregate resources are present.[21]

Although the project site has been mapped within the MRZ-2 zone, the site does not have a history of aggregate resource mining. Further, the site has a Business Park land use designation and is zoned for

[20] Department of Conservation. (2022). *Well Finder.* https://maps.conservation.ca.gov/doggr/wellfinder/#openModal/-117.36675/34.07440/14. Accessed March 25, 2022.

[21] City of Rialto. (2010). *City of Rialto General Plan*. https://www.yourrialto.com/DocumentCenter/View/1494/2010-General-Plan. Accessed March 25, 2022.

General Manufacturing. Therefore, the use of the project site for mining would be inconsistent with pertinent planning and policy documents. Due to the proximity of adjacent land uses, the project site would not be conducive for mining purposes. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would impact the prior finding of less than significant impact with mitigation incorporated. The mitigation measures set forth in the Airport Specific Plan EIR apply to mining extraction activities. Because no mining is proposed, the mitigation measures are not applicable to this Project. Therefore, a less than significant impact would occur regarding the loss of availability of a known mineral resource, and no mitigation is required.

The proposed Project would develop an industrial warehouse within an urbanized area of the City. The proposed Project would not remove any locally or regionally important mineral resources from production or preclude access to important mineral resources. No impact to locally-important mineral resource recovery sites would occur. Therefore, there are no changes or new significant information that would require subsequent environmental documentation.

Cumulative Impact

As discussed above, the proposed Project would not cause a new mineral impact to occur, nor an increase in the severity of a mineral impact previously disclosed in the Airport Specific Plan EIR. Therefore, the proposed Project would not cumulatively contribute to impacts to mineral resources.

Mitigation Program

Mitigation Measures 5.4-2A, 5.4-2B, 5.4-2C, 5.4-2D, 5.4-2E, 5.4-2F, 5.4-2G, 5.4-2H, and 5.4-2I from the Airport Specific Plan EIR are not applicable because the Project does not include mineral extraction, mining operations, or the implementation of a Reclamation Plan.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to mineral resources or a substantial increase in the severity of a previously identified significant impact evaluated in the Airport Specific Plan EIR would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the Project would not result in any new impacts, or increase the severity of the previously identified impacts. There are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Airport Specific Plan EIR. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would impact the prior finding of less than significant. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.13 Noise

Threshold (a) Would the project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Threshold (b) Would the project generate excessive groundborne vibration or groundborne noise levels?

Threshold (c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Summary of Impacts Identified in the Airport Specific Plan EIR

The Airport Specific Plan EIR concluded that Specific Plan implementation would create noise that would impact new and existing receptors. With respect to temporary construction noise, the Airport Specific Plan EIR determined that noise from construction activities would potentially result in excessive noise levels that impact noise sensitive receptors. However, these impacts are anticipated to be short-term, ceasing upon project completion. Further, construction-related noise impacts would be substantially mitigated and minimized by staging construction equipment away from existing and future sensitive receptors and with implementation of Airport Specific Plan EIR mitigation measures.

Airport Specific Plan implementation would also create several new stationary noise sources, such as mechanical equipment, loading areas, parking areas, and loudspeakers on the project site. However, the Airport Specific Plan EIR concluded that with implementation of mitigation measures and adherence to City noise standards, noise impacts would be reduced to less than significant levels. Further, the Airport Specific Plan EIR analyzed existing off-site sensitive receptors located along key roadways within the Airport Specific Plan area and concluded that noise impacts to off-site sensitive receptors resulting from project related traffic would be less than significant.

Project-Specific Analysis and Significance Determination: No new impact; no substantial change from previous analysis.

Construction

Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g. land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. During construction, exterior noise levels could affect nearby sensitive receptors. The nearest sensitive receptors consist of single-family residential uses located approximately 735 feet east of the project construction area (project site boundary to sensitive receptor boundary). However, construction activities would occur throughout the project site and would not be concentrated at a single point near sensitive receptors.

Construction activities would include demolition, site preparation, grading, building construction, paving, and architectural coating. Such activities would require concrete/industrial saws, excavators, and dozers during demolition; dozers and tractors during site preparation; tractors, excavators, graders, and dozers during grading; cranes, forklifts, generators, tractors, and welders during building construction; pavers, rollers, mixers, and paving equipment during paving; and air compressors during architectural coating. Typical operating cycles for these types of construction equipment may involve one or two minutes of full

power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical noise levels associated with individual construction equipment are identified in **Table 3.13-1: Typical Construction Noise Levels**.

Table 3.13-1: Typical Construction Noise Levels

Equipment	Typical Noise Level (dBA Lmax) at 50 feet from Source	Typical Noise Level (dBA Lmax) at 975 feet from Source[1]
Air Compressor	80	54
Backhoe	80	54
Compactor	80	54
Concrete Mixer	85	59
Concrete Pump	82	56
Concrete Vibrator	76	50
Crane, Derrick	88	62
Crane, Mobile	83	57
Dozer	85	59
Generator	82	56
Grader	85	59
Impact Wrench	85	59
Jack Hammer	88	62
Loader	80	54
Paver	85	59
Pneumatic Tool	85	59
Pump	77	51
Roller	85	59
Saw	76	50
Scraper	85	59
Shovel	82	56
Truck	84	58

1. Calculated using the inverse square law formula for sound attenuation: $dBA_2 = dBA_1+20Log(d_1/d_2)$
Where: dBA_2 = estimated noise level at receptor; dBA_1 = reference noise level; d_1 = reference distance; d_2 = receptor location distance
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

As shown in the table, exterior noise levels could affect the nearest existing sensitive receptors in the vicinity. Sensitive uses in the project site vicinity include residential uses located approximately 735 feet to the east. These sensitive receptors may be exposed to elevated noise levels during construction. However, construction noise would be acoustically dispersed throughout the project site and not concentrated in one area near surrounding sensitive uses. The City's Municipal Code does not establish quantitative construction noise standards. Instead, the Municipal Code establishes limited hours of construction activities. As a result, this analysis conservatively uses the Federal Transit Authority's (FTA)

threshold of 80 dBA (8-hour L_{eq}) for residential uses to evaluate construction noise impacts.[22] All motorized equipment used in such activity shall be equipped with functioning mufflers as mandated by the State.

Construction activities may also cause increased noise along site access routes due to movement of equipment and workers. Compliance with the Municipal Code would minimize impacts from construction noise, as construction would be limited to daytime hours on weekdays and Saturdays. By following Municipal Code standards, Project construction activities would result in a less than significant noise impact.

Following FTA's methodology for quantitative construction noise assessments, FHWA's Roadway Construction Noise Model (RCNM) was used to predict construction noise. The noise levels calculated in **Table 3.13-2: Project Construction Noise Levels**, show estimated exterior construction noise. In accordance with FTA methodology, when calculating construction noise, all construction equipment is assumed to operate simultaneously at a construction area nearest to sensitive receptors to represent a worst-case noise scenario as construction activities would routinely be spread throughout the construction site and would operate at different intervals. Therefore, the distances used in the RCNM model were approximately 975 feet for the nearest residential property (center of the project site to the nearest residential property line).

The maximum construction noise levels would not exceed the applicable FTA construction thresholds. The highest exterior noise level at the nearest residential receptors would occur during the building construction and paving stages and would be 63.6 dBA which is below the FTA's 80 dBA threshold. Construction equipment would operate throughout the project site and the associated noise levels would not occur at a fixed location for extended periods of time. Although sensitive uses may be exposed to elevated noise levels during project construction, these noise levels would be acoustically dispersed throughout the project site and not concentrated in one area near sensitive uses.

The City of Rialto has set restrictions to control noise impacts from construction activities. Municipal Code Section 9.50.070 states that the erection, alteration, repair, addition, movement, demolition, or improvement of any structure shall only occur between the hours of 7:00 a.m. and 5:30 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays from October 1 through April 30 and shall only occur between 6:00 a.m. and 7:00 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays from May 1 through September 30. Although the Rialto Municipal Code limits the hours of construction, it does not provide specific noise level performance standards for construction. By following the City's standards, the impact from construction noise would be less than significant level.

[22] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, Table 7-2, Page 179, September 2018.

Table 3.13-2: Project Construction Noise Levels

Construction Phase	Land Use	Direction	Distance (feet)[1]	Worst Case Modeled Exterior Noise Level (dBA L_{eq})	Noise Threshold[2] (dBA L_{eq})	Exceeded?
Demolition	Residential	East	975	60.6	80	**No**
	Residential	North	1,800	55.3	80	**No**
	Residential	Northeast	1,585	56.4	80	**No**
Site Preparation	Residential	East	975	61.8	80	**No**
	Residential	North	1,800	56.5	80	**No**
	Residential	Northeast	1,585	57.6	80	**No**
Grading	Residential	East	975	61.5	80	**No**
	Residential	North	1,800	56.1	80	**No**
	Residential	Northeast	1,585	57.3	80	**No**
Construction	Residential	East	975	63.6	80	**No**
	Residential	North	1,800	58.2	80	**No**
	Residential	Northeast	1,585	59.3	80	**No**
Paving	Residential	East	975	63.6	80	**No**
	Residential	North	1,800	56.2	80	**No**
	Residential	Northeast	1,585	59.3	80	**No**
Architectural Coating	Residential	East	975	47.9	80	**No**
	Residential	North	1,800	42.6	80	**No**
	Residential	Northeast	1,585	43.7	80	**No**

1. Per the methodology described in the FTA *Transit Noise and Vibration Impact Assessment Manual* (September 2018), distances are measured from the nearby buildings to the center of the Project construction site. Therefore, distance may not match those identified in **Table 6**, which are measured from the property line.
2. The City does not have a quantitative noise threshold for construction and only limits the hours of the construction activities. Therefore, FTA's construction noise threshold is conservatively used for this analysis (FTA, *Transit Noise and Vibration Impact Assessment Manual*, September 2018).

Source: Federal Highway Administration, *Roadway Construction Noise Model,* 2006. Refer to Appendix H for noise modeling results.

Operations

The land use designation for the project site in the Airport Specific Plan is General Manufacturing (I-GM). Warehouses are a permitted use in the I-GM. Based on the land use designation and the maximum FAR of 1, allowable development of the site in the Airport Specific Plan could be 208,217 sf. Noise levels associated with the operation of the proposed use is consistent with those contemplated in the Airport Specific Plan. In addition, the proposed development would generate fewer trips, result in lower operational noise levels associated with on-road trips and on-site parking activity than assumed for the project site in the Airport Specific Plan EIR.

Implementation of the proposed Project would create new sources of noise in the vicinity. The major noise sources associated with the Project include the following:

- Mechanical equipment (i.e. trash compactors, air conditioners, etc.);
- Slow moving trucks on the project site, approaching and leaving the loading areas;
- Activities at the loading areas (i.e. maneuvering and idling trucks, equipment noise);

- Parking areas (i.e. car door slamming, car radios, engine start-up, and car pass-by); and
- Off-Site Traffic Noise
- Back-Up Alarms

Mechanical Equipment. The nearest sensitive receptors are residences approximately 735 feet to the east. Potential stationary noise sources related to long-term operation of the project site would include mechanical equipment. Mechanical equipment (e.g. heating ventilation and air conditioning [HVAC] equipment) typically generates noise levels of approximately 52 dBA at 50 feet.[23] For the purposes of a conservative analysis, the closest mechanical equipment is assumed to be at the edge of the proposed warehouse building, approximately 735 feet to the west of the nearest sensitive receptors. At 735 feet, mechanical equipment noise would be 28.7 dBA, which is well below the City's 65 dBA standard. Operation of mechanical equipment would not increase ambient noise levels beyond the acceptable compatible land use noise levels. Therefore, the proposed Project would result in a less than significant impact related to stationary noise levels.

Truck and Loading Dock Noise. During loading and unloading activities, noise would be generated by trucks diesel engines, exhaust systems, and brakes during low gear shifting braking activities; backing up toward the loading docks; dropping down the dock ramps; and maneuvering away from the docks. Vehicular access to the proposed project site would consist of two driveways located along Lowell Street and one driveway along Locust Avenue. Typically, heavy truck operations generate a noise level of 68 dBA at a distance of 30 feet. The closest sensitive receptors are approximately 735 feet east of the building edge. At this distance, noise levels would be 40.2 dBA without considering attenuation from intervening walls or structures, which is below the City's acceptable limits of 65 dBA for residential noise. Noise levels at other sensitive receptors that are further away would be lower. Additionally, these noise levels would also be further attenuated by intervening structures. Loading dock doors would also be surrounded with protective aprons, gaskets, or similar improvements that, when a trailer is docked, would serve as a noise barrier between the interior warehouse activities and the exterior loading area. This would attenuate noise emanating from interior activities, and as such, interior loading and associated activities would be permissible during all hours of the day. Noise levels associated with trucks and loading or unloading activities would not exceed the City's standards and impacts would be less than significant.

Parking Noise. The proposed Project would provide 87 vehicle parking stalls. The Project would have parking stalls on the north, west, and south of the proposed building. Nominal parking noise would occur. Traffic noise associated with parking lots is typically not of sufficient volume to exceed community noise standards, which are based on a time-averaged scale such as the CNEL scale. The instantaneous maximum sound levels generated by a car door slamming, engine starting up, and car pass-bys range from 53 to 61 dBA[24] at 50 feet. It should be noted that parking lot noises are instantaneous noise levels compared to noise standards in the hourly L_{eq} metric, which are averaged over the entire duration of a time period. Sound levels of speech typically range from 33 dBA at 50 feet for normal speech to 50 dBA at 50 feet for very loud speech.[25] While these noise sources may be an annoyance to noise-sensitive receptors, there are no sensitive receptors within 50 feet of the project site.

[23] Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, 2015.

[24] Kariel, H. G., *Noise in Rural Recreational Environments*, Canadian Acoustics 19(5), 3-10, 1991.

[25] Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, 2015.

Actual noise levels over time resulting from parking lot activities would be far lower than the reference levels identified above. Parking lot noise would occur within the surface parking lot and would be up to 39.7 dBA (without considering attenuation from intervening walls or structures) at the nearest sensitive receptor, which is below the City's acceptable limits of 65 dBA for residential noise. Parking lot noise also currently occurs at the adjacent properties under existing conditions. Parking lot noise would be consistent with the existing noise in the vicinity and would be partially masked by background noise from traffic along Lowell Street and Locust Avenue. Noise associated with parking lot activities would not exceed the City's noise standards during operation. Therefore, noise impacts from parking lots would be less than significant.

Off-Site Traffic Noise. Implementation of the Project would be consistent with the allowable uses for the project site as determined by the Rialto Airport Specific Plan. Therefore, traffic volumes associated with the proposed Project would be consistent with and less than what was anticipated for the site in the Rialto Airport Specific Plan EIR. In general, a traffic noise increase of less than 3 dBA is barely perceptible to people, while a 5-dBA increase is readily noticeable.[26] Traffic volumes on area roadways would have to approximately double for the resulting traffic noise levels to increase by 3 dBA.[27] Therefore, permanent increases in ambient noise levels of less than 3 dBA would be less than significant. Project-related trips would occur along Locust Avenue and Lowell Street. According to the Traffic Scoping Agreement, the proposed Project would generate approximately 173 daily trips. The project area is currently developed with other industrial uses and an additional 173 daily trips would not result in a doubling of traffic. Therefore, off-site traffic noise would be less than significant.

Back-Up Alarms. Medium and heavy-duty trucks reversing into loading docks would produce noise from back-up alarms (also known as back-up beepers). Back-up beepers produce a typical volume of 97 dBA at one meter from the source. The property line of the nearest sensitive receptor would be located approximately 735 feet east of the project driveway where trucks could be reversing and maneuvering into the loading area. At this distance, exterior noise levels from back-up beepers would be approximately 50 dBA, which is below the City's acceptable limits of 65 dBA for residential noise.

Ground-borne Vibration and Noise Levels. Increases in ground-borne vibration levels attributable to the proposed Project would be primarily associated with short-term construction-related activities. Construction on the project site would have the potential to result in varying degrees of temporary ground-borne vibration, depending on the specific construction equipment used and the operations involved.

The FTA has published standard vibration velocities for construction equipment operations in their 2018 *Transit Noise and Vibration Impact Assessment Manual*. The types of construction vibration impacts include human annoyance and building damage. In general, the FTA architectural damage criterion for continuous vibrations (i.e., 0.2 in/sec) appears to be conservative. The types of construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration

[26] Federal Highway Administration, *Highway Traffic Noise Analysis and Abatement Policy and Guidance, Noise Fundamentals*, https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm, accessed July 12, 2021.

[27] California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, 2013.

source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. For example, for a building that is constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 0.20 in/sec is considered safe and would not result in any construction vibration damage.

Table 3.13-3: Typical Construction Equipment Vibration Levels, lists vibration levels at 25 feet and 50 feet for typical construction equipment. Ground-borne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. As indicated in Table 3.13-3, based on FTA data, vibration velocities from typical heavy construction equipment operations that would be used during Project construction range from 0.001 to 0.031 in/sec PPV at 50 feet from the closest structure (warehouse building to the west and north), which is below the FTA's 0.20 PPV threshold.

Table 3.13-3: Typical Construction Equipment Vibration Levels

Equipment	Peak Particle Velocity at 25 Feet (in/sec)	Peak Particle Velocity at 50 Feet (in/sec)
Large Bulldozer	0.089	0.031
Caisson Drilling	0.089	0.031
Loaded Trucks	0.076	0.027
Jackhammer	0.035	0.012
Small Bulldozer/Tractors	0.003	0.001

1. Calculated using the following formula: $PPV_{equip} = PPV_{ref} \times (125/D)^{1.5}$, where: PPV_{equip} = the peak particle velocity in in/sec of the equipment adjusted for the distance; PPV_{ref} = the reference vibration level in in/sec from Table 7-4 of the Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018; D = the distance from the equipment to the receiver.

Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018.

It is also acknowledged that construction activities would occur throughout the project site and would not be concentrated at the point closest to the nearest structure. Therefore, vibration impacts associated with the proposed Project would be less than significant.

Once operational, the Project would not be a significant source of ground-borne vibration. Ground-borne vibration surrounding the Project currently result from heavy-duty vehicular travel (e.g., refuse trucks, heavy duty trucks, delivery trucks, and transit buses) on the nearby local roadways. Operations of the proposed Project would include truck deliveries. Due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity. According to the FTA's Transit Noise and Vibration Impact Assessment, trucks rarely create vibration levels that exceed 70 VdB (equivalent to 0.012 inches per second PPV) when they are on roadways. Therefore, trucks operating at the project site or along surrounding roadways would not exceed FTA thresholds for building damage or annoyance. Impacts would be less than significant.

Airport-Related Noise. The nearest airport to the project site is the San Bernardino International Airport located approximately 9.5 miles to the southwest. Therefore, the project site is not within two miles of a public airport or within an airport land use plan. Additionally, there are no private airstrips located within the vicinity. Therefore, the Project would not expose people residing or working in the area to excessive airport- or airstrip-related noise levels and no mitigation is required.

Cumulative Impacts

As discussed above, all construction and operational noise impacts would be less than significant. Construction noise impacts are by nature localized. The distance of separation among the proposed Project and other cumulative projects would be such that the temporary noise and vibration effects of the proposed Project would not be compounded or increased by similar noise or vibration effects from other cumulative projects. As discussed above, operational noise caused by the proposed Project would be less than significant. Due to site distance and these intervening land uses, cumulative stationary noise impacts would not occur. No known projects would compound or increase the operational noise levels generated by the Project. Therefore, cumulative impacts relative to temporary and permanent noise generation associated with the proposed Project would be less than significant and within the level of impacts analyzed in the Airport Specific Plan EIR.

Mitigation Program

The Rialto Airport Specific Plan EIR includes measures to reduce potential impacts associated the implementation of the Rialto Airport Specific Plan Project.

Mitigation Measure 5.8-3G, as stated below, has been satisfied through the preparation of the Acoustical Assessment for the proposed Project.

MM 5.8-3G The project applicant shall submit detailed design plans and an acoustical study, prepared by a City-approved acoustical expert, for each site plan, which delineates appropriate setbacks from adjacent existing and/planned sensitive receptors, which is consistent with City of Rialto Noise Standards. The study shall demonstrate that all feasible sound attenuation has been incorporated into the design, such as noise walls and other noise barriers, and other appropriate measures. [NOTE: This measure has been satisfied through the preparation of this Acoustical Assessment.]

The following measures from the EIR are applicable to the proposed Project: Mitigation Measures 5.8-1A through 5.8-1D, and 5.8-2A through 5.8-2E.

MM 5.8-1A Construction activities shall comply with the City of Rialto Noise Standards relating to construction noise. Enforcement of City standards relating to construction-related noise discernable at residential boundaries is required and construction activities shall be limited to the hours between 7:00 a.m. and 7:00 p.m. Monday through Saturdays (excluding Sundays and Federal holidays).

MM 5.8-1B All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, to the satisfaction of the City Engineer.

MM 5.8-1C Stationary construction equipment shall be staged such that emitted noise is directed away from sensitive noise receivers, to the satisfaction of the City Engineer.

MM 5.8-1D Stockpiling and vehicle staging areas shall be located as far as practical from noise sensitive receptors during construction activities, to the satisfaction of the City of Engineer.

MM 5.8-2A The project applicable shall submit detailed design plans and an acoustical study, prepared by a City-approved acoustical expert, for each site plan, which delineates

appropriate setbacks from adjacent existing and planned sensitive receptors, which is consistent with City of Rialto Noise Standards. The study shall demonstrate that all feasible sound attenuation has been incorporated into the design, such as noise walls and other noise barriers, and other appropriate measures (refer also to Mitigation Measure No. 5.8-3). [NOTE: This MM has been satisfied through the preparation of this Acoustical Assessment.]

MM 5.8-2B Development of the proposed project land uses shall adhere to City of Rialto and California State Noise Insulation Standards (California Administrative Code, Title 25, Chapter 1, Subchapter 1, Article 4). These standards require that the interior noise levels for residential living spaces and for hotel rooms be no greater than 45 dB CNEL. If additional attenuation is necessary, measures (i.e. increases in window STC rating, reduction of window area) can be specified at such time.

MM 5.8-2C Any loudspeaker system installation shall conform to the following standards:

a. The use of a hand held paging system shall be encouraged. A combination of loudspeakers and hand held paging may be authorized upon review of the system by City of Rialto.

b. The outdoor loudspeakers system shall have limited hours of operation, to the satisfaction of the Development Services Director. In no event shall any use of outdoor speakers be authorized for operation on weekends or holidays.

c. All loudspeakers shall be mounted at a 75 degree angle facing the ground to avoid voice travel. All loudspeakers mounted on perimeter walls shall be located at least two (2) feet below the top of the wall.

d. All loudspeakers shall be directed toward the interior of each lot. Each speaker layout system shall be subject to review and approval by the Development Services Department.

MM 5.8-2D Mechanical equipment shall be located and designed so that it will not be audible at adjacent residential land uses. This includes adhering to specifications for quiet equipment, and locating/shielding equipment away from homes. It is recommended that any mechanical equipment be located on the side of the building furthest from residential areas and/or constructed with a parapet surrounding the equipment.

MM 5.8-2E The following measures are recommended to minimize noise impacts from activities within parking areas:

a. Maximize the use of berms and landscaping to help shield and attenuate noise from cars within parking lots.

b. Loading dock should be located away from residential areas. Loading hours should be limited so that deliveries do not occur between midnight and 6 a.m.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to noise or an increase in the severity of a previously identified significant impact evaluated in the Airport Specific Plan

EIR would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the Project would not result in any new impacts, or increase the severity of the previously identified impacts. There are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Airport Specific Plan EIR. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would impact the prior finding of less than significant with mitigation. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.14 Population and Housing

Threshold (a) Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of road or other infrastructure?

Threshold (b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

Summary of Impacts Identified in the Airport Specific Plan EIR

The Airport Specific Plan EIR proposed approximately 117 acres of residential land uses, most of which was comprised of existing residential neighborhoods. At the time that the Airport Specific Plan EIR was prepared, the CEQA Appendix G checklist did not evaluate impacts to population and housing as a separate threshold; however, Section 5.10, *Parks and Recreation and Open Space*, estimated the potential population growth. Accordingly, The Airport Specific Plan EIR assumed that the Airport Specific Plan buildout would result in an increase in population to approximately 1,923 persons in the Airport Specific Plan area. An estimated 155 to 160 new residential units were expected to be constructed as a result of implementation of the Airport Specific Plan, resulting in a net increase of 81 to 86 residential units in the Airport Specific Plan area, accounting for non-conforming residential uses that would eventually be replaced with non-residential uses. Further, analysis of ways in which the Airport Specific Plan could directly or indirectly foster economic or population growth, or the construction of additional housing was analyzed in Section 6.3, *Growth Inducing Impacts of the Proposed Project*, of the Airport Specific Plan EIR, which determined that employees of commercial and industrial uses in the Airport Specific Plan area would likely be drawn predominantly from the existing labor pool in the cities of Rialto, Fontana and San Bernardino, and the surrounding subregion and employees that might choose to relocate to housing closer to the Airport Specific Plan area, would do so over time, as the land uses are developed. Therefore, the demand for housing over time was expected to be satisfied by existing and proposed housing in the area. Additionally, the Airport Specific Plan was found to be generally consistent with the City General Plan and zoning designations and was not anticipated to result in growth-inducing impacts related to population or housing. The Airport Specific Plan EIR did not identify any impacts; therefore, mitigation was not required.

Project-Specific Analysis and Significance Determination: No new impact; no substantial change from previous analysis.

The proposed Project would result in the construction of an industrial warehouse building; development of the project site was anticipated as a part of the Airport Specific Plan area; no significant impacts were identified. Additionally, no residential development is proposed as a part of the Project. The land use designation for the project site in the Airport Specific Plan is General Manufacturing (I-GM). Warehouses are a permitted use in the I-GM. Based on the land use designation and the maximum FAR of 1, allowable development of the site in the Airport Specific Plan could be 208,217 sf. As such, the proposed development could have fewer employees than assumed in the Airport Specific Plan for the project site. Consistent with the Airport Specific Plan EIR, no population and housing impacts would occur with the proposed Project.

As of April 2022, unemployment in San Bernardino County and the Riverside-San Bernardino-Ontario Municipal Service Area (MSA) was 3.8 percent[28] and within the City of Rialto, it as 4.1 percent[29]. The proposed Project would create new jobs and increase the demand for new employees. By providing jobs, the proposed Project is expected to benefit the local community while having little effect on population growth. The growth that would occur as a result of the proposed Project is accounted for in the General Plan, as delineated by the Specific Plan, which indicates that the site has a Business Park land use designation with a Specific Plan Overlay. The Business Park land use designation allows for a mix of commercial, office, research and development, laboratories, and light industrial uses. The Specific Plan identifies the project site as General Manufacturing, which allows industrial land uses like warehousing, manufacturing, and multi-tenant spaces.

Given the need for jobs to meet the existing population, and the relatively small number of jobs created by the proposed Project compared to those on a regional basis, the Project would not induce substantial population growth. Although the proposed Project would create job opportunities, an industrial project such as this is not considered inherently growth inducing.

With respect to indirect effects, roadways near the project site include Locust Avenue to the east, and Lowell Street and SR-210 to the south. The Project would provide one driveway on Locust Avenue and two new driveways on Lowell Street. The Project includes easements and dedications to allow for future roadway and infrastructure improvements by the City; however, these improvements are not specific to the proposed Project. In addition, infrastructure (water, sewer, electrical) is located in the immediate vicinity of the project site and these services would be extended to the site to serve the proposed Project. The proposed Project does not include the extension of roads or other infrastructure to unserved areas, which could induce indirect growth. Therefore, the proposed Project would not result in any adverse change in the population, housing, or employment projections developed by or for the City of Rialto. Impacts would be less than significant, and no mitigation is required.

There are no structures are on the site. No existing residential uses are located on the site; therefore, Project implementation would not displace existing housing, necessitating the construction of replacement housing. No impacts would occur and no mitigation is required. The proposed Project would cause neither a new impact to occur nor an increase in the severity of an impact previously disclosed. As such, no further analysis is required.

Cumulative Impacts

As discussed above, the proposed Project would not cause an impact to population and housing to occur, nor an increase in the severity of any impacts previously disclosed in the Airport Specific Plan EIR. The Airport Specific Plan was found to be generally consistent with the City General Plan and zoning designations and was not anticipated to result in growth-inducing impacts related to population or housing. Therefore, the proposed Project would not cause either a new cumulative impact to occur, nor an increase in the severity of a cumulative impact previously disclosed.

[28] California Employment Development Department. (2022a). *Riverside-San Bernardino-Ontario Metropolitan Statistical Area (MSA) (Riverside and San Bernardino Counties)*. https://www.labormarketinfo.edd.ca.gov/file/lfmonth/rive$pds.pdf. Accessed June 6, 2022.

[29] California Employment Development Department. (2022b). *Monthly Labor Force Data for Cities and Census Designated Places (CDP).* https://www.labormarketinfo.edd.ca.gov/data/labor-force-and-unemployment-for-cities-and-census-areas.html. Accessed June 6, 2022.

Mitigation Program

No mitigation measures are required.

Conclusion

Based on the comparative analysis set forth in this Addendum and consistent with the Airport Specific Plan EIR, the proposed Project would have no impact on population and housing. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the Project would not result in any new impacts, or increase the severity of the previously identified impacts. There are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Airport Specific Plan EIR. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would impact the prior finding of less than significant. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.15 Public Services

Threshold (a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection?

Threshold (b) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection?

Threshold (c) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools?

Threshold (d) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks?

Threshold (e) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities?

Summary of Impacts Identified in the Airport Specific Plan EIR

Fire Protection. Fire protection and paramedic services are provided by the Rialto Fire Department. The Airport Specific Plan EIR concluded that impacts to fire services from implementation of the Airport Specific Plan were less than significant with mitigation, specifically compliance with all applicable code and ordinance requirements for construction access, water mains, fire flows, and fire hydrants, and through the payment of fire protection development impact fees as identified in Mitigation Measures 5.11-1A, 5.11-1B, 5.11-1C, and 5.11-2A.

Police Protection. The Rialto Police Department provides law enforcement services to the City of Rialto, inclusive of the Airport Specific Plan area. The Airport Specific Plan EIR determined that police services via calls for service, police enforcement, and protection would increase as development occurs throughout the Airport Specific Plan area. The Airport Specific Plan EIR identified Mitigation Measure 5.11-3A to address increased demand for police services, including Police Department review of site plans to ensure adequate access and lighting is provided, and payment of police protection development impact fees.

Schools. The Rialto Unified School District (School District) serves the Airport Specific Plan area and residents in the surrounding areas. The Airport Specific Plan EIR noted that schools in the district that

would serve area residents where at, or near capacity. The Airport Specific Plan EIR identified Mitigation Measure 5.11-4B to address school impacts, including School District review of tentative tract maps to help ensure that adequate school facilities and services are planned, as well as the payment of school development impact fees.

Parks. Please refer to Section 3.16, *Recreation*.

Other Public Facilities. The Airport Specific Plan EIR did not discuss impacts related to other public facilities including libraries. However, the Airport Specific Plan EIR did note that existing City policy provides for the development of supplemental funding sources for libraries. Although the Specific Plan did not call for the provision of funding for library services, induced population growth associated with the buildout of the original Specific Plan area would result in increased funding for the library system.

Project-Specific Analysis and Significance Determination: No new impact; no substantial change from previous analysis.

Fire Protection. The proposed Project would result in the construction of an industrial warehouse inclusive of 9,000 sf of ancillary office space. The Project does not involve any residential development and therefore is not expected to substantially increase service demand such that new or altered facilities would need to be constructed. The closest fire station, Rialto Fire Station No. 204, is located at 3288 Alder Avenue, approximately 3,000 feet northwest of the project site[30]. Consistent Municipal Code Section 3.33.220, Fire Protection Facilities Development Fee, the proposed Project would be required to pay a fee to ensure a proportionate fair share is contributed toward facilities, equipment, and personnel that would be needed over time to accommodate any additional incremental demand from future development including the proposed Project. The proposed Project does not propose or require new or physically altered fire station facilities.

Police Protection. The project site is in a currently developed area served by the Police Department. The closest police station is located at 128 N. Willow Avenue, approximately 4.2 miles southeast of the project site[31]. Because of this, and because law enforcement personnel already patrol the area, the proposed Project is not anticipated to increase response times to the project site or surrounding area. Further, the proposed Project would be required to comply with Municipal Code Section 3.33.210, Law Enforcement Facilities Development Impact Fee, which requires all development projects to pay a fee to account for any cost increases associated with the law enforcement facilities, equipment, and training resulting from project implementation. The proposed Project does not propose or require new or physically altered police protection facilities.

Schools. The proposed Project is a non-residential land use. Implementation of the proposed Project would not directly result in an increased population in the City and would therefore not increase the need for the construction of additional school facilities. The Project would be required to comply with SB 50 requirements, which allow school districts to collect impact fees from developers of new projects. In compliance with SB 50, the Rialto Unified School District requires a development fee for New Commercial/Industrial Construction to be paid by the applicant[32]. As stated in Government Code Section 65995(h), "The payment or satisfaction of a fee, charge, or other requirement levied or imposed …are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or

[30] City of Rialto. (2022). *Facilities.* https://www.yourrialto.com/Facilities?clear=False. Accessed March 7, 2022.

[31] Rialto Police Department. (2022). *Our Department.* https://rialtopolice.com/our-department. Accessed March 7, 2022.

[32] Rialto Unified School District. (2022). *Developer Fee.* https://kec.rialto.k12.ca.us/Page/1939. Accessed March 7, 2022.

both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization …on the provision of adequate school facilities."

Cumulative

As discussed above, the proposed Project would not cause a new public services impact to occur, nor an increase in the severity of any public service impacts previously disclosed in the Airport Specific Plan EIR. The Airport Specific Plan did not identify any potential significant cumulative impacts associated with the provision of public services addressed in the EIR. The Project would not cumulatively contribute to any impacts to public services.

Mitigation Program

Mitigation Measures 5.11-1A, 5.11-1B, 5.11-1C, 5.11-2A, 5.11-3A, and 5.11-4B from the Airport Specific Plan EIR are applicable to the proposed Project. Mitigation Measure 5.11-3B is no longer applicable because development fees have been established by the City for police protection services. Mitigation Measure 5.11-4A is not applicable because the proposed Project does not require approval of a tract map.

MM 5.11-1A Prior to issuance of building permits, project developers shall comply with all applicable code and ordinance requirements as required by the City of Rialto for construction, access, water mains, fire flows, and fire hydrants.

MM 5.11-1B At time of issuance of building permits, developers shall be required to participate in any City-wide fire protection impact fee program(s).

MM 5.11-1C Temporary construction roads and water supplies for firefighting shall be required to provide adequate access for emergency vehicles. Construction contractors shall be required to prepare and implement temporary fire control systems and plans consistent with the requirements of the City's Fire Department. The Fire Department shall review all construction plans to ensure adequate emergency access and water for fire protection to the entire Specific Plan area.

MM 5.11-2A Prior to any final entitlements for specific projects in the Specific Plan area, the project developer shall be required to provide evidence to the Fire Department that the proposed infrastructure and fire protection requirements and emergency services would be adequate to serve the proposed development. This evidence shall define phasing and project implementation.

MM 5.11-3A Prior to issuance of building permits, site plans shall undergo review by the Rialto Police Department to ensure that: one, adequate access to the site is provided; and two, that all entryways, lobbies, stairways, and parking areas are illuminated and visually isolated areas shall be minimized for public safety purposes.

MM 5.11-4B Developers shall be required to contribute their fair share to school impact fees.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to public services or an increase in the severity of a previously identified significant impact evaluated in the Airport Specific Plan EIR would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the Project would not result in any new impacts, or increase the severity of the previously identified impacts.

There are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Airport Specific Plan EIR. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would impact the prior finding of less than significant with mitigation. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.16 Recreation

Threshold (a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Threshold (b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which have an adverse physical effect on the environment?

Summary of Impacts Identified in the Airport Specific Plan EIR

The Rialto Recreation, Park, and Social Services Department manages recreational facilities in the City of Rialto, inclusive of the Airport Specific Plan area. The City's parkland standard is 3 acres per 1,000 residents. The Airport Specific Plan EIR identified that the Specific Plan implementation would increase the City's population and create a demand for approximately 4.9 to 5.8 acres of parkland. This was considered a less than significant impact because the analysis concluded that the majority of the persons residing in the Airport Specific Plan area would use the 22-acre Jerry Eaves Park, located at 1485 N. Ayala Drive, in the Airport Specific Plan area. The analysis also noted that the City as a whole did not meet the goal of 3 acres of parkland per resident. Mitigation Measures 5.10-1 and 5.10-2 were identified, including the collection of developer fees as permitted by the Quimby Act and design review for commercial recreation projects. The Airport Specific Plan EIR concluded that ensuring that new projects conform with existing City regulations and fee programs, and Specific Plan regulations and guidelines (e.g., recreation overlays within certain parts of the Airport Specific Plan area) would further reduce impacts on recreational facilities, and create certain beneficial impacts.

Project-Specific Analysis and Significance Determination: No new impact/reduced impact; no change from previous analysis.

Development of the project site with non-residential uses was assumed in the Airport Specific Plan. The proposed Project does not include residential development, which would directly increase population and result in increased demand for parks and recreational facilities. Accordingly, implementation of the proposed Project would not generate an increase in demand on existing public or private parks or other recreational facilities that could result in substantial physical deterioration of the City's parks and recreational facilities. The City of Rialto requires the payment of development fees for public facilities maintained in the City for uses including but not limited to parks and recreation. The proposed Project would be subject to Municipal Code Section 3.33.190, General Municipal Facilities Development Impact Fee. In addition, the proposed project site has a Business Park land use designation with a Specific Plan Overlay and is not identified in the Rialto General Plan as a park or open space resource. The proposed Project does not include the construction of recreational facilities, nor would it require the construction or expansion of recreational facilities. Therefore, no impact to existing recreational facilities would occur and no mitigation is required.

Cumulative Impacts

Under the significance criteria for recreation, potential cumulative impacts could occur if the Project—when combined with cumulative projects—would include new recreational facilities or require the construction or expansion of recreational facilities that might adversely affect the environment in order to maintain acceptable service ratios or other performance objectives for parks; or increase the use of the existing neighborhood and regional parks or other recreational facilities such that a substantial physical deterioration of the facilities would occur or be accelerated. The Airport Specific Plan identified that with

mitigation, buildout of the Airport Specific Plan area could result in beneficial impacts. The proposed Project would not cause the need for new or expanded recreational facilities or result in substantial physical deterioration of existing facilities. As discussed above, the proposed Project would not cause an increase in the severity of recreational impacts previously disclosed in the Airport Specific Plan EIR. Implementation of the proposed Project would not result in project-specific recreational impacts nor cumulatively contribute to recreation impacts.

Mitigation Program

Mitigation Measure 5.10-1 from the Airport Specific Plan EIR is not applicable to the proposed Project because it is not subject to the Quimby Act. Mitigation Measure 5.10-2 is not applicable to the Project because the proposed Project is not a commercial recreation project.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to recreation or an increase in the severity of a previously identified significant impact evaluated in the Airport Specific Plan EIR would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the Project would not result in any new impacts, or increase the severity of the previously identified impacts. There are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Airport Specific Plan EIR. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would impact the prior finding of less than significant with mitigation. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.17 Transportation

Threshold (a) Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Threshold (b) Would the project conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?

Threshold (c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Threshold (d) Would the project result in inadequate emergency access?

Summary of Impacts Identified in the Airport Specific Plan EIR

The Airport Specific Plan EIR evaluated existing traffic conditions and existing plus project conditions and concluded that implementation of the Airport Specific Plan would contribute traffic greater than the San Bernardino County Congestion Management Program (CMP) threshold volume of 100 two-way trips to State Highways (Route 30 Freeway, I-15, and I-215). The Airport Specific Plan EIR also found that the Airport Specific Plan would contribute more than 80 trips (the CMP Roadway threshold volume) along roadway segments serving CMP intersections within the cities of Fontana and San Bernardino, as well as the County of San Bernardino. This was considered an unavoidable impact. Although roadways in the study area would experience heavier traffic conditions as a result of Airport Specific Plan development, implementation of the mitigation measures, such as a requirement for individual developments to provide a traffic analysis to determine fair share contribution to circulation improvements, construction of bus-turn outs and bus stops by individual developments, and requiring bicycle racks with commercial developments, were determined to reduce impacts to less than significant levels.

Project-Specific Analysis and Significance Determination: Reduced Impact; change from previous analysis.

A Traffic Scoping Agreement Memorandum was prepared by Kimley-Horn in May 2022 to evaluate potential traffic-related impacts associated with the proposed Project. The Traffic Scoping Agreement Memorandum is included as **Appendix I** to this Addendum.

Methodology. When the Airport Specific Plan EIR was approved in 1997, the applicable traffic threshold was Level of Service (LOS). On September 27, 2013, SB 743 was signed into law and started a process that would change the methodology and significance criteria for transportation impact analyses as part of CEQA compliance. These changes include the elimination of auto delay, LOS, and similar measures of vehicular capacity or traffic congestion as a basis for determining significant environmental impacts. On January 20, 2016, the State of California Office of Planning and Research (OPR) released revisions to its proposed CEQA Guidelines for the implementation of SB 743, and final review and rulemaking for the new guidelines were completed in December 2018. OPR allowed lead agencies an opt-in period to adopt the guidelines before the mandatory date adoption of July 1, 2020.

Level of Service was the applicable threshold when the City certified the Airport Specific Plan EIR. The mandate requiring lead agencies to use Vehicle Miles Traveled (VMT) as a threshold for evaluating traffic impacts was adopted in 2018 and became effective in 2020. The potential environmental impacts regarding the amount of travel associated with the Airport Specific Plan were known at the time that Airport Specific Plan EIR was certified.

Trip Generation. The Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition was used to develop trip generation characteristics of the Project. The Project is most comparable to Warehousing (Land Use Code 150), which is also in line with the City of Rialto Traffic Impact Analysis Guidelines for Vehicles Miles Traveled (VMT) and Level of Service (LOS) (October 2021) which states Warehousing (Land Use Code 150) shall be used for all warehousing projects. The truck rates, truck mixes and Passenger Car Equivalents (PCEs) for warehousing follow the City's Guidelines. The estimated trip generation is shown in **Table 3.17-1: Trip Generation**. The proposed Project is estimated to generate 291 PCE trips per day with 29 PCE trips during the AM peak hour and 30 PCE trips during the PM peak hour.

The project site is currently undeveloped property used for construction equipment storage. Driveway counts were collected at the existing site on Wednesday, December 15, 2021 and Thursday, December 22, 2021. The average of the two weekday counts was used to calculate trip generation from the existing use. The existing use generates 71 PCE per day with 9 PCE during the AM peak hour, and 1 PCE during the PM peak hour. The net trip generation from the Project is expected to be 220 PCE per day with 16 PCE during the AM peak hour, and 29 PCE during the PM peak hour.

The land use designation for the project site in the Airport Specific Plan is General Manufacturing (I-GM). The I-GM uses are the most intensive industrial uses within the Specific Plan area. Industrial land uses may include warehousing, manufacturing, and multi-tenant spaces. Key requirements for these industries include large parcels, designated truck access routes, and appropriate utility connections. Warehouses are a permitted use in the I-GM. Based on the land use designation and the maximum FAR of 1, allowable development of the site in the Airport Specific Plan could be 208,217 sf. Applying the 11th Edition of ITE to the Warehousing Land Use Code 150, development of the project site with 208,217 sf uses is estimated to generate of 597 PCE trips per day, with 59 PCE trips during the AM peak hour and 61 PCE trips during the PM peak hour. As such, the proposed development of a 100,880-sf facility would generate fewer trips than the allowable development under the maximum FAR for the project site as set forth in the Airport Specific Plan.

Trip Distribution. The trip distribution is based on expected travel patterns to/from the site from areas in Rialto and other surrounding communities. Truck distributions use designated truck routes and are routed in the direction of intended travel to the nearest freeways while per the City of Rialto Guidelines. The distribution also reflects that the SR-210 Alder Avenue interchange provides the shortest travel times and most direct routing to the site for passenger vehicle and trucks traveling from the west. The trip distribution for passenger vehicles and trucks is summarized below:

Passenger Vehicles

- 30% to/from the east along Riverside Avenue (east of Locust Avenue)
- 20% to/from the east along SR-210, using Ayala Drive interchange
- 5% to/from the north along Riverside Avenue (west of Locust Avenue)
- 30% to/from the west along SR-210, using Alder Avenue interchange
- 15% to/from the south along Locust Avenue

Table 3.17-1: Trip Generation

Trip Generation Rates[1]

ITE Land Use	ITE Code	Unit	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Warehousing	150	KSF	1.71	0.131	0.039	0.170	0.050	0.150	0.180

Project Trip Generation

Project Land Use		Quantity	Unit	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Warehousing		1.026	KSF	173	13	4	17	5	13	18
Passenger Vehicles	60.0%			104	8	2	10	3	8	11
Trucks	40.0%			69	5	2	7	2	5	7

Project Trips - Passenger Car Equivalents (PCE)

Vehicle Type	Vehicle Mix [2]	Daily Vehicles	PCE Factor	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Passenger Vehicles	60.0%	104	1.0	104	13	4	17	5	13	18
2-Axle Trucks	0.8%	1	1.5	2	0	0	0	0	0	0
3-Axle Trucks	11.2%	19	2.0	39	2	2	4	2	2	4
4+ Axle Trucks	28.0%	48	3.0	145	12	3	15	3	12	15
Total Truck PCE Trips				186	14	5	19	5	14	19
Total Project PCE Trips				**291**	**22**	**7**	**29**	**8**	**22**	**30**

Existing Land Use[3]	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Passenger Vehicles	30	2	1	3	0	0	1
Trucks	18	2	3	5	0	0	0

Existing Trips - Passenger Car Equivalents (PCE)

Vehicle Type	Vehicle Mix [2]	Daily Vehicles	PCE Factor	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Passenger Vehicles	60.0%	104	1.0	30	2	1	3	0	1	1
2-Axle Trucks	0.8%	6	1.5	9	2	3	5	0	0	0
3-Axle Trucks	11.2%	4	2.0	8	0	0	0	0	0	0
4+ Axle Trucks	28.0%	8	3.0	24	3	3	6	0	0	0
Total Truck PCE Trips				41	5	6	11	0	1	0
Total Project PCE Trips				**71**	**7**	**7**	**14**	**0**	**1**	**1**
Net Trip Generation				**125**	**9**	**0**	**9**	**5**	**12**	**17**
Net Trip Generation – PCE				**220**	**16**	**0**	**16**	**8**	**21**	**29**

PCE = Passenger Car Equivalent; KSF = Thousand Square Feet

1. Source: Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition
2. Source: City of Rialto Traffic Impact Analysis Report Guidelines and Requirements, December 2013
3. Based on driveway counts on Wednesday, 12/15/2021 and Thursday, 12/16/2021

Trucks

- 20% to/from the north along I-15, using Sierra Avenue interchange
- 30% to/from the east along SR-210, using Ayala Drive interchange
- 20% to/from the south along Cedar Avenue
- 30% to/from the west using SR-210, using Alder Avenue interchange

Study Area

The City's Traffic Impact Analysis Guidelines, require a Traffic Study to be prepared for the intersections where one or more of the following criteria are met:

- The project will generate more than 50 peak hour trips
- Freeway interchanges within 2 miles from the site that is expected to receive more than 40% of the project's traffic
- Additional intersections of concern (specifically located within the vicinity of schools, shopping areas, or other locations of high trip generation and roadways that exceed V/C ratio as a result of project traffic).

Based on the trip generation described above, the Project is expected to generate less than 50 PCE peak hour trips and as such would not contribute 50 or more PCE trips to any intersection. The SR-210 interchange at Alder Avenue is located less than two miles from the project site. However, it is not expected to receive more than 40 percent of the Project's traffic based on the distribution noted above. Due to the expected distribution and low peak hour trip generation, Project trips are also not expected to significantly impact any roadways or intersections near high traffic generating shopping centers and/or nearby schools. Further, the City's guidelines indicate that any proposed use which can demonstrate, based on the most current Trip Generation manual published by the ITE or other approved trip generation data, that there will be less than 50 vehicle trips during peak hours and no other operational concerns exist may be exempt from level of service analysis. Therefore, no additional traffic operational analysis is required for the Project.

Construction Traffic and Emergency Access. Construction of the proposed Project would add construction-related trips to and from the site during construction activities. These trips are associated with construction workers, grading, and construction of structures and site features.

Large construction equipment such as bulldozers, loaders, scrapers, and pavers would be required during various construction phases. Large equipment is generally brought to the site at the start of the construction phase and kept on site until its term of use ends. A staging area would be designated on-site to store construction equipment and supplies during construction.

Throughout construction, the size of the work crew reporting to the site each day would vary depending on the construction phase and the different activities taking place at the time. Parking for workers would be provided on the project site during all phases of construction. Construction workers would not be allowed to park on local streets. If needed during the peak construction periods, off-site parking would be provided and workers would carpool or be shuttled to the work site.

The Applicant will be required to provide a Construction Management Plan and identify planned travel patterns for haul vehicles. Approach and departure routes for construction vehicles would be via Locust Avenue and Alder Avenue. Trucks would typically arrive and depart via I-10, to the south of the site.

Impacts from construction traffic would be limited to occasional and temporary delays to traffic during the movement of heavy equipment or transport of heavy loads to and from the site. The arrivals and departures of dirt-hauling trucks and other heavy trucks will be scheduled outside of the AM and PM peak hours. Construction management requirements, such as complying with peak hour restrictions, using flag men for short-term obstructions, and a formal traffic control plan for extended lane and street closures would be required.

The project site is in a developed area, and the proposed development would be accessed by roadways and driveways into the project site. The Project would have three points of access: one driveway on Locust Avenue near the northern boundary of the project site, and two driveways on Lowell Street. The Locust Avenue driveway would be 50 feet wide, unsignalized, and would provide full movement access for truck and passenger vehicles to the project site. The eastern 32-foot-wide driveway on Lowell Street would be unsignalized and would provide full movement access for passenger vehicles into the surface parking lot area. The western 40-foot-wide driveway on Lowell Street would be unsignalized and would provide full movement access for trucks and passenger vehicles to the site. Drive aisles along the northern, southern and western frontages would range from 26 to 40 feet in width. All drive aisles would accommodate standard fire lane turning radiuses and hammerhead turnaround maneuvers for emergency and fire vehicles.

The proposed Project would not introduce incompatible uses to area roadways. The Project would be designed in compliance with all applicable State and City building codes and would meet City of Rialto standards for design, including sight distance at all intersections. The Project would not introduce roadway hazards or incompatible uses. It would not increase transportation hazards in comparison to the Rialto Airport Specific Plan. Constructed roadways and driveways are required to meet access standards of the Rialto Fire Department. Project traffic would not result in substantial delays and congestions that would affect the circulation of emergency vehicles in the study area.

The proposed Project would cause neither a new impact to occur, nor an increase in the severity of an impact previously disclosed. However, the proposed Project is subject to the City's citywide traffic impact fee program and the Congestion Management Program (CMP).

Cumulative Impacts

As discussed above, the proposed Project would not cause a transportation impact to occur, nor an increase in the severity of any cumulatively considerable transportation impacts previously disclosed in the Airport Specific Plan EIR, with implementation of the mitigation measures discussed in this section. Implementation of the proposed Project would not cumulatively contribute to cumulative transportation impacts.

Mitigation Program

Mitigation Measures 5.2-2A, 5.2-3A, and 5.2-4 are not applicable to the proposed Project because the City has imposed a citywide traffic impact fee program and the Congestion Management Program (CMP), which replaces the noted mitigation measures. Mitigation Measure 5.2-1 is not applicable to the proposed Project because the City of Rialto complied with this mitigation measure prior to the approval of the

Airport Specific Plan. Mitigation Measure 5.2-2B is not applicable to the proposed Project because bus turn-outs and bus stops have been constructed in the Airport Specific Plan EIR area. Mitigation Measures 5.2-2C and 5.2-2E are not applicable to the proposed Project because the Project is not a commercial project; however, the project would provide bicycle racks in accordance with current City requirements and MM AQ-10 in Section 3.3, *Air Quality*. Mitigation Measure 5.2-3B is not applicable to the proposed Project because it is an action to be completed by the City of Rialto rather than an individual applicant.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to transportation or an increase in the severity of a previously identified significant impact evaluated in the Airport Specific Plan EIR would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the Project would not result in any new impacts, or increase the severity of the previously identified impacts. There are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Airport Specific Plan EIR. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would impact the prior finding of less than significant with mitigation. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.18 Utilities and Service Systems

Threshold (a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm drainage, electrical power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?

Threshold (b) Would the project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?

Threshold (c) Would the project result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Threshold (d) Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Threshold (e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Summary of Impacts Identified in the Airport Specific Plan EIR

Water. The Airport Specific Plan area is within the service area of three water utilities: City of Rialto, West San Bernardino County Water District (WSBCWD), and the Fontana Water Company. Domestic water demand would be increased substantially as a result of Specific Plan implementation and would require the construction of domestic water transmission facilities to serve the Airport Specific Plan area; however, these system expansions would be added as necessary and would be paid for by user fees and, as appropriate, developer impact fees. Several mitigation measures, including Mitigation Measure 5.12-1 and 5.12-3, were identified to meet the daily water supply demand and City's maximum fire flow requirements. Impacts were considered less than significant with mitigation.

Sewer. The Airport Specific Plan area is served by the sanitary sewer system of the City of Rialto. Wastewater is currently treated at the existing City of Rialto wastewater treatment plant, near the intersection of Acacia Avenue and Santa Ana Avenue. Specific Plan implementation would require upsizing of existing facilities to serve the area. The Airport Specific Plan EIR determined that implementation of the Airport Specific Plan would result in significant amounts of wastewater, requiring additional facilities. Mitigation measures, including Mitigation Measure 5.12-1and 5.12-3, were identified to reduce impacts to sewer facilities, although sewage generation would occur incrementally as projects are developed in the Specific Plan area. Impacts were considered less than significant with mitigation.

Electrical/Natural Gas/Telecommunications. Electricity of provided to the Airport Specific Plan area by Southern California Edison and natural gas is supplied by the Southern California Gas Company. Telephone service was provided by Pacific Bell Company. Airport Specific Plan implementation would require expansion of existing electrical, natural gas, and telecommunication facilities. The Airport Specific Plan EIR determined that implementation of the Airport Specific Plan would create additional demand for electricity, natural gas, and telephone service facilities related to the development of the proposed land uses. Several mitigation measures, including Mitigation Measure 5.12-6, were identified to reduce impacts to utility services and infrastructure.

Solid Waste. The Airport Specific Plan EIR determined that implementation of the Airport Specific Plan would result in the generation of significant amounts of solid waste. However, impacts on existing solid waste facilities from Specific Plan land use solid waste would be reduced to a less than significant level with mitigation including compliance with the California Integrated Waste Management Act of 1989 (Mitigation Measure 5.12-5A), review of site plans identifying proposed solid waste and recyclable collection areas (Mitigation Measure 5.12-B), and the use of landscape treatments that minimize yard trimmings and waste (Mitigation Measure 5.12-5C).

Project-Specific Analysis and Significance Determination: No new impact; no substantial change from previous analysis.

The land use designation for the project site in the Airport Specific Plan is General Manufacturing (I-GM). Warehouses are a permitted use in the I-GM. Less development is proposed than was assumed in the Airport Specific Plan EIR for the project site.

Water. In 2003, the WSBCWD changed its name to the West Valley Water District (WVWD).[33] The project site is in the service area of the WVWD.[34] As it applies to the Project, the West Valley Water District 2020 Retail Regional Urban Water Management Plan (RUWMP), as part of the San Bernardino Valley Municipal Water District (SBVMWD) 2020 Upper Santa Ana River Watershed IRUWMP, is the applicable planning document for evaluating water supply and demand. According to the RUWMP, WVWD's 2020 water supply was approximately 20,098 acre-feet (AF), which was a combination of 11,401 AF of groundwater, 5,356 AF of surface water, and 3,342 AF of purchased or imported water. **Table 3.18-1: WVWD Projected Water Supplies** shows the forecasted water supply for the WVWD service area through 2045.

Table 3.18-1: WVWD Projected Water Supplies (AFY)

Water Supply	Additional Detail	2025	2030	2035	2040	2045
Groundwater[1]	Bunker Hill (part of SBB)	2,052	2,353	3,554	4,754	6,455
Groundwater [1]	Bunker Hill (part of SBB, via Baseline Feeder)	5,000	5,000	5,000	5,000	5,000
Groundwater [1]	Lytle (part of SBB)	2,900	2,900	2,900	2,900	2,900
Groundwater [1]	Rialto-Colton	4,426	4,538	4,650	4,761	4,873
Purchased or Imported Water	State Water Project – Rialto Colton Groundwater Supplemental Supply	-	-	-	-	-
Groundwater [1]	Riverside-Arlington	2,500	3,000	3,500	4,000	4,000
Groundwater [1]	Chino	-	900	900	900	900
Surface water (not desalinated)	Lytle Creek	3,100	3,100	3,100	3,100	3,100
Purchased or Imported Water	State Water Project – Direct Delivery	7,000	7,000	7,000	7,000	7,000
Total	–	**26,978**	**28,791**	**30,603**	**32,415**	**34,229**

AFY = acre-feet per year; Source: WVWD, 2021.
1. Not desalinated
Source: WVWD, 2021.

[33] West Valley Water District. (2022). *Our History.* https://wvwd.org/about/history/#:~:text=Our%20history%20began%20on%20February,rights%20and%20assets%20from%20condemnation. Accessed May 16, 2022.

[34] West Valley Water District. (2016). *West Valley Water District Boundary Map.* https://www.yourrialto.com/DocumentCenter/View/1207/Map-of-West-Valley-Water-District-Boundaries. Accessed March 7, 2022.

The anticipated water generation for the Project is shown in **Table 3.18-2: Potable Water Demand**.

Table 3.18-2: Potable Water Demand

Land Use	Average (gpm/ac)	Project Site (ac)	Water Use (gpm)	Water Use (AFY)
Industrial Park	1.39	4.78	6.64	10.71
Total			**6.64**	**10.71**

gpm = gallons per minute; ac = acre; AFY = acre-feet per year
Note: Water generation rates derived from estimates included in the 2010 Rialto General Plan EIR. The Business Park land use category was not included in the General Plan water demand estimates; therefore, this analysis used the generation rate for the Industrial Park land use category.
Source: Rialto General Plan EIR, 2010, Page 337.

Buildout of the proposed Project is estimated to generate a water demand of approximately 6.64 gallons per minute(GPM), or 10.71 acre-feet per year (AFY) (see Table 3.18-2). The most recent Rialto UWMP provides updated water demand and supply projections, as shown in **Table 3.18-3: WVWD Water Supply and Demand Comparison.** In comparison of WVWD's water demand to its water supply (Table 3.18-2), there is an anticipated water supply surplus in 2025 of 4,464 AFY. The proposed Project's water demand of 10.71 AFY would represent 0.04 percent of the anticipated water surplus for 2025 during a normal year. Therefore, no relocation or construction of new water facilities would be required.

Table 3.18-3: WVWD Water Supply and Demand Comparison (AF)

	2025	2030	2035	2040	2045
Supply Totals	26,978	28,791	30,603	32,415	34,229
Demand Totals	23,459	25,035	26,611	28,188	29,764
Difference	**3,519**	**3,756**	**3,993**	**4,227**	**4,464**

AF = acre-feet
Source: WVWD, 2021.

The WVWD RUWMP found that the water supply was 100 percent reliable and able to accommodate normal years, single dry years, and multiple dry-year events, if needed. Under all scenarios (i.e., normal, dry, and multiple dry years), the WVWD had a surplus of water availability. The year 2025 projected availability would exceed the projected water demands by at least 3,871 AF under the worst-case multiple dry year scenario[35]. **Table 3.18-4: Single Dry Year Supply and Demand** and **Table 3.18-5: Multiple Dry Year Supply and Demand** show WVWD's estimated single dry-year and multiple dry-year supplies and demand.

[35] SBVMWD. (2021). *2020 Upper Santa Ana River Watershed IRUWMP – WVWP 2020 RUWMP.* https://secureservercdn.net/104.238.69.81/n1s.6f9.myftpupload.com/wp-content/uploads/2021/07/Part-2-Local-Agency-Information.pdf. Accessed March 22, 2022.

Table 3.18-4: Single Dry Year Supply and Demand (AF)					
	2025	**2030**	**2035**	**2040**	**2045**
Supply Totals	29,676	31,670	33,663	35,657	37,651
Demand Totals	25,805	27,539	29,273	31,006	32,740
Difference	**3,871**	**4,131**	**4,391**	**4,651**	**4,911**

AF = acre-feet
Source: WVWP RUWMP Table 10-14, 2021

Table 3.18-5: Multiple Dry Year Supply and Demand (AF)						
		2025	**2030**	**2035**	**2040**	**2045**
First Year	Supply Totals	29,676	31,670	33,663	35,657	37,651
	Demand Totals	25,805	27,539	29,273	31,006	32,740
	Difference	**3,871**	**4,131**	**4,391**	**4,651**	**4,911**
Second Year	Supply Totals	29,676	31,670	33,663	35,657	37,651
	Demand Totals	25,805	27,539	29,273	31,006	32,740
	Difference	**3,871**	**4,131**	**4,391**	**4,651**	**4,911**
Third Year	Supply Totals	29,676	31,670	33,663	35,657	37,651
	Demand Totals	25,805	27,539	29,273	31,006	32,740
	Difference	**3,871**	**4,131**	**4,391**	**4,651**	**4,911**
Fourth Year	Supply Totals	29,676	31,670	33,663	35,657	37,651
	Demand Totals	25,805	27,539	29,273	31,006	32,740
	Difference	**3,871**	**4,131**	**4,391**	**4,651**	**4,911**
Fifth Year	Supply Totals	29,676	31,670	33,663	35,657	37,651
	Demand Totals	25,805	27,539	29,273	31,006	32,740
	Difference	**3,871**	**4,131**	**4,391**	**4,651**	**4,911**

AF = acre-feet
Source: WVWP RUWMP 2021, Table 10-15.

Sewer. The proposed Project is an industrial warehouse development. As such, the proposed development is consistent with the assumptions in the Airport Specific Plan for the project site. Assuming the City's wastewater generation factors of 1,000 gallons per acre for commercial land uses from the 1994 Rialto Storm Drain and Wastewater Master Plan, the proposed Project would generate 4,780 gallons per day (gpd), as identified in **Table 3.18-6: Wastewater Generation**.

Wastewater collected by the City would be treated at the Rialto Wastewater Treatment Plant, which functions in conjunction with four additional independent treatment plants. The combined total treatment design capacity of the plants is over 12 million gallons per day (mgd)[36]. Given that the proposed Project would generate an additional 4,780 gpd or 0.0047 mgd of wastewater, this increase is nominal compared to the combined residual capacity of the treatment plants. Therefore, existing wastewater treatment facilities would accommodate the Project-generated wastewater and continue to maintain a substantial amount of remaining capacity for future wastewater treatment. The proposed Project includes

[36] City of Rialto. (2010). *Rialto General Plan.* https://www.yourrialto.com/DocumentCenter/View/1494/2010-General-Plan. Accessed March 7, 2022.

a new sewer connection. The Project would design the sewer connection consistent with current City design guidelines and would pay a sewer connection fee.

Table 3.18-6: Estimated Wastewater Generation

Land Use	Project Site (ac)	Wastewater Generation (gpd)	
		Per Acre Generation	Total
Commercial [a]	4.78	1,000 gallons	4,780 gpd
Total			**4,780 gpd**

gpd = gallons per day; ac = acre

a. The wastewater generation rates listed in the 1994 wastewater Rialto Storm Drain and Wastewater Master Plan include residential, commercial, schools, and parks. The commercial rates were used for the analysis of the entire project site because rates specific to industrial uses were not identified.

Source: Rialto Storm Drain and Wastewater Master Plan, 1994, as identified in the 2010 Rialto Specific Plan EIR, Page 4-16.9.

Development of the proposed Project would alter the on-site drainage patterns with the development of the warehouse, surface parking areas, and associated site improvements. Pursuant to Municipal Code Section 12.60.260, Stormwater Quality Management Plan (SWQMP), the proposed Project would be required to submit and have approved a SWQMP to the City Engineer. The SWQMP would identify all BMPs that would be incorporated into the Project to control stormwater and non-stormwater pollutants during and after construction and would be revised as necessary during the life of the Project. BMPs would be designed in accordance with the NPDES requirements. Therefore, stormwater runoff expected at buildout of the proposed Project would not exceed existing storm drainage capacities. Impacts would be less than significant, and there are no changes or new significant information that would require preparation of subsequent CEQA documentation.

Electrical/Natural Gas/Telecommunications. The proposed Project would not require relocation or construction of new backbone infrastructure facilities. The Project would connect to existing connections for services. Natural gas infrastructure would not be extended to the project site. No significant impacts would occur.

Solid Waste. Implementation of the proposed Project would be expected to generate additional waste during the temporary, short-term construction phase, as well as the operational phase, but it would not result in inadequate landfill capacity. The City of Rialto's Waste Management Office provides environmental services to City residents and businesses. The Waste Management Office oversees the City's trash and recycling service contract provided by Burrtec Disposal. Solid waste service for the City of Rialto is provided by the Mid-Valley Sanitary Landfill located in the northern portion of the City. The landfill has a maximum throughput of 7,500 tons per day. This landfill has a maximum permitted capacity of approximately 101.3 million cubic yards, and the landfill has a remaining capacity of approximately 61.2 million cubic yards.[37] The landfill has an expected operational life through 2045 with the potential for vertical or downward expansion.[38]

Landfill capacity is expected to decrease over time with future growth and development throughout San Bernardino County and surrounding Inland Empire areas. Waste reduction and recycling programs and regulations are expected to reduce this demand and extend the life of existing landfills. The proposed

[37] CalRecycle. (2022). *SWIS Facility/Site Activity Details.* https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1880?siteID=2662. Accessed March 7, 2022.

[38] City of Rialto. (2017). *Addendum to the Renaissance Specific Plan Final Environmental Impact Report.*

Project complies with the land use and zoning designations set forth in the Airport Specific Plan for the project site. Impacts would be less than significant, and there are no changes or new significant information that would require preparation of subsequent CEQA documentation.

The proposed Project would be required to adhere to City ordinances with respect to waste reduction and recycling, as detailed in Municipal Code Chapter 8.08, Refuse Collection. The Project's solid waste generation would be subject to compliance with AB 939, which measures for each jurisdiction, in part, the actual disposal amounts compared to target disposal amounts. Further, the proposed Project, similar to all projects, is required to recycle construction waste in compliance with the 2019 California Green Building Code, to store and collect recyclable materials in compliance with AB 341, and to handle green waste in accordance with AB 1826. Overall, impacts would be less than significant and there are no changes or new significant information associated with the proposed Project.

Cumulative Impact

Given the existing available water supply, the water supply needs of the Project—together with related projects—would not result in the need for new or expanded water entitlements that could result in significant environmental impacts. Since the proposed Project would not have a significant impact on the water supply and would have adequate water infrastructure improvements, the Project combined with related projects would not result in significant water supply and infrastructure impacts. Therefore, the Project would not require or result in the relocation or construction of new or expanded water facilities. Further, the Project would have sufficient water supplies to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years. No significant cumulative impact is anticipated with respect to water supply, and the Project's contribution is not considered cumulatively considerable.

Given the existing available capacity of the water treatment plant, the wastewater treatment needs of the Project—together with related projects—would not result in the need for new or expanded wastewater treatment facilities that could result in significant environmental impacts or that could cause the wastewater treatment to exceed the capacity of the wastewater treatment facilities. The City indicated that sufficient capacity exists for sewer services for the Project. Therefore, the Project would not require or result in the relocation or construction of new or expanded wastewater treatment facilities. Further, the Project would have adequate wastewater capacity to serve the project and reasonably foreseeable future development. No significant cumulative impact is anticipated with respect to wastewater capacity, and the Project's contribution is not cumulatively considerable.

As addressed in Section 3.6, *Energy*, the proposed Project would not cause an energy impact to occur, including the use of electricity. Implementation of the proposed Project would not result in significant unavoidable energy impacts and would therefore not result in a new or substantially more severe project-specific or cumulative energy impact than those already analyzed. The Project's contribution to energy use would less than cumulatively considerable.

Potential future projects in the area would increase solid waste generation and decrease available capacity of the County's landfills. The Project does not propose a change to land use or zoning; thus, the solid waste generation for construction and operations of a warehouse on this site were assumed in planning documents. The Project would not result in a significant impact and combined with related projects would not result in significant impacts to solid waste standards, infrastructure, or reduction goals. Therefore, the Project's contribution would not be cumulative considerable.

In summary, the proposed Project would not cause utility impacts to occur, nor an increase in the severity of any utilities impacts previously disclosed in the Airport Specific Plan EIR. The Project's contribution would be less than cumulatively considerable.

Mitigation Program

Mitigation Measures 5.12-1, 5.12-3, 5.12-5A, 5.12-5B, 5.12-5C, and 5.12-6 from the Airport Specific Plan EIR are applicable to the proposed Project. Mitigation Measure 5.12-2 from the Airport Specific Plan EIR is not applicable to the Project because the proposed Project does not include the approval of a tentative subdivision map. Mitigation Measure 5.12-7 is the same measure as Mitigation Measure 5.12-6.

MM 5.12-1 Prior to the issuance of building permits, project developers shall demonstrate the use of low water use fixtures, plumbing fixtures and appliances, to the satisfaction of the City Building Inspector, as follows:

Interior:

- Supply line pressure: Reduce water pressure greater than 50 psi to 50 psi or less by means of a pressure-reducing valve.
- Drinking fountains: Equip drinking fountains with self-closing valves.
- Ultra-low toilets: Install 1.ft gallon per flush toilets in all new construction.

Exterior:

- Landscape with low water-consuming plants wherever feasible.
- Minimize use of lawn by limiting it to lawn-dependent uses.
- Group plants of similar water use to reduce over irrigation of low- water-using plants.
- Use mulch extensively in all landscaped areas. Mulch applied on top of soil will improve the water-holding capacity of the soil by reducing evaporation and soil compaction.
- Preserve and protect existing trees and shrubs. Established plants are often adapted to low-water-using conditions and their use saves water needed to establish replacement vegetation.
- Install efficient irrigation systems which minimize runoff and evaporation and maximize the water which will reach the plant roots. Drip irrigation, soil moisture sensors, and automatic irrigation systems are a few methods to consider in increasing irrigation efficiency and may be feasible for the project.
- Use pervious paving material whenever feasible to reduce surface water runoff.
- investigate the feasibility of utilizing reclaimed wastewater, stored rain water, or gray water for irrigation.

MM 5.12-3 Project developers shall pay applicable connection fees prior to issuance of connection permits and shall provide appropriate facilities on-site to connect with the City's system.

MM 5.12-5A Prior to issuance of occupancy permits, the project applicant shall provide the City and County with evidence of compliance with guidelines set forth by the State of California in

accordance with the California Integrated Waste Management Act of 1989 (AB 989) which requires jurisdictions to divert 50 percent of solid waste from landfills by the year 2000. This shall include consideration for relocating mature trees, and offering marketable materials to recyclers such as concrete, asphalt and steel.

MM 5.12-5B Prior to the issuance of any building permits, a site plan delineating the capacity, number, and location of all proposed solid waste and recyclable collection areas shall be submitted to the City of Rialto Department of Public Works for review and approval. Further, each location shall be verified by the City of Rialto Development Services Department, prior to issuance of any certificates of use and occupancy.

MM 5.12-5C The applicant shall utilize special landscape treatments to minimize the amount of yard trimmings and waste from the proposed project area, to the satisfaction of the City Development Services Department, as part of the Precise Plan of Development review and approval.

MM 5.12-6 All construction shall be done within the guidelines established by State building regulations and the Uniform Building Code (UBC) as they relate to energy conservation including such measures as solar heating for water and the use of landscaping to shade buildings.

Conclusion

Based on the comparative analysis set forth in this Addendum, no new impacts relative to Utilities and Services or a substantial increase in the severity of a previously identified significant impact evaluated in the Airport Specific Plan EIR would occur. With regard to PRC Section 21166 and State CEQA Guidelines Section 15162(a), the Project would not result in any new impacts, or increase the severity of the previously identified impacts. There are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Airport Specific Plan EIR. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would impact the prior finding of less than significant. Therefore, preparation of a subsequent environmental analysis is not warranted.

3.19 Wildfire

The topic of Wildfire was not addressed in the Airport Specific Plan EIR because the requirement to analyze in CEQA documents, the potential impacts associated with proximity to very high fire hazard severity zones did not become effective until January 1, 2019, which was subsequent to the certification of the Airport Specific Area EIR by the Rialto City Council in November 1997.

Threshold (a) **If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?**

Threshold (b) **If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?**

Threshold (c) **If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?**

Threshold (d) **If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?**

No Impact. According to the CALFIRE Fire Hazard Severity Zone Viewer, the project site is not within or proximate to Very High Fire Hazard Severity Zone (VHFHSZ) zone for a Local Responsibility Area. Additionally, the project site is not within areas designated as High or Moderate fire susceptibility[39]. Therefore, this threshold is not applicable to the proposed Project. No impact would occur and no mitigation is required.

Cumulative Impact

As discussed above, the project site is not within a VHFHSZ. Therefore, the proposed Project would not cause either a new cumulative impact to occur or cumulatively contribute to wildfire impacts.

Mitigation Program

No mitigation measures are required.

Conclusion

As discussed above, the proposed Project would not cause a new wildfire impact. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Airport Specific Plan EIR was certified is available that would result in a significant impact that would require major revisions to the Airport Specific Plan EIR. Therefore, preparation of a subsequent environmental analysis is not warranted.

[39] California Department of Forestry and Fire Protection (CAL FIRE). (2022). Fire Hazard Severity Zones in State Responsibility Areas. Fire and Resource Assessment Program. https://egis.fire.ca.gov/FHSZ/. Accessed March 25, 2022.

4 DETERMINATION OF APPROPRIATE CEQA DOCUMENTATION

Based upon the analysis of potential environmental consequences anticipated to occur from implementation of the proposed Project as provided in Section 3, *Evaluation of Environmental Impacts*, the proposed Project would not result in any new or more severe impacts that were not disclosed, analyzed, and mitigated for in the Airport Specific Plan EIR. As demonstrated in this Addendum, the proposed Project's potential impacts would either be the same or less than those anticipated for the approved project as evaluated in the Airport Specific Plan EIR. In addition, there are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the Airport Specific Plan EIR, nor has any new information regarding the potential for new or more severe significant environmental impacts been identified.

Therefore, in accordance with State CEQA Guidelines Section 15164, this Addendum to the previously certified Airport Specific Plan EIR is the appropriate environmental documentation for the proposed Project. In taking action on any of the approvals, the decision-making body must consider the whole of the data presented in the Airport Specific Plan EIR, as augmented by this Addendum. Therefore, preparation of a subsequent EIR is not required and the appropriate CEQA document for the proposed Project is this Addendum to the Airport Specific Plan EIR. No additional environmental analysis or review is required for the proposed Project.

Section 15162 – Subsequent EIRs and Negative Declarations

(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

The land use designation for the project site in the Airport Specific Plan is General Manufacturing (I-GM). Warehouses are a permitted use in the I-GM. Based on the land use designation and the maximum FAR of 1, allowable development of the site as assumed in the Airport Specific Plan EIR could be 208,217 sf. The proposed Project would allow for a 100,880-sf warehouse on the 4.78-acre project site and would include 91,880 sf of warehouse space and 9,000 sf of ancillary office space.

The City of Rialto proposes to implement the Project within the context of the Rialto Airport Specific Plan, as described in this Addendum. As discussed in the Environmental Impact Analysis section of this Addendum, no new or more severe significant environmental effects beyond what was evaluated in the Airport Specific Plan EIR would occur that would require substantive revisions to the Airport Specific Plan EIR. The proposed Project would not result in increased impacts above what was evaluated in the Airport Specific Plan EIR with regard to environmental factors such as air quality, noise, public services, and utilities.

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

As documented herein, subsequent to the implementation and certification of the Airport Specific Plan, the Rialto City Council adopted resolutions declaring the intent to relocate the Rialto Airport operations to other nearby facilities. With the closure of the Rialto Airport, many of the assumptions for development in the Airport Specific Plan area were no longer applicable. On November 9, 2010, the Rialto City Council adopted the Renaissance Specific Plan and certified the Renaissance Specific Plan Program EIR. The approximately 1,439-acre Renaissance Specific Plan area is generally bordered by Casmalia Street to the north, Baseline Road to the south, Ayala Drive to the east, and Tamarind Avenue to the west. With the adoption of the Renaissance Specific Plan, the boundaries of the Airport Specific Plan area were modified to exclude the Renaissance Specific Plan area.

Although the boundaries of the Airport Specific Plan were modified, the remainder of the Airport Specific Plan, located primarily north of SR-210, continues to regulate the areas within the remaining Airport Specific Plan area, outside of the Renaissance Specific Plan area. The Airport Specific Plan identified this area as (1) an industrial area, (2) largely "underutilized and underdeveloped", (3) intended to "encourage and improve the economic and physical vitality of the area", (4) providing for "development standards and design guidelines … to ensure a quality appearance within the area".

Accordingly, this change in circumstances does not result in new or substantially more severe significant environmental effects than previously identified. As discussed in the Environmental Impact Analysis section of this Addendum, no substantial changes have occurred with respect to the circumstances under which the Project will be undertaken which will require major revisions of the Airport Specific Plan EIR due to new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

(A) The project will have one or more significant environmental effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

No new information that was not known at the time the Airport Specific Plan EIR was prepared is now available that demonstrates that the proposed Project will result in a new or increased impact. Based on the analysis prepared for the proposed Project, the project-related effects would not be substantially more severe than were disclosed in the Airport Specific Plan EIR as a result of the proposed Project. Implementation of the proposed Project within the context of the Airport Specific Plan would not substantially increase the severity of previously identified impacts.

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

No mitigation measures or alternatives were found infeasible in the Airport Specific Plan EIR.

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the

environment, but the project proponents decline to adopt the mitigation measure or alternative.

No feasible alternatives have been identified that would substantially reduce significant impacts associated with the buildout the Airport Specific Plan. However, the proposed Project would not result in any significant unavoidable impacts.

(b) If changes to a project or its circumstances occur or new information becomes available after adoption of a negative declaration, the lead agency shall prepare a subsequent EIR if required under subdivision (a). Otherwise the lead agency shall determine whether to prepare a subsequent negative declaration, an addendum, or no further documentation.

Additional technical analyses were performed for the proposed Project and are the subject of this Addendum. Based on the analysis in this document, the proposed Project would not result in any new significant environmental effects that are substantially different from those identified in the Airport Specific Plan EIR nor would it substantially increase the severity of significant effects previously identified in the Airport Specific Plan EIR. None of the conditions listed under subsection (a) would occur that would require preparation of a subsequent EIR.

(c) Once a project has been approved, the lead agency's role in project approval is completed, unless further discretionary approval on that project is required. Information appearing after an approval does not require reopening of that approval. If after the project is approved, any of the conditions described in subdivision (a) occurs, a subsequent EIR or negative declaration shall only be prepared by the public agency which grants the next discretionary approval for the project, if any. In this situation no other responsible agency shall grant an approval for the project until the subsequent EIR has been certified or subsequent negative declaration adopted.

None of the conditions listed in subsection (a) would occur as a result of the proposed Project. Therefore, no subsequent EIR is required.

Section 15164 – Addendum to an EIR or Negative Declaration

(a) The lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.

As described above, none of the conditions described in the State CEQA Guidelines Section 15162 calling for the preparation of a subsequent EIR have occurred.

(b) An addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred.

None of the conditions described in Section 15162 calling for preparation of a subsequent EIR would occur as a result of the proposed Project. Therefore, an Addendum to the Airport Specific Plan EIR is the appropriate CEQA document for the proposed Project.

(c) An addendum need not be circulated for public review but can be included in or attached to the EIR or adopted negative declaration.

This Addendum will be attached to the Airport Specific Plan EIR and maintained in the administrative record files at the City of Rialto.

(d) The decision making body shall consider the addendum with the EIR or adopted negative declaration prior to making a decision on the project.

The City of Rialto would consider this Addendum with the Airport Specific Plan EIR prior to making a decision on the proposed Project.

(e) A brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR, the lead agency's required findings on the project, or elsewhere in the record. The explanation must be supported by substantial evidence.

This document provides substantial evidence for City of Rialto records to support the preparation of this Addendum for the proposed Project.

5 PREPARERS

City of Rialto (Lead Agency)

150 S. Palm Avenue
Rialto, California 92376

Daniel Casey, Senior Planner

Kimley-Horn and Associates, Inc.

1100 W. Town and Country Road, Suite 700
Orange, California 92868

Dana C. Privitt, AICP, Project Manager
Casey Schooner, AICP, Assistant Project Manager
Serena Lin, Planning Analyst
Achilles Malisos, Technical Studies Manager
Olivia Chan, Technical Studies Planner
Pranesh Tarikere, P.E., Traffic Manager

6 REFERENCES

California Department of Conservation (DOC). 2022a. *California Important Farmland Finder*. http://maps.conservation.ca.gov/ciff. Accessed February 28, 2022.

——. 2022b. *Earthquake Zones of Required Investigation*. https://maps.conservation.ca.gov/cgs/EQZApp/app/. Accessed March 25, 2022.

——. 2022c. *Well Finder*. https://maps.conservation.ca.gov/doggr/wellfinder/#openModal/-117.36675/34.07440/14. Accessed March 25, 2022.

California Department of Forestry and Fire Protection (CAL FIRE). 2022. *Fire Hazard Severity Zones in State Responsibility Areas. Fire and Resource Assessment Program.* https://egis.fire.ca.gov/FHSZ/. March 25, 2022.

California Department of Resources Recycling and Recovery (CalRecycle). 2012. SWIS Facility/Site Activity Details. https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1880?siteID=2662. Accessed March 7, 2022.

California Department of Transportation . 2022. *California Scenic Highway Mapping System.* https://www.arcgis.com/home/webmap/viewer.html?useExisting=1&layers=f0259b1ad0fe4093a5604c9b838a486a. Accessed February 28, 2022.

California Employment Development Department. (2022a). *Riverside-San Bernardino-Ontario Metropolitan Statistical Area (MSA) (Riverside and San Bernardino Counties)*. https://www.labormarketinfo.edd.ca.gov/file/lfmonth/rive$pds.pdf. Accessed June 6, 2022.

——. 2022b. *Monthly Labor Force Data for Cities and Census Designated Places (CDP).* https://www.labormarketinfo.edd.ca.gov/data/labor-force-and-unemployment-for-cities-and-census-areas.html. Accessed June 6, 2022.

Geocon West, Inc. 2021. *Geotechnical Investigation, Proposed Industrial Development NWC of Locust Avenue and Lowell Street, Rialto, California.*

Kimley-Horn and Associates. 2022a. *Air Quality Assessment*.

——. 2022b. *Health Risk Assessment.*

——. 2022c. *Energy Assessment.*

——. 2022d. *Greenhouse Gas Emissions Assessment.*

——. 2022e. *Acoustical Assessment*.

——. 2022d. *Preliminary Drainage Study.*

——. 2022e. *Preliminary Water Quality Management Plan.*

National Assessment Corporation. 2004. *Phase I Environmental Assessment Report.*

Rialto, City of. 2022. *Facilities.* https://www.yourrialto.com/Facilities?clear=False. Accessed March 7, 2022.

——. 2022. *Rialto Police Department. Our Department. https://rialtopolice.com/our-department. Accessed March 7, 2022.*

——. 2022. *Rialto Municipal Code. https://library.municode.com/ca/rialto/codes/code_of_ordinances*

——. 2017. *Addendum to the Renaissance Specific Plan Final Environmental Impact Report.*

——. 2010. *City of Rialto General Plan*.

——. 1997. *Rialto Airport Specific Plan.*

——. 1997. *Rialto Airport Specific Plan Environmental Impact Report.*

Rialto Unified School District. 2020. *Developer Fee Update*. https://kec.rialto.k12.ca.us/Page/1939. Accessed March 7, 2022.

San Bernardino Valley Municipal Water District. 2020. *2020 Upper Santa Ana River Watershed IRUWMP.* https://www.sbvmwd.com/home/showpublisheddocument/9262/637614631603430000. Accessed March 22, 2022.

West Valley Water District. 2022. *Our History.* https://wvwd.org/about/history/#:~:text=Our%20history%20began%20on%20February,rights%20and%20assets%20from%20condemnation. Accessed May 16, 2022.

——. 2016. *West Valley Water District Boundary Map.* https://www.yourrialto.com/DocumentCenter/View/1207/Map-of-West-Valley-Water-District-Boundaries. Accessed March 7, 2022.

APPENDIX A

AIR QUALITY ASSESSMENT AND HEALTH RISK ASSESSMENT

Air Quality Assessment
Locust Avenue and Lowell Street Development Project
City of Rialto, California

Prepared by:

Kimley-Horn and Associates, Inc.
1100 W. Town and Country Road, Suite 700
Orange, California 92868
Contact: Ms. Olivia Chan
714.939.1030

May 2022

TABLE OF CONTENTS

1 INTRODUCTION
1.1 Project Location and Setting 1
1.2 Project Description 1

2 ENVIRONMENTAL SETTING
2.1 Climate and Meteorology 6
2.2 Air Pollutants of Concern 7
2.3 Sensitive Receptors 10

3 REGULATORY SETTING
3.1 Federal 11
3.2 State of California 11
3.3 Regional 13
3.4 Local 16

4 SIGNIFICANCE CRITERIA AND METHODOLOGY
4.1 Air Quality Thresholds 17
4.2 Methodology 18
4.3 Summary of the Rialto Airport Specific Plan Final EIR 19

5 POTENTIAL IMPACTS AND MITIGATION
5.1 Air Quality Analysis 20

6 REFERENCES
References 31

TABLES
Table 1 Air Contaminants and Associated Public Health Concerns 7
Table 2 Ambient Air Quality Data 9
Table 3 Sensitive Receptors 10
Table 4 State and Federal Ambient Air Quality Standards 12
Table 5 South Coast Air Basin Attainment Status 14
Table 6 South Coast Air Quality Management District Emissions Thresholds 17
Table 7 Local Significance Thresholds for Construction/Operations 18
Table 8 Construction-Related Emissions 23
Table 9 Operational Emissions 25
Table 10 Equipment-Specific Grading Rates 27
Table 11 Localized Significance of Construction Emissions 27
Table 12 Localized Significance of Operational Emissions 28

TABLE OF CONTENTS (CONTINUED)

EXHIBITS

Exhibit 1 Regional Location Map 3
Exhibit 2 Project Vicinity Map 4
Exhibit 3 Conceptual Site Plan 5

APPENDICES

Appendix A: Air Quality Modeling Data

LIST OF ABBREVIATED TERMS

AQMP	air quality management plan
AB	Assembly Bill
ADT	average daily traffic
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CCAA	California Clean Air Act
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CO	carbon monoxide
cy	cubic yards
DPM	diesel particulate matter
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
H_2S	hydrogen sulfide
Pb	lead
LST	local significance threshold
µg/m^3	micrograms per cubic meter
mg/m^3	milligrams per cubic meter
NAAQS	National Ambient Air Quality Standards
NO_2	nitrogen dioxide
NO_x	nitrogen oxide
O_3	ozone
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
ppm	parts per million
ROG	reactive organic gases
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SRA	source receptor area
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCAG	Southern California Association of Governments
sf	square foot
SO_{4-2}	sulfates
SO_2	sulfur dioxide
TAC	toxic air contaminant
C_2H_3Cl	vinyl chloride
VOC	volatile organic compound

1 INTRODUCTION

This report documents the results of an Air Quality Assessment completed for the Thrifty Oil Project ("Project" or "Proposed Project"). The purpose of this analysis is to identify the air quality emissions associated with construction and operations of the Project as part of the Rialto Airport Environmental Impact Report (EIR) Addendum, located in the City of Rialto, California. This comparative analysis has been undertaken to analyze whether the proposed Project would result in any new or substantially more severe significant environmental impacts as compared to the conclusions discussed in the certified Final Program Environmental Impact Report (FEIR) for the Rialto Airport Specific Plan (November 1997) (Approved Project).

1.1 Project Location and Setting

The Project site is in the northern area of the City of Rialto in San Bernardino County, approximately one mile north of State Route (SR) 210; refer to **Exhibit 1, Regional Location Map**. The Project site is approximately 4.78 acres and regional access to the Project site is provided via SR-210. Local access to the Project site is provided via Lowell Street which is a two-lane undivided roadway, trending in an east-west direction and Locust Avenue which is a two-lane undivided roadway, trending in a north-south direction. The site is bordered by a recycling center to the north; Lowell Street and vacant land designated for General Industrial uses to the south; Locust Avenue, a truck trailer storage yard, and an industrial warehouse to the east; and a manufacturing facility to the west; refer to **Exhibit 2, Project Vicinity Map**.

1.2 Project Description

The Project proposes to develop a warehouse building with approximately 91,880 square feet (sf) of warehouse space and 9,000 sf of two-story office area for a total building area of 100,880 sf; refer to **Exhibit 3, Conceptual Site Plan**. The Project includes minimal production, use, storage, transport or disposal of hazardous materials for construction and operational activities. The Project is speculative in nature; the end user(s) and their hours of operation are unknown at this time. However, to be conservative, it has been assumed that the building would operate 24 hours per day/7 days per week for the Addendum's analyses referenced herein. The Project will not include refrigerated uses on-site.

The Project proposes two office spaces (each would include two-story areas consisting of 4,500 sf), one on the southwest corner of the warehouse building and one on the southeast corner of the warehouse building. The warehouse building would be designed to have a maximum building height of approximately 34.5'. The warehouse building would provide ingress and egress via 40' wide driveway and one 32' wide driveway on Lowell Street and one 50' wide driveway on Locust Avenue. Drive aisles along the northern, southern and western frontages would range from 26 to 40 feet in width to allow for onsite movement for workers and emergency vehicles alike. The building will be provided with 87 vehicle parking stalls, 12 dock doors, and one drive thru door on the north side of the building. Vehicle parking will be provided on the north, west, and south sides of the site, while all truck doors will be located on the north side of the building.

As noted above, Project site's ingress and egress would be provided via three driveways with two located on Lowell Street and one located on Locust Avenue. The 32-foot wide driveway located on the south side of the Project site would allow for right-in-right-out access onto Lowell Street for passenger vehicles and emergency vehicles. The 40-foot wide driveway located at the southwest corner of the Project site would allow for right-in and left-out secondary truck access onto Lowell Street. The 50-foot wide driveway

located at the northeast corner of the Project site would allow for left-in-right-out primary truck access onto Locust Avenue.

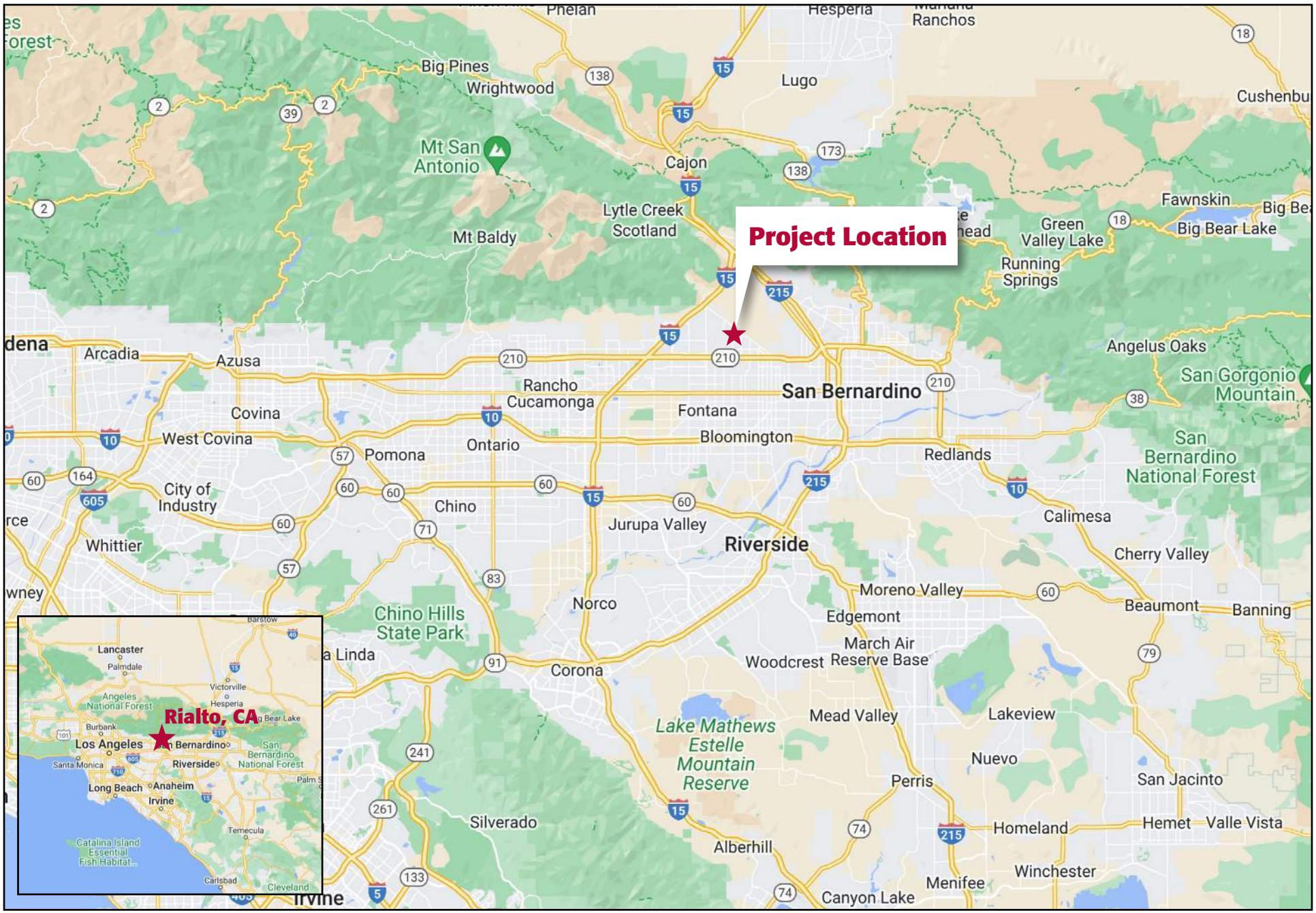
Construction is anticipated to occur over a duration of approximately nine months, commencing in the fourth quarter of 2022.

Parking

The Project is anticipated to provide 87 vehicle parking stalls. Additionally, the warehouse building includes 12 dock doors and one drive thru door located on the northern side of the building. All auto parking would be located on the parking will be provided on the north and west, and south sides of the site portions of the Project site.

Landscaping

The Project site would be landscaped in accordance with the landscape design guidelines set forth in Municipal Code Section 18.61.250 and Section 18.61.270, Landscaping would comply with City requirements for the efficient use of water in the landscape design plan.



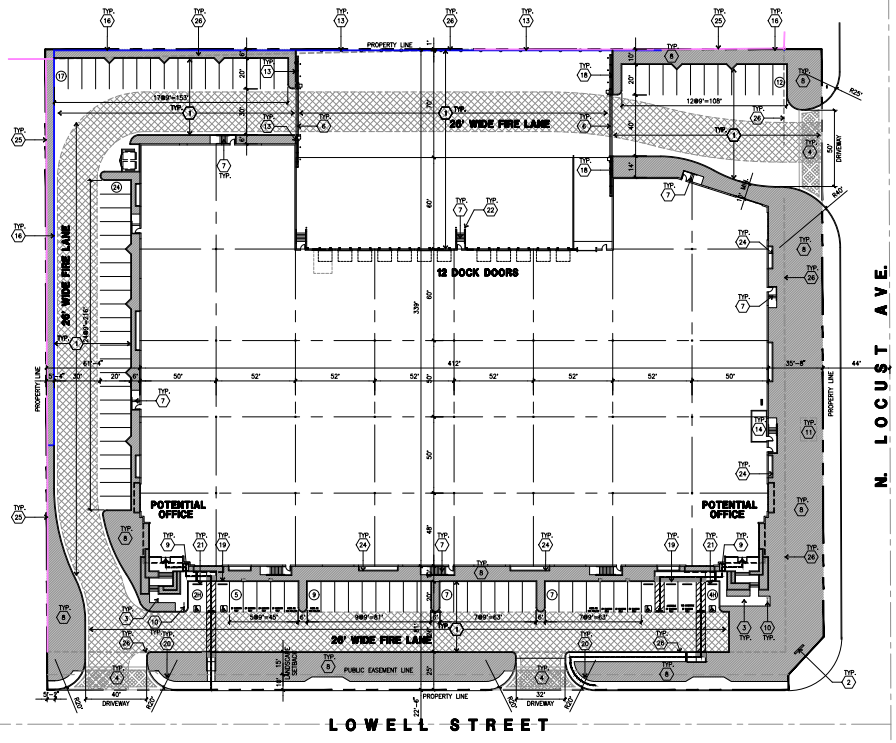
Source: Google Maps, 2022

Exhibit 1: Regional Vicinity Map
Locust Avenue and Lowell Street Development Project



Source: Nearmap, 2022

Exhibit 2: Local Vicinity Map
Locust Avenue and Lowell Street Development Project



OVERALL SITE PLAN

SCALE: 1" = 30'-0"

VICINITY MAP



PROJECT DATA

SITE AREA		
	In s.f. (Less pedestrian easement)	208,131 s.f.
	In acres	4.78 ac
BUILDING AREA		
	Office	4,500 s.f.
	Office 2nd floor	4,500 s.f.
	Warehouse	91,880 s.f.
	TOTAL	100,880 s.f.
COVERAGE		48.5%
AUTO PARKING REQUIRED		
	Office: 1/250 s.f.	36 stalls
	Whse: 1st 10'k @ 1/1000 s.f.	10 stalls
	w hse: above 10'k @ 1/2000 s.f.	41 stalls
	TOTAL	87 stalls
AUTO PARKING PROVIDED		
	Standard (9' x 20')	87 stalls
ZONING ORDINANCE FOR CITY		
	Zoning Designation - Rialto Airport Specific Plan - I-GM (General Manufacturing)	
MAXIMUM BUILDING HEIGHT ALLOWED		
	Height - 35' w ith 1:1 Setback Ratio	
MAXIMUM FLOOR AREA RATIO		
	FAR - 3:1	
SETBACKS		
	Building	Landscape
	Locust Ave/Front - 25'	15'
	Low ell St/Side - 15'	15'
	Rear - 0'-15'	0

PROPERTY OWNER

THRIFTY OIL CO.
13116 IMPERIAL HIGHWAY
SANTA FE SPRINGS CA 90670
TEL: 562-921-3581
ATTN: STEPHANE WANDEL

ADDRESS OF THE PROPERTY

TBD

ASSESSOR'S PARCEL NUMBER

0232-192-12-0-000

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF RIALTO, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL NO. 5 OF PARCEL MAP NO. 7173, IN BERNARDINO, STATE OF CALIFORNIA, AS PER INCLUSIVE OF PARCEL MAPS, IN THE OFFICE THE CITY OF RIALTO, COUNTY OF SAN MAP RECORDED IN BOOK 77 PAGES 64 TO 68 OF THE COUNTY RECORDER OF SAID COUNTY.

APN: 0239-192-12-0-000

ZONING

ZONING DESIGNATION – RIALTO AIRPORT SPECIFIC PLAN
– I-GM (GENERAL MANUFACTURING)

APPLICANT

THRIFTY OIL CO.
13116 IMPERIAL HIGHWAY
SANTA FE SPRINGS CA 90670
TEL: 562-921-3581
ATTN: STEPHANE WANDEL

APPLICANT'S REPRESENTATIVE

HPA, INC.
18831 BARDEEN AVE SUITE 100
IRVINE CA 92612
TEL: 949-862-2137
ATTN: JOSEPH KIM

SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONC. PAVEMENT.
2. FUTURE MONUMENT SIGN
3. CONCRETE WALKWAY
4. DRIVEWAY APRONS TO BE CONSTRUCTED PER "L" DRAWINGS.
5. 5'-6"X5'-6"X4" MIN. THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. SLOPE TO BE 1/4" : 12" MAX. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY W/ 1/20 MAX. AS REQ. BY CITY INSPECTOR.
6. PROVIDE METAL, MANUAL OPERATED GATES W/ KNOX-PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
7. EXTERIOR CONC. STAIR.
8. LANDSCAPE. SEE "L" DWGS.
9. ACCESSIBLE LIFT.
10. BIKE RACK.
11. APPROXIMATE LOCATION OF TRANSFORMER.
12. NOT USED.
13. 8'H WROUGHT IRON FENCE
14. ELECTRICAL ROOM
15. SITE LIGHT FIXTURE
16. PROPOSED RETAINING WALL.
17. TRASH ENCLOSURE PER CITY STANDARD.
18. 12'H CONCRETE TILT SCREEN WALL
19. HANDICAPPED PARKING STALL SIGN
20. HANDICAPPED ENTRY SIGN
21. PRE-CAST CONC. WHEEL STOP
22. CONC. FILLED GUARD POST "6 DIA. U.N.O. 42" H.
23. EMPLOYEE BREAK AREA WITH TRELLIS
24. NON-STRUCTURAL ARCHITECTURAL TREATMENT WITH SMOOTH PLASTER FINISH
25. EXISTING RETAINING WALL TO REMAIN.
26. EXISTING RETAINING WALL TO BE DEMOLISHED

SITE LEGEND

- LANDSCAPED AREA
- CONCRETE PAVING SEE "C" DRWGS. FOR THICKNESS
- STANDARD PARKING STALL (9' X 20')
- HANDICAP PARKING STALL (12' X 20')
- 26' FIRE LANE.
- PROPERTY LINE
- PATH OF TRAVEL

SITE PLAN GENERAL NOTES

1. THE SOILS REPORT PREPARED BY _____ SHOULD BE A PART OF THESE CONTRACT DOCUMENTS.
2. IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE.
3. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINE U.N.O.
4. SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES. DETAILS ON SHEET AD.1 ARE MINIMUM STANDARDS.
5. THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM, PRIOR TO INSTALLATION & AT LEAST 60 DAYS BEFORE BLDG. COMPLETION.
6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
9. SEE "C"DRAWINGS FOR FINISH GRADE ELEVATIONS.
10. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY W/ 1:20 MAX. SLOPE. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4". SEE "L" DRAWINGS FOR FINISH.
11. PROVIDE TWO FIRE HYDRANT ON THE SITE. FINAL LOCATION WILL DETERMINATE IN DURING SUBMITTAL.
12. PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.
13. CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND IRRIGATION OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
14. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
15. NOT USED
16. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
17. NOT USED.
18. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB
19. APPROVED CONCEPTUAL LANDSCAPE PLAN PRIOR TO GRADING PERMIT

OFFICIAL USE ONLY

Source: HPA Architecture

Exhibit 3: Site Plan
Locust Avenue and Lowell Street Development Project

2 ENVIRONMENTAL SETTING

2.1 Climate and Meteorology

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The Project is located within the South Coast Air Basin (SCAB), which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, as well as all of Orange County. The SCAB is on a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean on the southwest and high mountains forming the remainder of the perimeter[1]. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below.

The SCAB is part of a semi-permanent high-pressure zone in the eastern Pacific. As a result, the climate is mild and tempered by cool sea breezes. This usually mild weather pattern is occasionally interrupted by periods of extreme heat, winter storms, and Santa Ana winds. The annual average temperature throughout the 6,645-square-mile SCAB ranges from low 60 to high 80 degrees Fahrenheit with little variance. With more oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas.

Contrasting the steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all annual rainfall occurs between the months of November and April. Summer rainfall is reduced to widely scattered thundershowers near the coast, with slightly heavier activity in the east and over the mountains.

Although the SCAB has a semiarid climate, the air closer to the Earth's surface is typically moist because of the presence of a shallow marine layer. Except for occasional periods when dry, continental air is brought into the SCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog are frequent and low clouds known as high fog are characteristic climatic features, especially along the coast. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SCAB.

Wind patterns across the SCAB are characterized by westerly or southwesterly on-shore winds during the day and easterly or northeasterly breezes at night. Wind speed is typically higher during the dry summer months than during the rainy winter. Between periods of wind, air stagnation may occur in both the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During winter and fall, surface high-pressure systems over the SCAB, combined with other meteorological conditions, result in very strong, downslope Santa Ana winds. These winds normally continue for a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the diffusion of pollutants by inhibiting the eastward transport of pollutants. Air quality in the SCAB generally ranges from fair to poor and is similar to air quality in most of coastal Southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions.

In addition to the characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two distinct types of temperature inversions control the vertical depth through which air pollutants are mixed. These inversions are the marine inversion and the radiation inversion. The height of the base of the inversion at any given time is called the "mixing height." The combination of winds and

[1] South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993.

inversions is a critical determinant leading to highly degraded air quality for the SCAB in the summer and generally good air quality in the winter.

2.2 Air Pollutants of Concern

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by state and federal laws. These regulated air pollutants are known as "criteria air pollutants" and are categorized into primary and secondary pollutants.

Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_X), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead are primary air pollutants. Of these, CO, NO_X, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. ROG and NO_X are criteria pollutant precursors and form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O_3) is formed by a chemical reaction between ROG and NO_X in the presence of sunlight. O_3 and nitrogen dioxide (NO_2) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in Table 1: Air Contaminants and Associated Public Health Concerns.

Table 1: Air Contaminants and Associated Public Health Concerns

Pollutant	Major Man-Made Sources	Human Health Effects
Particulate Matter (PM_{10} and $PM_{2.5}$)	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC)[1] and nitrogen oxides (NO_X) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Sulfur Dioxide (SO_2)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to O_3. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead (Pb)	Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Due to the phase out of	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause

Table 1: Air Contaminants and Associated Public Health Concerns		
Pollutant	**Major Man-Made Sources**	**Human Health Effects**
	leaded gasoline, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.	neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ.
[1] Volatile Organic Compounds (VOCs or Reactive Organic Gases [ROG]) are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).		
Source: California Air Pollution Control Officers Association (CAPCOA), *Health Effects*, http://www.capcoa.org/health-effects/, accessed May 2022.		

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that can cause short-term (acute) or long-term (i.e. chronic, carcinogenic or cancer causing) adverse human health effects (i.e. injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes more than 200 compounds, including particulate emissions from diesel-fueled engines.

CARB identified diesel particulate matter (DPM) as a toxic air contaminant. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Ambient Air Quality

CARB monitors ambient air quality at approximately 250 air monitoring stations across the State. These stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. Existing levels of ambient air quality, historical trends, and projections near the Project are documented by measurements made by the South Coast Air Quality Management District (SCAQMD), the air pollution regulatory agency in the SCAB that maintains air quality monitoring stations which process ambient air quality measurements.

Pollutants of concern in the SCAB include O_3, PM_{10}, and $PM_{2.5}$. The closest air monitoring station to the Project that monitors ambient concentrations of these pollutants is the Fontana-Arrow Monitoring Station (located approximately 5.9 miles to the northeast). Local air quality data from 2018 to 2020 are provided in Table 2: Ambient Air Quality Data, which lists the monitored maximum concentrations and number of exceedances of state or federal air quality standards for each year.

Table 2: Ambient Air Quality Data			
Criteria Pollutant	**2018**	**2019**	**2020**
Ozone (O_3) [1]			
1-hour Maximum Concentration (ppm)	0.075	0.100	0.152
8-hour Maximum Concentration (ppm)	0.064	0.079	0.115
Number of Days Standard Exceeded			
CAAQS 1-hour (>0.09 ppm)	0	1	3
NAAQS 8-hour (>0.070 ppm)	0	1	4
Carbon Monoxide (CO) [1]			
1-hour Maximum Concentration (ppm)	4.66	3.82	4.54
Number of Days Standard Exceeded			
NAAQS 1-hour (>35 ppm)	0	0	0
CAAQS 1-hour (>20 ppm)	0	0	0
Nitrogen Dioxide (NO_2) [1]			
1-hour Maximum Concentration (ppm)	0.068	0.070	0.072
Number of Days Standard Exceeded			
NAAQS 1-hour (>.100 ppm)	0	0	0
CAAQS 1-hour (>0.18 ppm)	0	0	0
Particulate Matter Less Than 10 Microns (PM_{10}) [1]			
National 24-hour Maximum Concentration	—	—	—
State 24-hour Maximum Concentration	—	—	—
State Annual Average Concentration (CAAQS=20 µg/m^3)	—	—	—
Number of Days Standard Exceeded			
NAAQS 24-hour (>150 µg/m^3)	—	—	—
CAAQS 24-hour (>50 µg/m^3)	—	—	—
Particulate Matter Less Than 2.5 Microns ($PM_{2.5}$) [1]			
National 24-hour Maximum Concentration	49.4	39.5	67.5
State 24-hour Maximum Concentration	49.4	39.5	67.5
Number of Days Standard Exceeded			
NAAQS 24-hour (>35 µg/m^3)	2	1	19

NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppm = parts per million; µg/m^3 = micrograms per cubic meter; – = not measured

[1] Measurements taken at the Fontana-Arrow Monitoring Station at 14360 Arrow Boulevard, Fontana, California 92335 (CARB# 36197)

Source: All pollutant measurements are from the CARB Aerometric Data Analysis and Management system database (https://www.arb.ca.gov/adam) except for CO, which were retrieved from the CARB Air Quality and Meteorological Information System (https://www.arb.ca.gov/aqmis2/display.php?report=SITE31D&site=2266&year=2021&mon=08&day=10&hours=all&statistic=HVAL&ptype=aqd&param=CO).

2.3 Sensitive Receptors

Sensitive populations are more susceptible to the effects of decreased air quality than is the general population. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive land uses surrounding the Project consist single-family residential uses. Sensitive land uses nearest to the Project are shown in Table 3: Sensitive Receptors.

Table 3: Sensitive Receptors

Receptor Description	Distance and Direction from the Project[1]
Single-Family Residences	700 feet to the east
Single-Family Residences	1,588 feet to the north
Single-Family Residences	1,344 feet to the northeast

1. Distances have been measured from nearby buildings to the boundary of the Project construction site.

Source: Google Earth, 2022.

3 REGULATORY SETTING

3.1 Federal

Federal Clean Air Act

Air quality is federally protected by the Federal Clean Air Act (FCAA) and its amendments. Under the FCAA, the United States Environmental Protection Agency (EPA) developed the primary and secondary National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants including O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and lead. Proposed projects in or near nonattainment areas could be subject to more stringent air-permitting requirements. The FCAA requires each state to prepare a State Implementation Plan to demonstrate how it will attain the NAAQS within the federally imposed deadlines.

The EPA can withhold certain transportation funds from states that fail to comply with the planning requirements of the FCAA. If a state fails to correct these planning deficiencies within two years of Federal notification, the EPA is required to develop a Federal implementation plan for the identified nonattainment area or areas. The provisions of 40 Code of Federal Regulations Parts 51 and 93 apply in all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan. The EPA has designated enforcement of air pollution control regulations to the individual states. Applicable federal standards are summarized in Table 4: State and Federal Ambient Air Quality Standards.

3.2 State of California

California Air Resources Board

CARB administers the air quality policy in California. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in Table 4, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates.

The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for the preparation of the State Implementation Plan for meeting federal clean air standards for the State of California. Like the EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events such as wildfires, volcanoes, etc. are not considered violations of a state standard, and are not used as a basis for designating areas as nonattainment. The applicable State standards are summarized in Table 4.

Table 4: State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards[1]	Federal Standards[2]
Ozone (O_3) [2, 5, 7]	8 Hour	0.070 ppm (137 µg/m³)	0.070 ppm
	1 Hour	0.09 ppm (180 µg/m³)	NA
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)
	1 Hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 µg/m³)	0.10 ppm[11]
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)
Sulfur Dioxide (SO_2) [8]	24 Hour	0.04 ppm (105 µg/m³)	0.14 ppm (365 µg/m³)
	1 Hour	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)
	Annual Arithmetic Mean	NA	0.03 ppm (80 µg/m³)
Particulate Matter (PM_{10}) [1, 3, 6]	24-Hour	50 µg/m³	150 µg/m³
	Annual Arithmetic Mean	20 µg/m³	NA
Fine Particulate Matter ($PM_{2.5}$) [3, 4, 6, 9]	24-Hour	NA	35 µg/m³
	Annual Arithmetic Mean	12 µg/m³	12 µg/m³
Sulfates (SO_{4-2})	24 Hour	25 µg/m³	NA
Lead (Pb) [10, 11]	30-Day Average	1.5 µg/m³	NA
	Calendar Quarter	NA	1.5 µg/m³
	Rolling 3-Month Average	NA	0.15 µg/m³
Hydrogen Sulfide (H_2S)	1 Hour	0.03 ppm (0.42 µg/m³)	NA
Vinyl Chloride (C_2H_3Cl) [10]	24 Hour	0.01 ppm (26 µg/m³)	NA

Notes:

ppm = parts per million; µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; – = no information available.

1 California standards for O_3, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM_{10}, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e. all standards except for lead and the PM_{10} annual standard), then some measurements may be excluded. Measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe carbon monoxide standard is 6.0 ppm, a level one-half the national standard and two-thirds the State standard.

2 National standards shown are the "primary standards" designed to protect public health. National standards other than for O_3, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour O_3 standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour O_3 standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m_3. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m³.

3 Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard. NAAQS are set by the EPA at levels determined to be protective of public health with an adequate margin of safety.

4 On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour O_3 concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the O_3 level in the area.

5 The national 1-hour O_3 standard was revoked by the EPA on June 15, 2005.

6 In June 2002, CARB established new annual standards for $PM_{2.5}$ and PM_{10}.

7 The 8-hour California O_3 standard was approved by the CARB on April 28, 2005 and became effective on May 17, 2006.

8 On June 2, 2010, the EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO_2 NAAQS however must continue to be used until one year following EPA initial designations of the new 1-hour SO_2 NAAQS.

9 In December 2012, EPA strengthened the annual $PM_{2.5}$ NAAQS from 15.0 to 12.0 µg/m³. In December 2014, the EPA issued final area designations for the 2012 primary annual $PM_{2.5}$ NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

10 CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.

11 National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.

Source: South Coast Air Quality Management District, *Air Quality Management Plan*, 2016; California Air Resources Board, *Ambient Air Quality Standards*, May 6, 2016.

3.3 Regional

South Coast Air Quality Management District

The SCAQMD is the air pollution control agency for Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The agency's primary responsibility is ensuring that state and federal ambient air quality standards are attained and maintained in the SCAB. The SCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, conducting public education campaigns, and many other activities. All projects are subject to SCAQMD rules and regulations in effect at the time of construction.

The SCAQMD is also the lead agency in charge of developing the AQMP, with input from the Southern California Association of Governments (SCAG) and CARB. The AQMP is a comprehensive plan that includes control strategies for stationary and area sources, as well as for on-road and off-road mobile sources. SCAG has the primary responsibility for providing future growth projections and the development and implementation of transportation control measures. CARB, in coordination with federal agencies, provides the control element for mobile sources.

The 2016 AQMP was adopted by the SCAQMD Governing Board on March 3, 2017. The purpose of the AQMP is to set forth a comprehensive and integrated program that would lead the SCAB into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, and to provide an update to the SCAQMD's commitments towards meeting the federal 8-hour O_3 standards. The AQMP incorporates the latest scientific and technological information and planning assumptions, including the *Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) and updated emission inventory methodologies for various source categories. As part of its air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide and the Connect SoCal – The 2020-2045 RTP/SCS. The 2020-2045 RTP/SCS was determined to conform to the federally mandated state implementation plan (SIP) for the attainment and maintenance of the NAAQS. The 2020-2045 RTP/SCS will be incorporated into the forthcoming 2022 AQMP. Both the Regional Comprehensive Plan and AQMP are based, in part, on projections originating with county and city general plans.

The SCAQMD has published the CEQA Air Quality Handbook (approved by the SCAQMD Governing Board in 1993 and augmented with guidance for Local Significance Thresholds [LST] in 2008). The SCAQMD guidance helps local government agencies and consultants to develop environmental documents required by California Environmental Quality Act (CEQA) and provides identification of suggested thresholds of significance for criteria pollutants for both construction and operation (see discussion of thresholds below). With the help of the CEQA Air Quality Handbook and associated guidance, local land use planners and consultants are able to analyze and document how proposed and existing projects affect air quality in order to meet the requirements of the CEQA review process. The SCAQMD periodically provides supplemental guidance and updates to the handbook on their website.

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. Under federal law, SCAG is designated as a Metropolitan Planning Organization and under State law as a Regional Transportation Planning Agency and a Council of Governments.

The state and federal attainment status designations for the SCAB are summarized in Table 5: South Coast Air Basin Attainment Status. The SCAB is currently designated as a nonattainment area with respect to the State O_3, PM_{10}, and $PM_{2.5}$ standards, as well as the national 8-hour O_3 and $PM_{2.5}$ standards. The SCAB is designated as attainment or unclassified for the remaining state and federal standards.

Table 5: South Coast Air Basin Attainment Status

Pollutant	State	Federal
Ozone (O_3) (1 Hour Standard)	Non-Attainment	Non-Attainment (Extreme)
Ozone (O_3) (8 Hour Standard)	Non-Attainment	Non-Attainment (Extreme)
Particulate Matter ($PM_{2.5}$) (24 Hour Standard)	–	Non-Attainment (Serious)
Particulate Matter ($PM_{2.5}$) (Annual Standard)	Non-Attainment	Non-Attainment (Moderate)
Particulate Matter (PM_{10}) (24 Hour Standard)	Non-Attainment	Attainment (Maintenance)
Particulate Matter (PM_{10}) (Annual Standard)	Non-Attainment	–
Carbon Monoxide (CO) (1 Hour Standard)	Attainment	Attainment (Maintenance)
Carbon Monoxide (CO) (8 Hour Standard)	Attainment	Attainment (Maintenance)
Nitrogen Dioxide (NO_2) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Nitrogen Dioxide (NO_2) (Annual Standard)	Attainment	Attainment (Maintenance)
Sulfur Dioxide (SO_2) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Sulfur Dioxide (SO_2) (24 Hour Standard)	Attainment	–
Lead (Pb) (30 Day Standard)	–	Unclassifiable/Attainment
Lead (Pb) (3 Month Standard)	Attainment	–
Sulfates (SO_{4-2}) (24 Hour Standard)	Attainment	–
Hydrogen Sulfide (H_2S) (1 Hour Standard)	Unclassified	–

Source: South Coast Air Quality Management District, *Air Quality Management Plan*, 2016; United States Environmental Protection Agency, *Nonattainment Areas for Criteria Pollutants (Green Book)*, 2018.

The following is a list of SCAQMD rules that are required of construction activities associated with the Project:

- **Rule 402 (Nuisance)** – This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

- **Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. This rule is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM_{10} suppression techniques are summarized below.

    a) Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.

    b) All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.

    c) All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.

    d) The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.

    e) Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the workday to remove soil tracked onto the paved surface.

- **Rule 1113 (Architectural Coatings)** – This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories.

- **Rule 2305 (Warehouse Indirect Source Rule)** - Rule 2305 was adopted by the SCAQMD Governing Board on May 7, 2021 to reduce NO_X and particulate matter emissions associated with warehouses and mobile sources attracted to warehouses. This rule applies to all existing and proposed warehouses over 100,000 square feet located in the SCAQMD. Rule 2305 requires warehouse operators to track annual vehicle miles traveled associated with truck trips to and from the warehouse. These trip miles are used to calculate the warehouses WAIRE (Warehouse Actions and Investments to Reduce Emissions) Points Compliance Obligation. WAIRE Points are earned based on emission reduction measures and warehouse operators are required to submit an annual WAIRE Report which includes truck trip data and emission reduction measures. Reduction strategies listed in the WAIRE menu include acquire zero emission (ZE) or near zero emission (NZE) trucks; require ZE/NZE truck visits; require ZE yard trucks; install on-site ZE charging/fueling infrastructure; install onsite energy systems; and install filtration systems in residences, schools, and other buildings in the adjacent community. Warehouse operators that do not earn a sufficient number of WAIRE points to satisfy the WAIRE Points Compliance Obligation would be required to pay a mitigation fee. Funds from the mitigation fee will be used to incentivize the purchase of cleaner trucks and charging/fueling infrastructure in communities nearby.

3.4 Local

City of Rialto General Plan

Chapter 2, Managing Our Land Supply of the City's General Plan identifies goals that will improve air quality within the City. Goals and policies that relate to air quality impacts include the following:

Goal 2-35: Reduce air pollution emissions from both mobile and stationary sources in the City.

Policy 2-35.2: Require that new development projects incorporate design features that encourage ridesharing, transit use, park and ride facilities, and bicycle and pedestrian circulation.

Policy 2-35.3: Establish a balanced land use pattern, and facilitate developments that provide jobs for City residents in order to reduce vehicle trips citywide.

Policy 2-35.4: Require new development and significant redevelopment proposals to incorporate sufficient design and operational controls to prevent release of noxious odors beyond the limits of the development site.

Goal 2-36: Reduce the amount of fugitive dust released into the atmosphere.

Policy 2-36.1: Put conditions on discretionary permits to require fugitive dust controls.

Policy 2-36.3: Enforce regulations that do not allow vehicles to transport aggregate or similar material upon a roadway unless the material is stabilized or covered.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 Air Quality Thresholds

Based upon the criteria derived from Appendix G of the CEQA Guidelines, a Project normally would have a significant effect on the environment if it would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in nonattainment under an applicable state or federal ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

SCAQMD Thresholds

The significance criteria established by SCAQMD may be relied upon to make the above determinations. According to the SCAQMD, an air quality impact is considered significant if the Project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SCAQMD has established thresholds of significance for air quality during construction and operational activities of land use development projects, as shown in Table 6: South Coast Air Quality Management District Emissions Thresholds.

Table 6: South Coast Air Quality Management District Emissions Thresholds

Criteria Air Pollutants and Precursors	(Maximum Pounds Per Day)	
	Construction	Operations
Reactive Organic Gases (ROG)	75	55
Carbon Monoxide (CO)	550	550
Nitrogen Oxides (NO_X)	100	55
Sulfur Oxides (SO_X)	150	150
Coarse Particulates (PM_{10})	150	150
Fine Particulates ($PM_{2.5}$)	55	55

Source: South Coast Air Quality Management District, *South Coast AQMD Air Quality Significance Thresholds,* April 2019.

Localized Carbon Monoxide

In addition to the daily thresholds listed above, development associated with the Project would also be subject to the ambient air quality standards. These are addressed though an analysis of localized CO impacts. The significance of localized impacts depends on whether ambient CO levels near the Project are above state and federal CO standards (the more stringent California standards are 20 ppm for 1-hour and 9 ppm for 8-hour). The SCAB has been designated as attainment under the 1-hour and 8-hour standards.

Localized Significance Thresholds

In addition to the CO hotspot analysis, the SCAQMD developed LSTs for emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ generated at new development sites (off-site mobile source emissions are not included in the LST analysis). LSTs represent the maximum emissions that can be generated at a project without expecting to

cause or substantially contribute to an exceedance of the most stringent state or federal ambient air quality standards. LSTs are based on the ambient concentrations of that pollutant within the Project source receptor area (SRA), as demarcated by the SCAQMD, and the distance to the nearest sensitive receptor. LST analysis for construction is applicable for all projects that disturb 5 acres or less on a single day. The City of Rialto is located within SCAQMD SRA 34. Table 7: Local Significance Thresholds for Construction/Operations, shows the LSTs for a 1-acre, 2-acre, and 5-acre project in SRA 34 with sensitive receptors located within 200 meters of the Project. LSTs associated with all acreage categories are provided in Table 7 for informational purposes. Table 7 shows that the LSTs increase as acreages increase. It should be noted that LSTs are screening thresholds and are therefore conservative. The construction LST acreage is determined based daily acreage disturbed. The operational LST acreage is based on the total area of the Project site. Although the disturbed area of the Project site is greater than two acres, the 2-acre operational LSTs are conservatively used to evaluate the Project.

Table 7: Local Significance Thresholds for Construction/Operations

Project Size	(Maximum Pounds Per Day)			
	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Coarse Particulates (PM_{10})	Fine Particulates ($PM_{2.5}$)
1 Acre	334/334	5,356/5,356	74/18	23/6
2 Acres	378/378	6,346/6,346	83/20	26/7
5 Acres	486/486	8,532/8,532	106/26	35/9

Source: South Coast Air Quality Management District, *Localized Significance Threshold Methodology,* July 2008.

4.2 Methodology

This air quality impact analysis considers construction and operational impacts associated with the Project. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod). CalEEMod is a Statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Air quality impacts were assessed according to methodologies recommended by CARB and the SCAQMD.

Construction equipment, trucks, worker vehicles, and ground-disturbing activities associated with Project construction would generate emissions of criteria air pollutants and precursors. Daily regional construction emissions are estimated by assuming construction occurs at the earliest feasible date (i.e., a conservative estimate of construction activities) and applying off-road, fugitive dust, and on-road emissions factors in CalEEMod.

Project operations would result in emissions of area sources (consumer products), energy sources (natural gas usage), and mobile sources (motor vehicles from Project generated vehicle trips). Project-generated increases in operational emissions would be predominantly associated with motor vehicle use. The increase of traffic over existing conditions as a result of the Project was obtained from the Project's Traffic Scoping Agreement prepared by Kimley-Horn and Associates, Inc. (May 2022). Other operational emissions from area, energy, and stationary sources were quantified in CalEEMod based on land use activity data.

As discussed above, the SCAQMD provides significance thresholds for emissions associated with proposed Project construction and operations. The proposed Project's construction and operational emissions are compared to the daily criteria pollutant emissions significance thresholds in order to determine the significance of a Project's impact on regional air quality.

The localized effects from the Project's on-site emissions were evaluated in accordance with the SCAQMD's LST methodology, which uses on-site mass emissions rate look-up tables and Project-specific modeling. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

4.3 Summary of the Rialto Airport Specific Plan Final EIR

AQMP Consistency. The Rialto Airport Specific Plan EIR concluded a significant and unavoidable impact with regard to AQMP consistency. The increase in vehicle miles traveled (VMT) due to buildout of the Specific Plan was projected to exceed VMT for buildout of existing zoning. As traffic and growth projections used in regional planning documents (i.e., Air Quality Management Plan [AQMP] and Regional Comprehensive Plan and Guide [RCPH]), implementation of the Specific Plan would exceed growth projections and would therefore not be consistent with local or regional growth management documents. Therefore, the Rialto Airport Specific Plan EIR concluded that the Specific Plan would not be consistent with the 1997 AQMP.

Construction. The Rialto Airport Specific Plan EIR determined that short term impacts on air quality would occur from construction activities, including exhaust emissions from construction and grading equipment and fugitive dust emissions from grading. Construction emissions were determined to be significant and unavoidable for ROG, NO_X, CO, and particulate matter. Several mitigation measures were selected to reduce fugitive dust emissions. However, even with implementation of mitigation, impacts were determined to be significant and unavoidable.

Operation. The Rialto Airport Specific Plan would exceed the threshold criteria defined in the SCAQMD Air Quality Handbook for Preparing Environmental Impact Reports (revised April 1987). Specifically, the Rialto Airport Specific Plan EIR concluded that vehicle and stationary source emissions from Specific Plan buildout would exceed daily SCAQMD thresholds for ROG, NO_X, CO, and particulate matter. Mitigation requiring compliance with Title 24 Energy Efficiency Standards, applicable SCAQMD employer trip reduction regulations, and the City's Transportation Demand Ordinance would not reduce impacts to less than significant levels. Therefore, the Rialto Airport Specific Plan EIR concluded that operational impacts would be significant and unavoidable.

5 POTENTIAL IMPACTS AND MITIGATION

5.1 Air Quality Analysis

Threshold 5.1 Would the Project conflict with or obstruct implementation of the applicable air quality plan?

As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan that demonstrates the means to attain the federal standards. The State Implementation Plan must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under State law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment regarding the state and federal ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The Project is located within the SCAB, which is under the jurisdiction of the SCAQMD. The SCAQMD is required, pursuant to the FCAA, to reduce emissions of criteria pollutants for which the SCAB is in nonattainment. To reduce such emissions, the SCAQMD drafted the 2016 AQMP. The 2016 AQMP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The 2016 AQMP is a regional and multi-agency effort including the SCAQMD, the CARB, the SCAG, and the EPA. The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's growth projections and RTP/SCS, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. The Project is subject to the SCAQMD's AQMP.

Criteria for determining consistency with the AQMP are defined by the following indicators:

- **Consistency Criterion No. 1**: The Project will not result in an increase in the frequency or severity of existing air quality violations, or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.
- **Consistency Criterion No. 2**: The Project will not exceed the assumptions in the AQMP or increments based on the years of the Project build-out phase.

According to the SCAQMD's *CEQA Air Quality Handbook*, the purpose of the consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus if it would interfere with the region's ability to comply with CAAQS and NAAQS.

The violations to which Consistency Criterion No. 1 refers are CAAQS and NAAQS. As shown in Table 8 and Table 9 below, the Project would not exceed the construction or operational emission standards. Therefore, the Project would not contribute to an existing air quality violation. Thus, the Project is consistent with the first criterion.

Concerning Consistency Criterion No. 2, the AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The Project's proposed industrial warehouse use would comply with the allowable uses identified in the Airport Specific Plan and therefore would not

exceed the population or job growth projections used by the SCAQMD to develop the AQMP. Thus, no impact would occur, as the Project is also consistent with the second criterion. Additionally, the Rialto Airport Specific Plan EIR identified impacts during construction as a significant and unavoidable impact on air quality. Mitigation Measures 5.9-1A through 5.9-1H were identified in the Rialto Airport Specific Plan EIR to reduce air emissions from implementation of the Rialto Airport Specific Plan.

In addition, in accordance with South Coast AQMD Rule 2305 (refer to South Coast Air Quality Management District under Section 3.4 Regulatory Setting) the Project operator would be required to pay a mitigation fee if the Project does not generate enough WAIRE Points. The Project operator may be required to implement additional emission reduction strategies. Conservatively, this analysis does not take credit for these potential reductions. Compliance with proposed Rule 2305 would reduce emissions below what is currently analyzed.

Mitigation Measures: The Rialto Airport Specific Plan EIR includes measures to reduce potential impacts associated with the implementation of the Rialto Airport Specific Plan. The following measures from the Rialto Airport Specific Plan EIR are applicable to the proposed Project:

Mitigation Measures from the Rialto Airport Specific Plan EIR

5.9-1A The project shall comply with State, City, and Uniform Building Code dust control regulations, so as to prevent the soil from being eroded by wind, creating dust, or blowing onto a public road or roads or other public or private property.

5.9-1B Adequate watering techniques shall be employed to partially mitigate the impact of construction-generated dust particulates. Portions of the project site that are undergoing earth moving operations shall be watered such that a crust will be formed on the ground surface and then watered again at the end of the day. Unpaved construction roads shall be watered at least three times a day.

5.9-1C SCAQMD Rule 403, as amended, as well as City of Rialto Ordinance No. 649, Section 18, shall be adhered to, ensuring the clean up on the construction-related dirt on approach routes to the site, and the application of water and/or chemical dust retardants that solidify loose soils shall be implemented for construction vehicle access, as directed by the City Engineer. This shall include covering, watering or otherwise stabilizing all inactive soil piles (left more than 10 days) and inactive graded areas (left more than 10 days).

5.9-1D Any vegetative ground cover to be utilized on-site shall be planted as soon as possible to reduce the amount of open space subject to wind erosion. Irrigation shall be installed as soon as possible to maintain the ground cover and minimize blows.

5.9-1E Grading activity shall be suspended when local winds exceed 25 miles per hour and during first and second stage smog alerts.

5.9-1F All trucks shall maintain a minimum of two feet of freeboard.

5.9-1G All trucks hauling dirt, soil or other loose dirt material shall be covered.

5.9-1H All construction roads with more than 50 daily trips shall be paved.

5.9-2A In order to reduce emissions from the power plant providing electricity to the site and from natural gas consumed by the project's users, on-site buildings shall, at a minimum, be constructed to comply with State Energy Efficiency Standards (Title 24).

5.9-2B The commercial use tenants shall comply with applicable SCAQMD employer trip reduction regulations and the City's Transportation Demand Ordinance. The project shall, at a minimum, consider the following:

- Bicycle racks, lockers and secure storage areas for bicycles
- Marked pedestrian lanes and driver warning signs
- Transit access, including bus turnouts
- Preferential parking zone, free parking and/or parking limits
- Site access shall avoid queuing in driveways
- Mulch, groundcover and native vegetation to reduce energy for pumping water

Level of Significance: Less than significant impact.

Threshold 5.2 Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable state or federal ambient air quality standard?

Construction Emissions

Construction associated with the Project would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the Project area include O_3-precursor pollutants (i.e. ROG and NO_X) and PM_{10} and $PM_{2.5}$. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SCAQMD's thresholds of significance.

Construction results in the temporary generation of emissions resulting from site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water.

The duration of construction activities associated with the Project is estimated to last approximately nine months. Construction-generated emissions associated the Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. See Appendix A: Air Quality Modeling Data for more information regarding the construction assumptions used in this analysis. Predicted maximum daily construction-generated emissions for the Project are summarized in Table 8: Construction-Related Emissions.

Table 8: Construction-Related Emissions

Construction Year	(Maximum Pounds Per Day)					
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
2022	3.26	38.28	22.43	0.10	9.55	5.50
2023	55.32	15.72	17.61	0.04	1.19	0.80
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: SCAQMD Rule 403 Fugitive Dust applied. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stockpiles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied. Refer to Appendix A for Model Data Outputs.

Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.

Fugitive dust emissions may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the Project vicinity. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. SCAQMD Rules 402 and 403 (prohibition of nuisances, watering of inactive and perimeter areas, track out requirements, etc.), are applicable to the Project and were applied in CalEEMod to minimize fugitive dust emissions. While impacts would be considered less than significant, Project would be subject to SCAQMD Rules for reducing fugitive dust, described in the Regulatory Framework subsection above.

Table 8 shows that all criteria pollutant emissions would remain below their respective thresholds. While impacts would be considered less than significant, the Project would be subject to SCAQMD Rules 402, 403, and 1113, described in the Regulatory Framework subsection above.

Operational Emissions

The Project's operational emissions would be associated with area sources (e.g. landscape maintenance equipment, architectural coatings, off-road equipment, etc.), energy sources, mobile sources (i.e., motor vehicle use), and off-road equipment. Primary sources of operational criteria pollutants are from motor vehicle use and area sources. Long-term operational emissions attributable to the Project are summarized in Table 9: Operational Emissions. The operational emissions sources are described below.

- **Area Source Emissions.** Area source emissions would be generated due to on-site equipment, architectural coating, and landscaping that were previously not present on the site.

- **Energy Source Emissions.** Energy source emissions would be generated due to electricity and natural gas usage associated with the Project. Primary uses of electricity and natural gas by the Project would be for miscellaneous warehouse equipment, space heating and cooling, water heating, ventilation, lighting, appliances, and electronics.

- **Mobile Source.** Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern. NO_X and ROG react with sunlight to form O_3, known as photochemical smog. Additionally, wind currents readily transport PM_{10} and $PM_{2.5}$. However, CO tends to be a localized pollutant, dispersing rapidly at the source.

  Project-generated vehicle emissions are based on the trip generation within the Project's Traffic Memorandum and incorporated into CalEEMod as recommended by the SCAQMD. Per the Project Trip Generation and VMT Screening Memorandum, the Project would generate 173 daily trips.

- **Off-Road Equipment Emissions.** Because the Project is a speculative warehouse development and the final end user is not known, to be conservative it was assumed that the Project would operate five electric forklifts for twelve hours per day.

In addition, Rule 2305 requires the Project operator to directly reduce NO_X and particulate matter emissions or to otherwise facilitate emission and exposure reductions of these pollutants in nearby communities. Alternatively, warehouse operators can choose to pay a mitigation fee. Funds from the mitigation fee will be used to incentivize the purchase of cleaner trucks and charging/fueling infrastructure in communities nearby.

Warehouse owners and operators are required to earn Warehouse Actions and Investments to Reduce Emissions (WAIRE) Points each year. WAIRE points are a menu-based system earned by emission reduction measures. Warehouse operators are required to submit an annual WAIRE Report which includes truck trip data and emission reduction measures. WAIRE points can be earned by completing actions from a menu that can include acquiring and using natural gas, Near-Zero Emissions and/or Zero-Emissions on-road trucks, zero-emission cargo handling equipment, solar panels or zero-emission charging and fueling infrastructure, or other options. Therefore, the Project operator would be required to implement

additional emission reduction strategies. Conservatively, this analysis does not take credit for these potential reductions. Compliance with Rule 2305 would reduce emissions below what is currently analyzed.

Table 9: Operational Emissions

Source	(Maximum Pounds Per Day)					
	Reactive Organic Gases (ROG)	**Nitrogen Oxide (NO_x)**	**Carbon Monoxide (CO)**	**Sulfur Dioxide (SO_2)**	**Coarse Particulate Matter (PM_{10})**	**Fine Particulate Matter ($PM_{2.5}$)**
Area Source Emissions	2.30	<0.01	0.01	0.00	<0.01	<0.01
Energy Emissions	<0.01	0.06	0.05	<0.01	<0.01	<0.01
Mobile Emissions	0.49	11.13	6.22	0.07	2.98	0.88
Off-Road Emissions	0.00	0.00	0.00	0.00	0.00	0.00
Total Emissions	**2.80**	**11.19**	**6.28**	**0.07**	**2.99**	**0.89**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.

Cumulative Construction Emissions

The SCAB is designated nonattainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards and nonattainment for O_3 and $PM_{2.5}$ for Federal standards. Appendix D of the SCAQMD White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (2003) notes that projects that result in emissions that do not exceed the project-specific SCAQMD regional thresholds of significance should result in a less than significant impact on a cumulative basis unless there is other pertinent information to the contrary. The mass-based regional significance thresholds published by the SCAQMD are designed to ensure compliance with both NAAQS and CAAQS and are based on an inventory of projected emissions in the SCAB. Therefore, if a project is estimated to result in emissions that do not exceed the thresholds, the project's contribution to the cumulative impact on air quality in the SCAB would not be cumulatively considerable. As shown in Table 8 above, Project construction-related emissions by themselves would not exceed the SCAQMD significance thresholds for criteria pollutants. Therefore, the proposed Project would not generate a cumulatively considerable contribution to air pollutant emissions during construction.

The SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the AQMP pursuant to the FCAA mandates. The analysis assumed fugitive dust controls would be utilized during construction, including frequent water applications. SCAQMD rules, mandates, and compliance with adopted AQMP emissions control measures would also be imposed on construction projects throughout the SCAB, which would include related projects. Compliance with SCAQMD rules and regulations would further reduce the Project construction-related impacts. Therefore, Project-related construction emissions, combined with those from other projects in the area, would not substantially deteriorate local air quality. Construction emissions associated with the Project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Cumulative Operational Impacts

The SCAQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, individual project emissions contribute to existing cumulatively significant adverse air quality impacts. The SCAQMD developed the

operational thresholds of significance based on the level above which individual project emissions would result in a cumulatively considerable contribution to the SCAB's existing air quality conditions. Therefore, a project that exceeds the SCAQMD operational thresholds would also be a cumulatively considerable contribution to a significant cumulative impact.

Table 9 shows that the Project operational emissions would not exceed the SCAQMD thresholds. As a result, operational emissions associated with the Project would not represent a cumulatively considerable contribution to significant cumulative air quality impacts. Therefore, cumulative operational impacts would be less than significant.

Furthermore, compliance with SCAQMD Rule 2305 (Warehouse Indirect Source Rule) is required for all existing and proposed warehouses greater than 100,000 square feet. Warehouse operators are required to implement additional emission reduction strategies or pay mitigation fee to reduce emissions. Compliance with Rule 2305 would reduce project emissions below what is currently analyzed and also reduce cumulative emissions.

Conclusion

The Project's emissions would not exceed the SCAQMD thresholds during both construction and operations. Thus, the impact would not be cumulatively considerable. The proposed Project is consistent with the impact findings disclosed in the Rialto Airport Specific Plan EIR. No new impacts or a substantial increase in the severity of a previously identified significant impact evaluated in the Rialto Airport Specific Plan EIR would occur. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Rialto Airport Specific Plan EIR was certified is available that would impact the prior finding of no significant impact under this issue area.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less than significant impact.

Threshold 5.3 Would the Project expose sensitive receptors to substantial pollutant concentrations?

Localized Construction Significance Analysis

The nearest sensitive receptors are the single-family residences located 700 feet to the east. To identify impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with Project-specific emissions.

Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, Table 10: Equipment-Specific Grading Rates, is used to determine the maximum daily disturbed acreage for comparison to LSTs. The appropriate SRA for the localized significance thresholds is the Central San Bernardino Valley (SRA 34) since this area includes the Project. LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. The SCAQMD produced look-up tables for projects that disturb areas less than or equal to 5 acres in size. Project construction is anticipated to disturb a maximum of 3.5 acres in a single day.

Table 10: Equipment-Specific Grading Rates					
Construction Phase	**Equipment Type**	**Equipment Quantity**	**Acres Graded per 8-Hour Day**	**Operating Hours per Day**	**Acres Graded per Day**
Site Preparation	Tractors	4	0.5	8	2
	Graders	0	0.5	8	0
	Dozers	3	0.5	8	1.5
	Scrapers	0	1	8	0
				Total Acres Graded per Day	**3.5**
Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.					

The SCAQMD's methodology states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs." Therefore, only emissions included in the CalEEMod "on-site" emissions outputs were considered. The nearest sensitive receptors are the residences located 700 feet (225 meters) east of the Project. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. The SCAQMD recommends that the 25-meter LSTs should be used for receptors located approximately 25 meters away or less. Therefore, the LSTs for receptors located at 225 meters, the thresholds for 200 meters were utilized in this analysis. Table 11: Localized Significance of Construction Emissions, presents the results of localized emissions during construction. Table 11 shows that emissions of these pollutants on the peak day of construction would not result in significant concentrations of pollutants at nearby sensitive receptors. Significant impacts would not occur concerning LSTs during construction.

Table 11: Localized Significance of Construction Emissions				
Construction Activity	**(Maximum Pounds Per Day)**			
	Nitrogen Oxide (NO_x)	**Carbon Monoxide (CO)**	**Coarse Particulate Matter (PM_{10})**	**Fine Particulate Matter ($PM_{2.5}$)**
Demolition (2022)	25.72	20.59	3.20	1.45
Site Preparation (2022)	33.08	19.70	9.28	5.42
Grading (2022)	20.86	15.27	3.73	2.21
Building Construction (2022)	15.62	16.36	0.81	0.76
Building Construction (2023)	14.38	16.24	0.70	0.66
Paving (2023)	8.79	12.19	0.44	0.40
Architectural Coating (2023)	1.30	1.81	0.07	0.07
SCAQMD Localized Screening Threshold (2 acres at 200 meters)	*378*	*6,346*	*83*	*26*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**
Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.				

Localized Operational Significance Analysis

According to the SCAQMD LST methodology, LSTs would apply to the operational phase of a project only if it includes stationary sources or attracts mobile sources that may spend long periods queuing and idling at the site (e.g. warehouse or transfer facilities). Since the Project is a warehouse, the operational phase LST protocol is conservatively applied to both the area source and all the mobile source emissions. As the nearest receptors are located approximately 700 feet (225 meters) from the Project site the 200-meter

LSTs for SRA 34 were used in this analysis. Although the Project is 4.37 acres, the 2-acre operational LST thresholds were conservatively used for the Project, as the LSTs increase with the size of the site.

The LST analysis only includes on-site sources. However, the CalEEMod model outputs do not separate on- and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions shown in Table 12: Localized Significance of Operational Emissions, conservatively include all on-site Project-related stationary sources and 100 percent of the Project-related vehicle emissions in spite that only a portion of mobile sources would include vehicles maneuvering and idling on-site. Table 12 shows that the maximum daily emissions of these pollutants during operations would not result in significant concentrations of pollutants at nearby sensitive receptors. Therefore, significant impacts would not occur concerning LSTs during operational activities.

Table 12: Localized Significance of Operational Emissions

Activity	(Maximum Pounds Per Day)			
	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
On-Site and Mobile Source Emissions[1]	11.19	6.28	2.99	0.89
SCAQMD Localized Screening Threshold (2 acres at 200 meters)	*378*	*6,346*	*20*	*7*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**

Note:
1. Includes onsite emissions and 100 percent of mobile source emissions

Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.

In addition, SCAQMD's Rule 2305 will require the Project to directly reduce NO_X and particulate matter emissions, or to otherwise facilitate emissions and exposure reductions of these pollutants in nearby communities. The Project operator may be required to implement additional emission reduction strategies. Conservatively, this analysis is not taking credit for these potential reductions. Compliance with Rule 2305 would reduce emissions below what is currently analyzed.

Criteria Pollutant Health Impacts

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (*Sierra Club v. County of Fresno* [Friant Ranch, L.P.] [2018] Cal.5th, Case No. S219783). The SCAQMD has set its CEQA significance thresholds based on the FCAA, which defines a major stationary source (in extreme ozone nonattainment areas such as the South Coast Air Basin) as emitting 10 tons per year. The thresholds correlate with the trigger levels for the federal New Source Review (NSR) Program and SCAQMD Rule 1303 for new or modified sources. The NSR Program[2] was created by the FCAA to ensure that stationary sources of air pollution are constructed or modified in a manner that is consistent with attainment of health-based federal ambient air quality standards. The federal ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, projects that do not exceed the SCAQMD's LSTs and mass emissions thresholds would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts.

[2] Code of Federal Regulation (CFR) [i.e., PSD (40 CFR 52.21, 40 CFR 51.166, 40 CFR 51.165 (b)), Non-attainment NSR (40 CFR 52.24, 40 CFR 51.165, 40 CFR part 51, Appendix S)

As previously discussed, Project emissions would be less than significant and would not exceed SCAQMD thresholds (refer to Table 8 and Table 9). Localized effects of on-site project emissions on nearby receptors were also found to be less than significant (refer to Table 11 and Table 12). The LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard. The LSTs were developed by the SCAQMD based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. The ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect public health, including protecting the health of sensitive populations such as asthmatics, children, and the elderly. As shown above, project-related emissions would not exceed the regional thresholds or the LSTs, and therefore would not exceed the ambient air quality standards or cause an increase in the frequency or severity of existing violations of air quality standards. Therefore, sensitive receptors would not be exposed to criteria pollutant levels in excess of the health-based ambient air quality standards.

Carbon Monoxide Hotspots

An analysis of CO "hot spots" is needed to determine whether the change in the level of service of an intersection resulting from the Project would have the potential to result in exceedances of the CAAQS or NAAQS. It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations have steadily declined. Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard.

The South Coast Air Basin (SCAB) was re-designated as attainment in 2007 and is no longer addressed in the SCAQMD's AQMP. The 2003 AQMP is the most recent version that addresses CO concentrations. As part of the SCAQMD *CO Hotspot Analysis*, the Wilshire Boulevard/Veteran Avenue intersection, one of the most congested intersections in Southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day, was modeled for CO concentrations. This modeling effort identified a CO concentration high of 4.6 ppm, which is well below the 35-ppm Federal standard. The Project considered herein would not produce the volume of traffic required to generate a CO hot spot in the context of SCAQMD's *CO Hotspot Analysis*. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection even as it accommodates 100,000 vehicles daily, it can be reasonably inferred that CO hotspots would not be experienced at any vicinity intersections resulting from 173 additional vehicle trips attributable to the Project. Therefore, impacts would be less than significant.

Conclusion

Air quality impacts related to the proposed Project are within the limit of impacts identified in the Rialto Airport Specific Plan EIR. No new impact relative to air quality or a substantial increase in the severity of a previously identified significant impact evaluated in the Rialto Airport Specific Plan EIR would occur. Additionally, no new information of substantial importance that was not known and could not have been known at the time the Rialto Airport Specific Plan EIR was certified is available that would alter the Final EIR's significance finding.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 5.4 Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The SCAQMD *CEQA Air Quality Handbook* identifies certain land uses as sources of odors. These land uses include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Project would not include any of the land uses that have been identified by the SCAQMD as odor sources.

During construction-related activities, some odors (not substantial pollutant concentrations) that may be detected are those typical of construction vehicles (e.g. diesel exhaust from grading and construction equipment). These odors are a temporary short-term impact that is typical of construction projects and would disperse rapidly. The Project would not include any of the land uses that have been identified by the SCAQMD as odor sources. Therefore, the Project would not create objectionable odors.

Mitigation Measures: No mitigation is required.

Level of Significance: No impact.

6 REFERENCES

1. California Air Pollution Control Officers Association (CAPCOA), *Health Effects*, 2018.
2. California Air Pollution Control Officers Association (CAPCOA), *Health Risk Assessments for Proposed Land Use Projects*, 2009.
3. California Air Resources Board, *Aerometric Data Analysis and Measurement System (ADAM) Top Four Summaries from 2017 to 2019*, 2021.
4. California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*, 2005.
5. California Air Resources Board, *Current Air Quality Standards*, 2016.
6. California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, 2000.
7. City of Rialto, *General Plan*, December 2010
8. HPA Architecture, *Conceptual Site Plan for Thrifty Oil Project*, April 5, 2022.
9. Kimley-Horn*, Thrifty Rialto Warehouse – Traffic Scoping Agreement*, May 11, 2022.
10. Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Risk Assessment Guidelines*, 2015.
11. South Coast Air Quality Management District, *2016 Air Quality Management Plan,* March 2017.
12. South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993.
13. South Coast Air Quality Management District, *Localized Significance Threshold Methodology*, 2009.
14. South Coast Air Quality Management District, *High-Cube Warehouse Vehicle Trip Generation Analysis*, 2016.
15. United States Environmental Protection Agency, *National Ambient Air Quality Standards Table*, https://www.epa.gov/criteria-air-pollutants/naaqs-table, accessed August 20, 2021.
16. United States Environmental Protection Agency, *Nonattainment Areas for Criteria Pollutants (Green Book)*, https://www.epa.gov/green-book, accessed August 20, 2021.
17. United States Environmental Protection Agency, *Policy Assessment for the Review of the Lead National Ambient Air Quality Standards*, 2013.

Appendix A

Air Quality Modeling Data

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Rialto Thrifty Oil Warehouse

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	9.00	1000sqft	0.10	9,000.00	0
Unrefrigerated Warehouse-No Rail	91.88	1000sqft	2.11	91,880.00	0
Other Asphalt Surfaces	2.57	Acre	2.57	111,949.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 4,500 SF Office on ground floor, 4,500 SF Office on second floor

Construction Phase - Project Schedule

Trips and VMT - Estimated 25 miles to disposal site; 25 Construction workers per day

Demolition -

Grading -

Vehicle Trips - Trip generation per Scoping Agreement

Construction Off-road Equipment Mitigation - Water Exposed Area
Unpaved Road vehicle speed 15%
Clean Paved Road

Operational Off-Road Equipment - 5 Electric Forklifts

Rialto Thrifty Oil Warehouse - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Stationary Sources - Emergency Generators and Fire Pumps -

Fleet Mix - Fleet Mix per Scoping Agreement

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	230.00	136.00
tblConstructionPhase	NumDays	8.00	13.00
tblFleetMix	HHD	8.6520e-003	0.71
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.4370e-003	0.01
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	3.7060e-003	0.00
tblFleetMix	MHD	0.01	0.28
tblFleetMix	OBUS	8.1200e-004	0.00
tblFleetMix	SBUS	7.4500e-004	0.00
tblFleetMix	UBUS	5.0800e-004	0.00
tblGrading	MaterialExported	0.00	9,200.00
tblLandUse	LotAcreage	0.21	0.10
tblOperationalOffRoadEquipment	OperFuelType	Diesel	Electrical
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	5.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	WorkerTripNumber	15.00	25.00
tblTripsAndVMT	WorkerTripNumber	18.00	25.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblTripsAndVMT	WorkerTripNumber	15.00	25.00
tblTripsAndVMT	WorkerTripNumber	88.00	25.00
tblTripsAndVMT	WorkerTripNumber	20.00	25.00
tblTripsAndVMT	WorkerTripNumber	18.00	25.00
tblVehicleTrips	CNW_TL	6.90	33.20
tblVehicleTrips	CNW_TTP	41.00	100.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	2.21	11.56
tblVehicleTrips	ST_TR	1.74	0.74
tblVehicleTrips	SU_TR	0.70	11.56
tblVehicleTrips	SU_TR	1.74	0.74
tblVehicleTrips	WD_TR	9.74	11.56
tblVehicleTrips	WD_TR	1.74	0.74

2.0 Emissions Summary

Rialto Thrifty Oil Warehouse - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.2555	38.2810	22.4291	0.0990	19.9365	1.6143	21.5507	10.1766	1.4851	11.6617	0.0000	10,492.4827	10,492.4827	1.3733	1.1763	10,877.3581
2023	55.3249	15.7190	17.6096	0.0358	0.5589	0.7084	1.2119	0.1482	0.6667	0.8053	0.0000	3,493.4007	3,493.4007	0.6393	0.1054	3,540.7987
Maximum	**55.3249**	**38.2810**	**22.4291**	**0.0990**	**19.9365**	**1.6143**	**21.5507**	**10.1766**	**1.4851**	**11.6617**	**0.0000**	**10,492.4827**	**10,492.4827**	**1.3733**	**1.1763**	**10,877.3581**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.2555	38.2810	22.4291	0.0990	7.9311	1.6143	9.5453	4.0105	1.4851	5.4956	0.0000	10,492.4827	10,492.4827	1.3733	1.1763	10,877.3581
2023	55.3249	15.7190	17.6096	0.0358	0.5297	0.7084	1.1877	0.1411	0.6667	0.7993	0.0000	3,493.4007	3,493.4007	0.6393	0.1054	3,540.7987
Maximum	**55.3249**	**38.2810**	**22.4291**	**0.0990**	**7.9311**	**1.6143**	**9.5453**	**4.0105**	**1.4851**	**5.4956**	**0.0000**	**10,492.4827**	**10,492.4827**	**1.3733**	**1.1763**	**10,877.3581**

Rialto Thrifty Oil Warehouse - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**58.72**	**0.00**	**52.85**	**59.79**	**0.00**	**49.51**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.3028	1.0000e-004	0.0106	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0226	0.0226	6.0000e-005		0.0241
Energy	6.3700e-003	0.0579	0.0486	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003		69.4758	69.4758	1.3300e-003	1.2700e-003	69.8887
Mobile	0.4895	11.1284	6.2178	0.0660	2.8988	0.0841	2.9829	0.8038	0.0803	0.8841		7,161.6077	7,161.6077	0.3601	0.9853	7,464.2189
Offroad	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**2.7986**	**11.1864**	**6.2770**	**0.0663**	**2.8988**	**0.0885**	**2.9873**	**0.8038**	**0.0847**	**0.8885**	**0.0000**	**7,231.1061**	**7,231.1061**	**0.3615**	**0.9865**	**7,534.1317**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.3028	1.0000e-004	0.0106	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0226	0.0226	6.0000e-005		0.0241
Energy	6.3700e-003	0.0579	0.0486	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003		69.4758	69.4758	1.3300e-003	1.2700e-003	69.8887
Mobile	0.4895	11.1284	6.2178	0.0660	2.8988	0.0841	2.9829	0.8038	0.0803	0.8841		7,161.6077	7,161.6077	0.3601	0.9853	7,464.2189
Offroad	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**2.7986**	**11.1864**	**6.2770**	**0.0663**	**2.8988**	**0.0885**	**2.9873**	**0.8038**	**0.0847**	**0.8885**	**0.0000**	**7,231.1061**	**7,231.1061**	**0.3615**	**0.9865**	**7,534.1317**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/1/2022	11/28/2022	5	20	
2	Site Preparation	Site Preparation	11/29/2022	12/5/2022	5	5	
3	Grading	Grading	12/6/2022	12/22/2022	5	13	
4	Building Construction	Building Construction	12/23/2022	6/30/2023	5	136	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5	Paving	Paving	7/3/2023	7/26/2023	5	18	
6	Architectural Coating	Architectural Coating	7/3/2023	7/26/2023	5	18	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 13

Acres of Paving: 2.57

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 151,320; Non-Residential Outdoor: 50,440; Striped Parking Area: 6,717 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	25.00	0.00	464.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	25.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	25.00	0.00	1,150.00	14.70	6.90	25.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	25.00	35.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	25.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.0202	0.0000	5.0202	0.7601	0.0000	0.7601			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**5.0202**	**1.2427**	**6.2629**	**0.7601**	**1.1553**	**1.9154**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1014	3.7294	0.8866	0.0142	0.4057	0.0297	0.4354	0.1112	0.0285	0.1396		1,558.0841	1,558.0841	0.0922	0.2476	1,634.1755
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0853	0.0602	0.9485	2.5300e-003	0.2794	1.6800e-003	0.2811	0.0741	1.5400e-003	0.0757		256.9376	256.9376	6.6800e-003	6.0900e-003	258.9208
Total	**0.1867**	**3.7897**	**1.8351**	**0.0167**	**0.6851**	**0.0314**	**0.7165**	**0.1853**	**0.0300**	**0.2153**		**1,815.0217**	**1,815.0217**	**0.0989**	**0.2537**	**1,893.0963**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.9579	0.0000	1.9579	0.2964	0.0000	0.2964			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**1.9579**	**1.2427**	**3.2005**	**0.2964**	**1.1553**	**1.4517**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1014	3.7294	0.8866	0.0142	0.3873	0.0297	0.4170	0.1067	0.0285	0.1351		1,558.0841	1,558.0841	0.0922	0.2476	1,634.1755
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0853	0.0602	0.9485	2.5300e-003	0.2649	1.6800e-003	0.2665	0.0705	1.5400e-003	0.0721		256.9376	256.9376	6.6800e-003	6.0900e-003	258.9208
Total	**0.1867**	**3.7897**	**1.8351**	**0.0167**	**0.6521**	**0.0314**	**0.6835**	**0.1772**	**0.0300**	**0.2072**		**1,815.0217**	**1,815.0217**	**0.0989**	**0.2537**	**1,893.0963**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0853	0.0602	0.9485	2.5300e-003	0.2794	1.6800e-003	0.2811	0.0741	1.5400e-003	0.0757		256.9376	256.9376	6.6800e-003	6.0900e-003	258.9208
Total	**0.0853**	**0.0602**	**0.9485**	**2.5300e-003**	**0.2794**	**1.6800e-003**	**0.2811**	**0.0741**	**1.5400e-003**	**0.0757**		**256.9376**	**256.9376**	**6.6800e-003**	**6.0900e-003**	**258.9208**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6662	0.0000	7.6662	3.9400	0.0000	3.9400			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**7.6662**	**1.6126**	**9.2788**	**3.9400**	**1.4836**	**5.4235**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0853	0.0602	0.9485	2.5300e-003	0.2649	1.6800e-003	0.2665	0.0705	1.5400e-003	0.0721		256.9376	256.9376	6.6800e-003	6.0900e-003	258.9208
Total	**0.0853**	**0.0602**	**0.9485**	**2.5300e-003**	**0.2649**	**1.6800e-003**	**0.2665**	**0.0705**	**1.5400e-003**	**0.0721**		**256.9376**	**256.9376**	**6.6800e-003**	**6.0900e-003**	**258.9208**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.1626	0.0000	7.1626	3.4369	0.0000	3.4369			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.1626**	**0.9409**	**8.1035**	**3.4369**	**0.8656**	**4.3024**		**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4605	17.3656	3.9323	0.0669	1.9330	0.1414	2.0744	0.5297	0.1353	0.6650		7,363.4987	7,363.4987	0.4377	1.1702	7,723.1689
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0853	0.0602	0.9485	2.5300e-003	0.2794	1.6800e-003	0.2811	0.0741	1.5400e-003	0.0757		256.9376	256.9376	6.6800e-003	6.0900e-003	258.9208
Total	**0.5458**	**17.4259**	**4.8808**	**0.0694**	**2.2124**	**0.1431**	**2.3555**	**0.6038**	**0.1369**	**0.7407**		**7,620.4363**	**7,620.4363**	**0.4444**	**1.1763**	**7,982.0897**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7934	0.0000	2.7934	1.3404	0.0000	1.3404			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**2.7934**	**0.9409**	**3.7343**	**1.3404**	**0.8656**	**2.2060**	**0.0000**	**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4605	17.3656	3.9323	0.0669	1.8453	0.1414	1.9867	0.5082	0.1353	0.6435		7,363.4987	7,363.4987	0.4377	1.1702	7,723.1689
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0853	0.0602	0.9485	2.5300e-003	0.2649	1.6800e-003	0.2665	0.0705	1.5400e-003	0.0721		256.9376	256.9376	6.6800e-003	6.0900e-003	258.9208
Total	**0.5458**	**17.4259**	**4.8808**	**0.0694**	**2.1101**	**0.1431**	**2.2532**	**0.5787**	**0.1369**	**0.7156**		**7,620.4363**	**7,620.4363**	**0.4444**	**1.1763**	**7,982.0897**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0639	1.6515	0.5524	6.7100e-003	0.2241	0.0168	0.2409	0.0645	0.0161	0.0806		722.9135	722.9135	0.0266	0.1050	754.8644
Worker	0.0853	0.0602	0.9485	2.5300e-003	0.2794	1.6800e-003	0.2811	0.0741	1.5400e-003	0.0757		256.9376	256.9376	6.6800e-003	6.0900e-003	258.9208
Total	**0.1492**	**1.7117**	**1.5009**	**9.2400e-003**	**0.5035**	**0.0185**	**0.5220**	**0.1386**	**0.0176**	**0.1563**		**979.8511**	**979.8511**	**0.0333**	**0.1111**	**1,013.7852**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0639	1.6515	0.5524	6.7100e-003	0.2145	0.0168	0.2313	0.0622	0.0161	0.0783		722.9135	722.9135	0.0266	0.1050	754.8644
Worker	0.0853	0.0602	0.9485	2.5300e-003	0.2649	1.6800e-003	0.2665	0.0705	1.5400e-003	0.0721		256.9376	256.9376	6.6800e-003	6.0900e-003	258.9208
Total	**0.1492**	**1.7117**	**1.5009**	**9.2400e-003**	**0.4794**	**0.0185**	**0.4979**	**0.1327**	**0.0176**	**0.1503**		**979.8511**	**979.8511**	**0.0333**	**0.1111**	**1,013.7852**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0376	1.2808	0.4916	6.3700e-003	0.2241	7.0800e-003	0.2312	0.0645	6.7700e-003	0.0713		688.0306	688.0306	0.0255	0.0998	718.4044
Worker	0.0791	0.0533	0.8741	2.4400e-003	0.2794	1.5800e-003	0.2810	0.0741	1.4500e-003	0.0756		250.1603	250.1603	5.9900e-003	5.6300e-003	251.9882
Total	**0.1167**	**1.3341**	**1.3656**	**8.8100e-003**	**0.5035**	**8.6600e-003**	**0.5122**	**0.1386**	**8.2200e-003**	**0.1468**		**938.1908**	**938.1908**	**0.0315**	**0.1054**	**970.3926**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0376	1.2808	0.4916	6.3700e-003	0.2145	7.0800e-003	0.2216	0.0622	6.7700e-003	0.0689		688.0306	688.0306	0.0255	0.0998	718.4044
Worker	0.0791	0.0533	0.8741	2.4400e-003	0.2649	1.5800e-003	0.2664	0.0705	1.4500e-003	0.0720		250.1603	250.1603	5.9900e-003	5.6300e-003	251.9882
Total	**0.1167**	**1.3341**	**1.3656**	**8.8100e-003**	**0.4794**	**8.6600e-003**	**0.4880**	**0.1327**	**8.2200e-003**	**0.1409**		**938.1908**	**938.1908**	**0.0315**	**0.1054**	**970.3926**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025		1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.3741					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2922**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**		**1,805.4304**	**1,805.4304**	**0.5673**		**1,819.6122**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0791	0.0533	0.8741	2.4400e-003	0.2794	1.5800e-003	0.2810	0.0741	1.4500e-003	0.0756		250.1603	250.1603	5.9900e-003	5.6300e-003	251.9882
Total	**0.0791**	**0.0533**	**0.8741**	**2.4400e-003**	**0.2794**	**1.5800e-003**	**0.2810**	**0.0741**	**1.4500e-003**	**0.0756**		**250.1603**	**250.1603**	**5.9900e-003**	**5.6300e-003**	**251.9882**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025	0.0000	1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.3741					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2922**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**	**0.0000**	**1,805.4304**	**1,805.4304**	**0.5673**		**1,819.6122**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0791	0.0533	0.8741	2.4400e-003	0.2649	1.5800e-003	0.2664	0.0705	1.4500e-003	0.0720		250.1603	250.1603	5.9900e-003	5.6300e-003	251.9882
Total	**0.0791**	**0.0533**	**0.8741**	**2.4400e-003**	**0.2649**	**1.5800e-003**	**0.2664**	**0.0705**	**1.4500e-003**	**0.0720**		**250.1603**	**250.1603**	**5.9900e-003**	**5.6300e-003**	**251.9882**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	53.6828					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**53.8745**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0791	0.0533	0.8741	2.4400e-003	0.2794	1.5800e-003	0.2810	0.0741	1.4500e-003	0.0756		250.1603	250.1603	5.9900e-003	5.6300e-003	251.9882
Total	**0.0791**	**0.0533**	**0.8741**	**2.4400e-003**	**0.2794**	**1.5800e-003**	**0.2810**	**0.0741**	**1.4500e-003**	**0.0756**		**250.1603**	**250.1603**	**5.9900e-003**	**5.6300e-003**	**251.9882**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	53.6828					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**53.8745**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0791	0.0533	0.8741	2.4400e-003	0.2649	1.5800e-003	0.2664	0.0705	1.4500e-003	0.0720		250.1603	250.1603	5.9900e-003	5.6300e-003	251.9882
Total	**0.0791**	**0.0533**	**0.8741**	**2.4400e-003**	**0.2649**	**1.5800e-003**	**0.2664**	**0.0705**	**1.4500e-003**	**0.0720**		**250.1603**	**250.1603**	**5.9900e-003**	**5.6300e-003**	**251.9882**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4895	11.1284	6.2178	0.0660	2.8988	0.0841	2.9829	0.8038	0.0803	0.8841		7,161.6077	7,161.6077	0.3601	0.9853	7,464.2189
Unmitigated	0.4895	11.1284	6.2178	0.0660	2.8988	0.0841	2.9829	0.8038	0.0803	0.8841		7,161.6077	7,161.6077	0.3601	0.9853	7,464.2189

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	104.04	104.04	104.04	409,797	409,797
Other Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	67.99	67.99	67.99	821,660	821,660
Total	172.03	172.03	172.03	1,231,457	1,231,457

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	100	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	33.20	0.00	0.00	100.00	100	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.543401	0.061496	0.184986	0.128935	0.023820	0.006437	0.011961	0.008652	0.000812	0.000508	0.024540	0.000745	0.003706
Other Asphalt Surfaces	0.543401	0.061496	0.184986	0.128935	0.023820	0.006437	0.011961	0.008652	0.000812	0.000508	0.024540	0.000745	0.003706
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.000000	0.014706	0.279412	0.705882	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	6.3700e-003	0.0579	0.0486	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003		69.4758	69.4758	1.3300e-003	1.2700e-003	69.8887
NaturalGas Unmitigated	6.3700e-003	0.0579	0.0486	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003		69.4758	69.4758	1.3300e-003	1.2700e-003	69.8887

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	84.5753	9.1000e-004	8.2900e-003	6.9700e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004		9.9500	9.9500	1.9000e-004	1.8000e-004	10.0092
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	505.969	5.4600e-003	0.0496	0.0417	3.0000e-004		3.7700e-003	3.7700e-003		3.7700e-003	3.7700e-003		59.5258	59.5258	1.1400e-003	1.0900e-003	59.8795
Total		**6.3700e-003**	**0.0579**	**0.0486**	**3.5000e-004**		**4.4000e-003**	**4.4000e-003**		**4.4000e-003**	**4.4000e-003**		**69.4758**	**69.4758**	**1.3300e-003**	**1.2700e-003**	**69.8887**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.0845753	9.1000e-004	8.2900e-003	6.9700e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004		9.9500	9.9500	1.9000e-004	1.8000e-004	10.0092
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.505969	5.4600e-003	0.0496	0.0417	3.0000e-004		3.7700e-003	3.7700e-003		3.7700e-003	3.7700e-003		59.5258	59.5258	1.1400e-003	1.0900e-003	59.8795
Total		**6.3700e-003**	**0.0579**	**0.0486**	**3.5000e-004**		**4.4000e-003**	**4.4000e-003**		**4.4000e-003**	**4.4000e-003**		**69.4758**	**69.4758**	**1.3300e-003**	**1.2700e-003**	**69.8887**

6.0 Area Detail

6.1 Mitigation Measures Area

Rialto Thrifty Oil Warehouse - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.3028	1.0000e-004	0.0106	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0226	0.0226	6.0000e-005		0.0241
Unmitigated	2.3028	1.0000e-004	0.0106	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0226	0.0226	6.0000e-005		0.0241

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2647					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.7000e-004	1.0000e-004	0.0106	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0226	0.0226	6.0000e-005		0.0241
Total	**2.3028**	**1.0000e-004**	**0.0106**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0226**	**0.0226**	**6.0000e-005**		**0.0241**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2647					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.7000e-004	1.0000e-004	0.0106	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0226	0.0226	6.0000e-005		0.0241
Total	**2.3028**	**1.0000e-004**	**0.0106**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0226**	**0.0226**	**6.0000e-005**		**0.0241**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	5	8.00	260	89	0.20	Electrical

Rialto Thrifty Oil Warehouse - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Forklifts	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Rialto Thrifty Oil Warehouse

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	9.00	1000sqft	0.10	9,000.00	0
Unrefrigerated Warehouse-No Rail	91.88	1000sqft	2.11	91,880.00	0
Other Asphalt Surfaces	2.57	Acre	2.57	111,949.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 4,500 SF Office on ground floor, 4,500 SF Office on second floor

Construction Phase - Project Schedule

Trips and VMT - Estimated 25 miles to disposal site; 25 Construction workers per day

Demolition -

Grading -

Vehicle Trips - Trip generation per Scoping Agreement

Construction Off-road Equipment Mitigation - Water Exposed Area
Unpaved Road vehicle speed 15%
Clean Paved Road

Operational Off-Road Equipment - 5 Electric Forklifts

Rialto Thrifty Oil Warehouse - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Stationary Sources - Emergency Generators and Fire Pumps -

Fleet Mix - Fleet Mix per Scoping Agreement

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	230.00	136.00
tblConstructionPhase	NumDays	8.00	13.00
tblFleetMix	HHD	8.6520e-003	0.71
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.4370e-003	0.01
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	3.7060e-003	0.00
tblFleetMix	MHD	0.01	0.28
tblFleetMix	OBUS	8.1200e-004	0.00
tblFleetMix	SBUS	7.4500e-004	0.00
tblFleetMix	UBUS	5.0800e-004	0.00
tblGrading	MaterialExported	0.00	9,200.00
tblLandUse	LotAcreage	0.21	0.10
tblOperationalOffRoadEquipment	OperFuelType	Diesel	Electrical
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	5.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	WorkerTripNumber	15.00	25.00
tblTripsAndVMT	WorkerTripNumber	18.00	25.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblTripsAndVMT	WorkerTripNumber	15.00	25.00
tblTripsAndVMT	WorkerTripNumber	88.00	25.00
tblTripsAndVMT	WorkerTripNumber	20.00	25.00
tblTripsAndVMT	WorkerTripNumber	18.00	25.00
tblVehicleTrips	CNW_TL	6.90	33.20
tblVehicleTrips	CNW_TTP	41.00	100.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	2.21	11.56
tblVehicleTrips	ST_TR	1.74	0.74
tblVehicleTrips	SU_TR	0.70	11.56
tblVehicleTrips	SU_TR	1.74	0.74
tblVehicleTrips	WD_TR	9.74	11.56
tblVehicleTrips	WD_TR	1.74	0.74

2.0 Emissions Summary

Rialto Thrifty Oil Warehouse - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.2607	39.0026	22.3600	0.0989	19.9365	1.6143	21.5507	10.1766	1.4851	11.6617	0.0000	10,479.7957	10,479.7957	1.3729	1.1770	10,864.8629
2023	55.3352	15.7846	17.5480	0.0356	0.5589	0.7084	1.2119	0.1482	0.6667	0.8053	0.0000	3,480.6026	3,480.6026	0.6393	0.1060	3,528.1796
Maximum	**55.3352**	**39.0026**	**22.3600**	**0.0989**	**19.9365**	**1.6143**	**21.5507**	**10.1766**	**1.4851**	**11.6617**	**0.0000**	**10,479.7957**	**10,479.7957**	**1.3729**	**1.1770**	**10,864.8629**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.2607	39.0026	22.3600	0.0989	7.9311	1.6143	9.5453	4.0105	1.4851	5.4956	0.0000	10,479.7957	10,479.7957	1.3729	1.1770	10,864.8629
2023	55.3352	15.7846	17.5480	0.0356	0.5297	0.7084	1.1878	0.1411	0.6667	0.7994	0.0000	3,480.6026	3,480.6026	0.6393	0.1060	3,528.1796
Maximum	**55.3352**	**39.0026**	**22.3600**	**0.0989**	**7.9311**	**1.6143**	**9.5453**	**4.0105**	**1.4851**	**5.4956**	**0.0000**	**10,479.7957**	**10,479.7957**	**1.3729**	**1.1770**	**10,864.8629**

Rialto Thrifty Oil Warehouse - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**58.72**	**0.00**	**52.85**	**59.79**	**0.00**	**49.51**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.3028	1.0000e-004	0.0106	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0226	0.0226	6.0000e-005		0.0241
Energy	6.3700e-003	0.0579	0.0486	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003		69.4758	69.4758	1.3300e-003	1.2700e-003	69.8887
Mobile	0.4751	11.6165	6.1222	0.0656	2.8988	0.0842	2.9830	0.8038	0.0804	0.8842		7,126.6876	7,126.6876	0.3609	0.9874	7,429.9448
Offroad	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**2.7842**	**11.6745**	**6.1814**	**0.0660**	**2.8988**	**0.0886**	**2.9874**	**0.8038**	**0.0848**	**0.8886**	**0.0000**	**7,196.1860**	**7,196.1860**	**0.3623**	**0.9886**	**7,499.8576**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.3028	1.0000e-004	0.0106	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0226	0.0226	6.0000e-005		0.0241
Energy	6.3700e-003	0.0579	0.0486	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003		69.4758	69.4758	1.3300e-003	1.2700e-003	69.8887
Mobile	0.4751	11.6165	6.1222	0.0656	2.8988	0.0842	2.9830	0.8038	0.0804	0.8842		7,126.6876	7,126.6876	0.3609	0.9874	7,429.9448
Offroad	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**2.7842**	**11.6745**	**6.1814**	**0.0660**	**2.8988**	**0.0886**	**2.9874**	**0.8038**	**0.0848**	**0.8886**	**0.0000**	**7,196.1860**	**7,196.1860**	**0.3623**	**0.9886**	**7,499.8576**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/1/2022	11/28/2022	5	20	
2	Site Preparation	Site Preparation	11/29/2022	12/5/2022	5	5	
3	Grading	Grading	12/6/2022	12/22/2022	5	13	
4	Building Construction	Building Construction	12/23/2022	6/30/2023	5	136	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5	Paving	Paving	7/3/2023	7/26/2023	5	18	
6	Architectural Coating	Architectural Coating	7/3/2023	7/26/2023	5	18	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 13

Acres of Paving: 2.57

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 151,320; Non-Residential Outdoor: 50,440; Striped Parking Area: 6,717 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	25.00	0.00	464.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	25.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	25.00	0.00	1,150.00	14.70	6.90	25.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	25.00	35.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	25.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.0202	0.0000	5.0202	0.7601	0.0000	0.7601			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**5.0202**	**1.2427**	**6.2629**	**0.7601**	**1.1553**	**1.9154**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0989	3.8841	0.9022	0.0142	0.4057	0.0298	0.4354	0.1112	0.0285	0.1397		1,558.5207	1,558.5207	0.0921	0.2477	1,634.6311
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0906	0.0661	0.8637	2.3800e-003	0.2794	1.6800e-003	0.2811	0.0741	1.5400e-003	0.0757		242.5869	242.5869	6.7700e-003	6.4800e-003	244.6872
Total	**0.1895**	**3.9502**	**1.7659**	**0.0165**	**0.6851**	**0.0315**	**0.7166**	**0.1853**	**0.0300**	**0.2153**		**1,801.1076**	**1,801.1076**	**0.0989**	**0.2542**	**1,879.3184**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.9579	0.0000	1.9579	0.2964	0.0000	0.2964			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**1.9579**	**1.2427**	**3.2005**	**0.2964**	**1.1553**	**1.4517**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0989	3.8841	0.9022	0.0142	0.3873	0.0298	0.4170	0.1067	0.0285	0.1352		1,558.5207	1,558.5207	0.0921	0.2477	1,634.6311
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0906	0.0661	0.8637	2.3800e-003	0.2649	1.6800e-003	0.2665	0.0705	1.5400e-003	0.0721		242.5869	242.5869	6.7700e-003	6.4800e-003	244.6872
Total	**0.1895**	**3.9502**	**1.7659**	**0.0165**	**0.6521**	**0.0315**	**0.6836**	**0.1772**	**0.0300**	**0.2072**		**1,801.1076**	**1,801.1076**	**0.0989**	**0.2542**	**1,879.3184**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0906	0.0661	0.8637	2.3800e-003	0.2794	1.6800e-003	0.2811	0.0741	1.5400e-003	0.0757		242.5869	242.5869	6.7700e-003	6.4800e-003	244.6872
Total	**0.0906**	**0.0661**	**0.8637**	**2.3800e-003**	**0.2794**	**1.6800e-003**	**0.2811**	**0.0741**	**1.5400e-003**	**0.0757**		**242.5869**	**242.5869**	**6.7700e-003**	**6.4800e-003**	**244.6872**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.6662	0.0000	7.6662	3.9400	0.0000	3.9400			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**7.6662**	**1.6126**	**9.2788**	**3.9400**	**1.4836**	**5.4235**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0906	0.0661	0.8637	2.3800e-003	0.2649	1.6800e-003	0.2665	0.0705	1.5400e-003	0.0721		242.5869	242.5869	6.7700e-003	6.4800e-003	244.6872
Total	**0.0906**	**0.0661**	**0.8637**	**2.3800e-003**	**0.2649**	**1.6800e-003**	**0.2665**	**0.0705**	**1.5400e-003**	**0.0721**		**242.5869**	**242.5869**	**6.7700e-003**	**6.4800e-003**	**244.6872**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.1626	0.0000	7.1626	3.4369	0.0000	3.4369			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.1626**	**0.9409**	**8.1035**	**3.4369**	**0.8656**	**4.3024**		**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4510	18.0813	3.9914	0.0669	1.9330	0.1416	2.0746	0.5297	0.1355	0.6653		7,365.1623	7,365.1623	0.4372	1.1705	7,724.9073
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0906	0.0661	0.8637	2.3800e-003	0.2794	1.6800e-003	0.2811	0.0741	1.5400e-003	0.0757		242.5869	242.5869	6.7700e-003	6.4800e-003	244.6872
Total	**0.5415**	**18.1474**	**4.8550**	**0.0693**	**2.2124**	**0.1433**	**2.3557**	**0.6038**	**0.1371**	**0.7409**		**7,607.7492**	**7,607.7492**	**0.4440**	**1.1770**	**7,969.5946**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7934	0.0000	2.7934	1.3404	0.0000	1.3404			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**2.7934**	**0.9409**	**3.7343**	**1.3404**	**0.8656**	**2.2060**	**0.0000**	**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4510	18.0813	3.9914	0.0669	1.8453	0.1416	1.9869	0.5082	0.1355	0.6437		7,365.1623	7,365.1623	0.4372	1.1705	7,724.9073
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0906	0.0661	0.8637	2.3800e-003	0.2649	1.6800e-003	0.2665	0.0705	1.5400e-003	0.0721		242.5869	242.5869	6.7700e-003	6.4800e-003	244.6872
Total	**0.5415**	**18.1474**	**4.8550**	**0.0693**	**2.1101**	**0.1433**	**2.2534**	**0.5787**	**0.1371**	**0.7158**		**7,607.7492**	**7,607.7492**	**0.4440**	**1.1770**	**7,969.5946**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0630	1.7199	0.5721	6.7100e-003	0.2241	0.0169	0.2410	0.0645	0.0162	0.0807		723.1757	723.1757	0.0265	0.1051	755.1595
Worker	0.0906	0.0661	0.8637	2.3800e-003	0.2794	1.6800e-003	0.2811	0.0741	1.5400e-003	0.0757		242.5869	242.5869	6.7700e-003	6.4800e-003	244.6872
Total	**0.1535**	**1.7860**	**1.4357**	**9.0900e-003**	**0.5035**	**0.0186**	**0.5221**	**0.1386**	**0.0177**	**0.1563**		**965.7626**	**965.7626**	**0.0333**	**0.1116**	**999.8467**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0630	1.7199	0.5721	6.7100e-003	0.2145	0.0169	0.2314	0.0622	0.0162	0.0783		723.1757	723.1757	0.0265	0.1051	755.1595
Worker	0.0906	0.0661	0.8637	2.3800e-003	0.2649	1.6800e-003	0.2665	0.0705	1.5400e-003	0.0721		242.5869	242.5869	6.7700e-003	6.4800e-003	244.6872
Total	**0.1535**	**1.7860**	**1.4357**	**9.0900e-003**	**0.4794**	**0.0186**	**0.4979**	**0.1327**	**0.0177**	**0.1504**		**965.7626**	**965.7626**	**0.0333**	**0.1116**	**999.8467**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0361	1.3412	0.5072	6.3800e-003	0.2241	7.1200e-003	0.2312	0.0645	6.8100e-003	0.0713		689.1742	689.1742	0.0254	0.1000	719.6194
Worker	0.0843	0.0585	0.7967	2.3100e-003	0.2794	1.5800e-003	0.2810	0.0741	1.4500e-003	0.0756		236.2185	236.2185	6.0800e-003	5.9900e-003	238.1541
Total	**0.1204**	**1.3997**	**1.3040**	**8.6900e-003**	**0.5035**	**8.7000e-003**	**0.5122**	**0.1386**	**8.2600e-003**	**0.1469**		**925.3927**	**925.3927**	**0.0315**	**0.1060**	**957.7735**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0361	1.3412	0.5072	6.3800e-003	0.2145	7.1200e-003	0.2216	0.0622	6.8100e-003	0.0690		689.1742	689.1742	0.0254	0.1000	719.6194
Worker	0.0843	0.0585	0.7967	2.3100e-003	0.2649	1.5800e-003	0.2664	0.0705	1.4500e-003	0.0720		236.2185	236.2185	6.0800e-003	5.9900e-003	238.1541
Total	**0.1204**	**1.3997**	**1.3040**	**8.6900e-003**	**0.4794**	**8.7000e-003**	**0.4881**	**0.1327**	**8.2600e-003**	**0.1410**		**925.3927**	**925.3927**	**0.0315**	**0.1060**	**957.7735**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025		1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.3741					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2922**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**		**1,805.4304**	**1,805.4304**	**0.5673**		**1,819.6122**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0843	0.0585	0.7967	2.3100e-003	0.2794	1.5800e-003	0.2810	0.0741	1.4500e-003	0.0756		236.2185	236.2185	6.0800e-003	5.9900e-003	238.1541
Total	**0.0843**	**0.0585**	**0.7967**	**2.3100e-003**	**0.2794**	**1.5800e-003**	**0.2810**	**0.0741**	**1.4500e-003**	**0.0756**		**236.2185**	**236.2185**	**6.0800e-003**	**5.9900e-003**	**238.1541**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025	0.0000	1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.3741					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2922**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**	**0.0000**	**1,805.4304**	**1,805.4304**	**0.5673**		**1,819.6122**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0843	0.0585	0.7967	2.3100e-003	0.2649	1.5800e-003	0.2664	0.0705	1.4500e-003	0.0720		236.2185	236.2185	6.0800e-003	5.9900e-003	238.1541
Total	**0.0843**	**0.0585**	**0.7967**	**2.3100e-003**	**0.2649**	**1.5800e-003**	**0.2664**	**0.0705**	**1.4500e-003**	**0.0720**		**236.2185**	**236.2185**	**6.0800e-003**	**5.9900e-003**	**238.1541**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	53.6828					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**53.8745**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0843	0.0585	0.7967	2.3100e-003	0.2794	1.5800e-003	0.2810	0.0741	1.4500e-003	0.0756		236.2185	236.2185	6.0800e-003	5.9900e-003	238.1541
Total	**0.0843**	**0.0585**	**0.7967**	**2.3100e-003**	**0.2794**	**1.5800e-003**	**0.2810**	**0.0741**	**1.4500e-003**	**0.0756**		**236.2185**	**236.2185**	**6.0800e-003**	**5.9900e-003**	**238.1541**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	53.6828					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**53.8745**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0843	0.0585	0.7967	2.3100e-003	0.2649	1.5800e-003	0.2664	0.0705	1.4500e-003	0.0720		236.2185	236.2185	6.0800e-003	5.9900e-003	238.1541
Total	**0.0843**	**0.0585**	**0.7967**	**2.3100e-003**	**0.2649**	**1.5800e-003**	**0.2664**	**0.0705**	**1.4500e-003**	**0.0720**		**236.2185**	**236.2185**	**6.0800e-003**	**5.9900e-003**	**238.1541**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4751	11.6165	6.1222	0.0656	2.8988	0.0842	2.9830	0.8038	0.0804	0.8842		7,126.6876	7,126.6876	0.3609	0.9874	7,429.9448
Unmitigated	0.4751	11.6165	6.1222	0.0656	2.8988	0.0842	2.9830	0.8038	0.0804	0.8842		7,126.6876	7,126.6876	0.3609	0.9874	7,429.9448

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	104.04	104.04	104.04	409,797	409,797
Other Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	67.99	67.99	67.99	821,660	821,660
Total	172.03	172.03	172.03	1,231,457	1,231,457

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	100	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	33.20	0.00	0.00	100.00	100	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.543401	0.061496	0.184986	0.128935	0.023820	0.006437	0.011961	0.008652	0.000812	0.000508	0.024540	0.000745	0.003706
Other Asphalt Surfaces	0.543401	0.061496	0.184986	0.128935	0.023820	0.006437	0.011961	0.008652	0.000812	0.000508	0.024540	0.000745	0.003706
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.000000	0.014706	0.279412	0.705882	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	6.3700e-003	0.0579	0.0486	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003		69.4758	69.4758	1.3300e-003	1.2700e-003	69.8887
NaturalGas Unmitigated	6.3700e-003	0.0579	0.0486	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003		69.4758	69.4758	1.3300e-003	1.2700e-003	69.8887

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	84.5753	9.1000e-004	8.2900e-003	6.9700e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004		9.9500	9.9500	1.9000e-004	1.8000e-004	10.0092
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	505.969	5.4600e-003	0.0496	0.0417	3.0000e-004		3.7700e-003	3.7700e-003		3.7700e-003	3.7700e-003		59.5258	59.5258	1.1400e-003	1.0900e-003	59.8795
Total		**6.3700e-003**	**0.0579**	**0.0486**	**3.5000e-004**		**4.4000e-003**	**4.4000e-003**		**4.4000e-003**	**4.4000e-003**		**69.4758**	**69.4758**	**1.3300e-003**	**1.2700e-003**	**69.8887**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.0845753	9.1000e-004	8.2900e-003	6.9700e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004		9.9500	9.9500	1.9000e-004	1.8000e-004	10.0092
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.505969	5.4600e-003	0.0496	0.0417	3.0000e-004		3.7700e-003	3.7700e-003		3.7700e-003	3.7700e-003		59.5258	59.5258	1.1400e-003	1.0900e-003	59.8795
Total		**6.3700e-003**	**0.0579**	**0.0486**	**3.5000e-004**		**4.4000e-003**	**4.4000e-003**		**4.4000e-003**	**4.4000e-003**		**69.4758**	**69.4758**	**1.3300e-003**	**1.2700e-003**	**69.8887**

6.0 Area Detail

6.1 Mitigation Measures Area

Rialto Thrifty Oil Warehouse - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.3028	1.0000e-004	0.0106	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0226	0.0226	6.0000e-005		0.0241
Unmitigated	2.3028	1.0000e-004	0.0106	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0226	0.0226	6.0000e-005		0.0241

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2647					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.7000e-004	1.0000e-004	0.0106	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0226	0.0226	6.0000e-005		0.0241
Total	**2.3028**	**1.0000e-004**	**0.0106**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0226**	**0.0226**	**6.0000e-005**		**0.0241**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2647					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.7000e-004	1.0000e-004	0.0106	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0226	0.0226	6.0000e-005		0.0241
Total	**2.3028**	**1.0000e-004**	**0.0106**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0226**	**0.0226**	**6.0000e-005**		**0.0241**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	5	8.00	260	89	0.20	Electrical

Rialto Thrifty Oil Warehouse - South Coast Air Basin, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Forklifts	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Health Risk Assessment
Locust Avenue and Lowell Street Development Project
City of Rialto, California

Prepared by:

Kimley-Horn and Associates, Inc.
1100 W. Town and Country Road, Suite 700
Orange, California 92868
Contact: Mr. Ace Malisos
714.939.1030

May 2022

TABLE OF CONTENTS

1 INTRODUCTION
1.1 Project Location 1
1.2 Project Description 1

2 ENVIRONMENTAL SETTING
2.1 Climate 6
2.2 Meteorology 6
2.3 Toxic Air Contaminants 7
2.4 Sensitive Receptors 8

3 REGULATORY SETTING
3.1 Federal 9
3.2 State of California 10
3.3 Regional 12

4 SIGNIFICANCE CRITERIA AND METHODOLOGY
4.1 Health Risk Analysis Thresholds 14
4.2 Methodology 14

5 POTENTIAL HEALTH RISK IMPACTS
5.1 Carcinogenic Risk 20
5.2 Non-Carcinogenic Hazard 21
5.3 Conclusion 21

6 REFERENCES
References 23

TABLES
Table 1 Sensitive Receptors 8
Table 2 Age Sensitivity Factors, Fraction of Time at Home, and Daily Breathing Rates 18
Table 3 Carcinogenic Risk Assessment 21
Table 4 Chronic Hazard Assessment 21

EXHIBITS
Exhibit 1 Regional Location Map 3
Exhibit 2 Project Vicinity Map 4
Exhibit 3 Conceptual Site Plan 5

APPENDIX
Appendix A: Modeling Data

LIST OF ABBREVIATED TERMS

A	absorption factor from inhalation
ACES	Advanced Collaborative Emissions Study
ASF	age sensitivity factor
AB	Assembly Bill
APN	Assessor's Parcel Number
APS	auxiliary power system
AT	averaging time
AQMP	Air Quality Management Plan
ATCM	Air Toxic Control Measure
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CLSP	California Landings Specific Plan
CSMA	California Subdivision Map Act
CPF	cancer potency factor
C_{air}	air concentration from model
C_i	air concentration of substance
DBR	daily breathing rate
DOORS	Diesel Off-Road Reporting System
DPM	Diesel Particulate Matter
DRRP	Diesel Risk Reduction Plan
Dose-air	does through inhalation
EMFAC	Emissions Factor Model
ED	exposure duration
EF	exposure frequency
°F	Fahrenheit
FCAA	Federal Clean Air Act
FAH	fraction of time spent at home
GVWR	gross vehicle weight rating
HAP	hazardous air pollutant
HOA	homeowner's association
HQ	health quotient
HRA	health risk assessment
kg	kilograms
L	liter
MATES	Multiple Air Toxics Exposure Study
MEIR	Maximally Exposed Individual Resident
MICR	Maximum Individual Cancer Risk
mg	milligrams
$\mu g/m^3$	micrograms per cubic meter
MSAT	Mobile Source Air Toxic
NAAQS	National Ambient Air Quality Standards
NED	National Elevation Dataset

LIST OF ABBREVIATED TERMS (CONTINUED)

NESHAP	National Emissions Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
O_3	ozone
OEHHA	Office Environmental Health Hazard Assessment
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PERP	Portable Equipment Registration Program
REL	Reference Exposure Level
REL_i	Reference Exposure Level of substance
$Risk_{inh\text{-}res}$	residential inhalation cancer risk
SB	Senate Bill
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
T-BACT	toxics best available control technology
TAC	Toxic Air Contaminant
EPA	United States Environmental Protection Agency
VMT	vehicle miles traveled
VOC	volatile organic compound

1 INTRODUCTION

The purpose of this Health Risk Assessment (HRA) is to evaluate potential health risks associated with Toxic Air Contaminants (TAC) including Diesel Particulate Matter (DPM) resulting from the implementation of the proposed Locust Avenue and Lowell Street Development Project ("Project" or "proposed Project"). This HRA was prepared in accordance with the requirements of the South Coast Air Quality Management District (SCAQMD) and guidance from the Office of Environmental Health Hazard Assessment (OEHHA) to determine if health risks are likely to occur from the Project. In addition to this HRA, an Air Quality Assessment and a Greenhouse Gas Emissions Assessment for this Project have also been prepared. Technical data is included as see Appendix A: Modeling Data.

1.1 Project Location

The Project site is in the northern area of the City of Rialto in San Bernardino County, approximately one mile north of State Route (SR) 210; refer to **Exhibit 1, Regional Location Map**. The Project site is approximately 4.78 acres and regional access to the Project site is provided via SR-210. Local access to the Project site is provided via Lowell Street which is a two-lane undivided roadway, trending in an east-west direction and Locust Avenue which is a two-lane undivided roadway, trending in a north-south direction. The site is bordered by a recycling center to the north; Lowell Street and vacant land designated for General Industrial uses to the south; Locust Avenue, a truck trailer storage yard, and an industrial warehouse to the east; and a manufacturing facility to the west; refer to **Exhibit 2, Project Vicinity Map**.

1.2 Project Description

T The Project proposes to develop a warehouse building with approximately 91,880 square feet (sf) of warehouse space and 9,000 sf of two-story office area for a total building area of 100,880 sf; refer to **Exhibit 3, Conceptual Site Plan**. The Project includes minimal production, use, storage, transport or disposal of hazardous materials for construction and operational activities. The Project is speculative in nature; the end user(s) and their hours of operation are unknown at this time. However, to be conservative, it has been assumed that the building would operate 24 hours per day/7 days per week for the Addendum's analyses referenced herein. The Project will not include refrigerated uses on-site.

The Project proposes two office spaces (each would include two-story areas consisting of 4,500 sf), one on the southwest corner of the warehouse building and one on the southeast corner of the warehouse building. The warehouse building would be designed to have a maximum building height of approximately 34.5'. The warehouse building would provide ingress and egress via 40' wide driveway and one 32' wide driveway on Lowell Street and one 50' wide driveway on Locust Avenue. Drive aisles along the northern, southern and western frontages would range from 26 to 40 feet in width to allow for onsite movement for workers and emergency vehicles alike. The building will be provided with 87 vehicle parking stalls, 12 dock doors, and one drive thru door on the north side of the building. Vehicle parking will be provided on the north, west, and south sides of the site, while all truck doors will be located on the north side of the building.

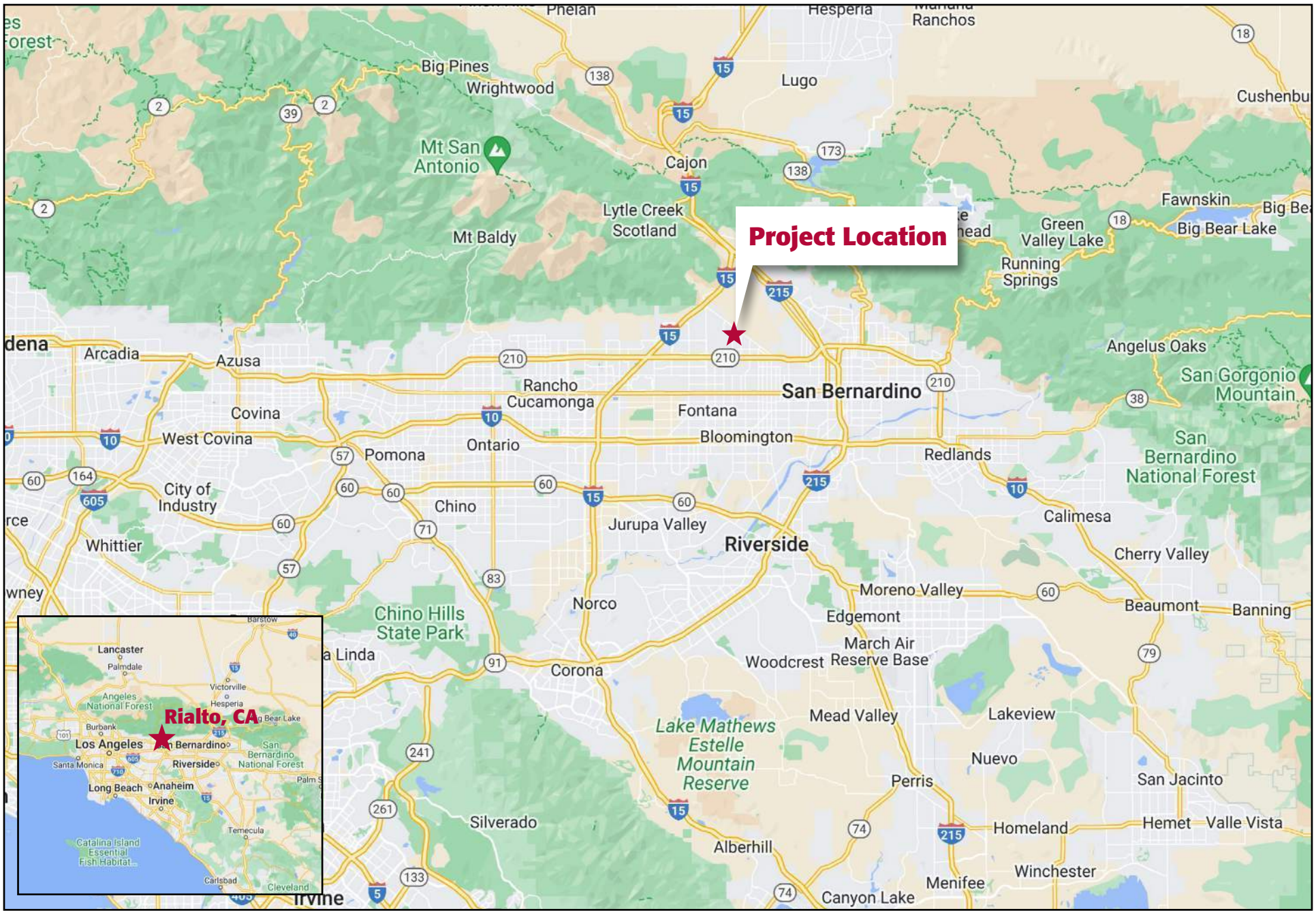
As noted above, Project site's ingress and egress would be provided via three driveways with two located on Lowell Street and one located on Locust Avenue. The 32-foot wide driveway located on the south side of the Project site would allow for right-in-right-out access onto Lowell Street for passenger vehicles and emergency vehicles. The 40-foot wide driveway located at the southwest corner of the Project site would

allow for right-in and left-out secondary truck access onto Lowell Street. The 50-foot wide driveway located at the northeast corner of the Project site would allow for left-in-right-out primary truck access onto Locust Avenue.

Construction is anticipated to occur over a duration of approximately nine months, commencing in the fourth quarter of 2022.

Parking

The Project is anticipated to provide 87 vehicle parking stalls. Additionally, the warehouse building includes 12 dock doors and one drive thru door located on the northern side of the building. All auto parking would be located on the parking will be provided on the north and west, and south sides of the site portions of the Project site.



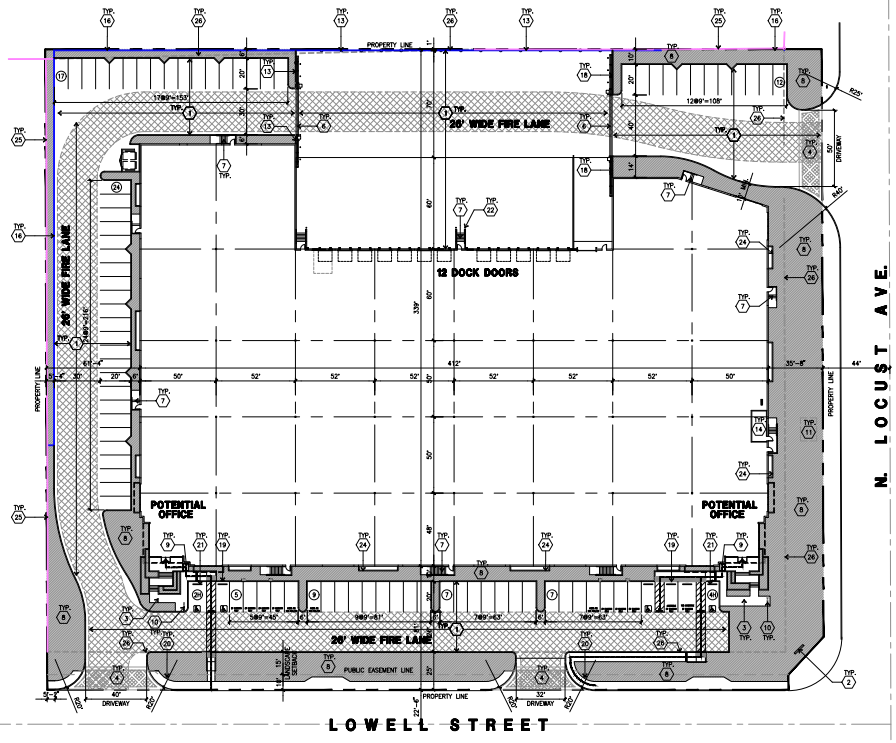
Source: Google Maps, 2022

Exhibit 1: Regional Vicinity Map
Locust Avenue and Lowell Street Development Project



Source: Nearmap, 2022

Exhibit 2: Local Vicinity Map
Locust Avenue and Lowell Street Development Project



OVERALL SITE PLAN

SCALE: 1" = 30'-0"

VICINITY MAP



PROJECT DATA

SITE AREA	
In s.f. (Less pedestrian easement)	208,131 s.f.
In acres	4.78 ac
BUILDING AREA	
Office	4,500 s.f.
Office 2nd floor	4,500 s.f.
Warehouse	91,880 s.f.
TOTAL	100,880 s.f.
COVERAGE	48.5%
AUTO PARKING REQUIRED	
Office: 1/250 s.f.	36 stalls
Whse: 1st 10'k @ 1/1000 s.f.	10 stalls
w hse: above 10'k @ 1/2000 s.f.	41 stalls
TOTAL	87 stalls
AUTO PARKING PROVIDED	
Standard (9' x 20')	87 stalls
ZONING ORDINANCE FOR CITY	
Zoning Designation - Rialto Airport Specific Plan - I-GM (General Manufacturing)	
MAXIMUM BUILDING HEIGHT ALLOWED	
Height - 35' w ith 1:1 Setback Ratio	
MAXIMUM FLOOR AREA RATIO	
FAR - 3:1	

SETBACKS	Building	Landscape
Locust Ave/Front - 25'		15'
Low ell St/Side - 15'		15'
Rear - 0'-15'		0

PROPERTY OWNER

THRIFTY OIL CO.
13116 IMPERIAL HIGHWAY
SANTA FE SPRINGS CA 90670
TEL: 562-921-3581
ATTN: STEPHANE WANDEL

ADDRESS OF THE PROPERTY

TBD

ASSESSOR'S PARCEL NUMBER

0232-192-12-0-000

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF RIALTO, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL NO. 5 OF PARCEL MAP NO. 7173, IN BERNARDINO, STATE OF CALIFORNIA, AS PER INCLUSIVE OF PARCEL MAPS, IN THE OFFICE THE CITY OF RIALTO, COUNTY OF SAN MAP RECORDED IN BOOK 77 PAGES 64 TO 68 OF THE COUNTY RECORDER OF SAID COUNTY.

APN: 0239-192-12-0-000

ZONING

ZONING DESIGNATION – RIALTO AIRPORT SPECIFIC PLAN
– I-GM (GENERAL MANUFACTURING)

APPLICANT

THRIFTY OIL CO.
13116 IMPERIAL HIGHWAY
SANTA FE SPRINGS CA 90670
TEL: 562-921-3581
ATTN: STEPHANE WANDEL

APPLICANT'S REPRESENTATIVE

HPA, INC.
18831 BARDEEN AVE SUITE 100
IRVINE CA 92612
TEL: 949-862-2137
ATTN: JOSEPH KIM

SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONC. PAVEMENT.
2. FUTURE MONUMENT SIGN
3. CONCRETE WALKWAY
4. DRIVEWAY APRONS TO BE CONSTRUCTED PER "L" DRAWINGS.
5. 5'-6"X5'-6"X4" MIN. THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. SLOPE TO BE 1/4" - 1'2" MAX. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY W/ 1'20 MAX. AS REQ. BY CITY INSPECTOR.
6. PROVIDE METAL, MANUAL OPERATED GATES W/ KNOX-PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
7. EXTERIOR CONC. STAIR.
8. LANDSCAPE. SEE "L" DWGS.
9. ACCESSIBLE LIFT.
10. BIKE RACK.
11. APPROXIMATE LOCATION OF TRANSFORMER.
12. NOT USED.
13. 8'H WROUGHT IRON FENCE
14. ELECTRICAL ROOM
15. SITE LIGHT FIXTURE
16. PROPOSED RETAINING WALL.
17. TRASH ENCLOSURE PER CITY STANDARD.
18. 12'H CONCRETE TILT SCREEN WALL
19. HANDICAPPED PARKING STALL SIGN
20. HANDICAPPED ENTRY SIGN
21. PRE-CAST CONC. WHEEL STOP
22. CONC. FILLED GUARD POST "6 DIA. U.N.O. 42" H.
23. EMPLOYEE BREAK AREA WITH TRELLIS
24. NON-STRUCTURAL ARCHITECTURAL TREATMENT WITH SMOOTH PLASTER FINISH
25. EXISTING RETAINING WALL TO REMAIN.
26. EXISTING RETAINING WALL TO BE DEMOLISHED

SITE LEGEND

- LANDSCAPED AREA
- CONCRETE PAVING SEE "C" DRWGS. FOR THICKNESS
- STANDARD PARKING STALL (9' X 20')
- HANDICAP PARKING STALL (12' X 20')
- 26' FIRE LANE.
- PROPERTY LINE
- PATH OF TRAVEL

SITE PLAN GENERAL NOTES

1. THE SOILS REPORT PREPARED BY _____ SHOULD BE A PART OF THESE CONTRACT DOCUMENTS.
2. IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE.
3. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINE U.N.O.
4. SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES. DETAILS ON SHEET AD.1 ARE MINIMUM STANDARDS.
5. THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM, PRIOR TO INSTALLATION & AT LEAST 60 DAYS BEFORE BLDG. COMPLETION.
6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
9. SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.
10. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY W/ 1:20 MAX. SLOPE. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4". SEE "L" DRAWINGS FOR FINISH.
11. PROVIDE TWO FIRE HYDRANT ON THE SITE. FINAL LOCATION WILL DETERMINATE IN DURING SUBMITTAL.
12. PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.
13. CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND IRRIGATION OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
14. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
15. NOT USED
16. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
17. NOT USED.
18. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB
19. APPROVED CONCEPTUAL LANDSCAPE PLAN PRIOR TO GRADING PERMIT

OFFICIAL USE ONLY

Source: HPA Architecture

Exhibit 3: Site Plan
Locust Avenue and Lowell Street Development Project

2 ENVIRONMENTAL SETTING

2.1 Climate

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. The climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the South Coast Air Basin (SCAB) is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the SCAB. These factors along with applicable regulations are discussed below.

The average annual temperature varies little throughout the SCAB, averaging 75 degrees Fahrenheit (°F). However, with a less-pronounced oceanic influence, the eastern inland portions of the SCAB show greater variability in annual minimum and maximum temperatures. All portions of the SCAB have had recorded temperatures over 100°F in recent years.

2.2 Meteorology

Although the SCAB has a semi-arid climate, the air near the surface is moist due to the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the SCAB by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as "high fog," are a characteristic climate feature. Annual average relative humidity is 70 percent at the coast and 57 percent in the eastern part of the SCAB. Precipitation in the SCAB is typically nine to 14 inches annually and is rarely in the form of snow or hail due to typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the SCAB.

A temperature inversion is defined as an increase in temperature with height, or to the layer within which such an increase occurs. The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet, the terrain prevents the pollutants from entering the upper atmosphere, resulting in a settlement in the foothill communities. Below 1,200 feet, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire SCAB. Usually, inversions are lower before sunrise than during the day. Mixing heights for inversions are lower in the summer and more persistent, being partly responsible for the high levels of ozone (O_3) observed during summer months in the SCAB. Smog in southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods of time, allowing them to form secondary pollutants by reacting with sunlight. The SCAB has a limited ability to disperse these pollutants due to typically low wind speeds.

The area in which the Project is located offers clear skies and sunshine yet is still susceptible to air inversions. These inversions trap a layer of stagnant air near the ground, where it is then further loaded with pollutants. These inversions cause haziness, which is caused by moisture, suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces, and other sources.

2.3 Toxic Air Contaminants

Toxic Air Contaminants (TACs) are airborne substances capable of causing short-term (acute) and long-term (chronic or carcinogenic, i.e. cancer causing) adverse human health effects (i.e. injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes approximately 200 compounds, including particulate emissions from diesel-fueled engines.

Hazardous Air Pollutants (HAP) is a term used by the Federal Clean Air Act (FCAA) that includes a variety of pollutants generated or emitted by industrial production activities. Identified as TACs under the California Clean Air Act (CCAA), ten have been singled out through ambient air quality data as being the most substantial health risk in California. Direct exposure to these pollutants has been shown to cause cancer, birth defects, damage to the brain and nervous system, and respiratory disorders. The California Air Resources Board (CARB) provides emission inventories for only the larger air basins.

TACs do not have ambient air quality standards because no safe levels of TACs can be determined. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. The requirements of the Air Toxic "Hot Spots" Information and Assessment Act (Assembly Bill [AB] 2588) apply to facilities that use, produce, or emit toxic chemicals. Facilities subject to the toxic emission inventory requirements of the act must prepare and submit toxic emission inventory plans and reports, and periodically update those reports.

Toxic contaminants often result from fugitive emissions during fuel storage and transfer activities, and from leaking valves and pipes. For example, the electronics industry, including semiconductor manufacturing, uses highly toxic chlorinated solvents in semiconductor production processes. Sources of air toxics go beyond industry, however. Automobile exhaust also contains toxic air pollutants such as benzene and 1,3-butadiene.

In California, on-road diesel-fueled engines contribute approximately 24 percent of the statewide total, with an additional 71 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources contribute about 5 percent of total DPM. It should be noted that CARB has developed several plans and programs to reduce diesel emissions such as the Diesel Risk Reduction Plan (DRRP), the Statewide Portable Equipment Registration Program (PERP), and the Diesel Off-Road Reporting System (DOORS). The PERP and DOORS programs allow owners or operators of portable engines and certain other types of equipment can register their units in order to operate their equipment throughout California without having to obtain individual permits from local air districts.

As noted above, diesel exhaust and many individual substances contained in it (including arsenic, benzene, formaldehyde, and nickel) have the potential to contribute to mutations in cells that can lead to cancer. Long-term exposure to diesel exhaust particles poses the highest cancer risk of any TAC evaluated by OEHHA. CARB estimates that about 70 percent of the cancer risk that the average Californian faces from breathing toxic air pollutants stems from diesel exhaust particles.

In its comprehensive assessment of diesel exhaust, OEHHA analyzed more than 30 studies of people who worked around diesel equipment, including truck drivers, railroad workers, and equipment operators. The studies showed these workers were more likely to develop lung cancer than workers not exposed to diesel

emissions. These studies provide strong evidence that long-term occupational exposure to diesel exhaust increases the risk of lung cancer. Using information from OEHHA's assessment, CARB estimates that diesel particle levels measured in California's air in 2000 could cause 540 "excess" cancers in a population of 1 million people over a 70-year lifetime. Other researchers and scientific organizations, including the National Institute for Occupational Safety and Health, have calculated cancer risks from diesel exhaust similar to those developed by OEHHA and CARB.

Exposure to diesel exhaust can have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks.

Diesel engines are a major source of fine particulate pollution. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particle pollution. Numerous studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Because children's lungs and respiratory systems are still developing, they are also more susceptible than healthy adults to fine particles. Exposure to fine particles is associated with increased frequency of childhood illnesses and can also reduce lung function in children. In California, diesel exhaust particles have been identified as a carcinogen.

2.4 Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive receptors that are in proximity to localized sources of toxins are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The Project site is immediately surrounded by industrial land uses and the closest sensitive land uses are located 700 feet away or more. Sensitive land uses nearest to the Project are shown in Table 1: Sensitive Receptors.

Table 1: Sensitive Receptors

Receptor Description	Approximate Distance and Direction from the Project[1]
Single-Family Residences	700 feet to the east
Single-Family Residences	1,588 feet to the north
Single-Family Residences	1,344 feet to the northeast

1. Approximate distances measured from the nearest Project site boundary to the property boundary of the identified sensitive receptor.

Source: Google Earth

3 REGULATORY SETTING

3.1 Federal

Federal Clean Air Act

The FCAA was amended in 1990 to address the numerous air pollutants that are known to cause or may reasonably be anticipated to cause adverse effects to human health or adverse environmental effects. 188 specific pollutants and chemical groups were initially identified as HAPs, and the list has been modified over time. The FCAA Amendments included new regulatory programs to control acid deposition and for the issuance of stationary source operating permits.

In 2001, the United States Environmental Protection Agency (EPA) issued its first Mobile Source Air Toxics Rule, which identified 21 mobile source air toxic (MSAT) compounds as being HAPs that required regulation. A subset of six of these MSAT compounds were identified as having the greatest influence on health and included benzene, 1,3-butadiene, formaldehyde, acrolein, acetaldehyde, and DPM. More recently, the EPA issued a second MSAT Rule in February 2007, which generally supported the findings in the first rule and provided additional recommendations of compounds having the greatest impact on health. The rule also identified several engine emission certification standards that must be implemented. Unlike the criteria pollutants, toxics do not have National Ambient Air Quality Standards (NAAQS) making evaluation of their impacts more subjective.

National Emissions Standards for Hazardous Air Pollutants (NESHAPs) were incorporated into a greatly expanded program for controlling toxic air pollutants. The provisions for attainment and maintenance of the NAAQS were substantially modified and expanded. Other revisions included provisions regarding stratospheric ozone protection, increased enforcement authority, and expanded research programs.

Section 112 of the FCAA Amendments governs the federal control program for HAPs. NESHAPs are issued to limit the release of specified HAPs from specific industrial sectors. These standards are technology-based, meaning that they represent the best available control technology an industrial sector could afford. The level of emissions controls required by NESHAPs are not based on health risk considerations because allowable releases and resulting concentrations have not been determined to be safe for the general public. The FCAA does not establish air quality standards for HAPs that define legally acceptable concentrations of these pollutants in ambient air.

Federal Emissions Standards for On-Road Trucks

To reduce emissions from on-road, heavy-duty diesel trucks, the U.S. EPA established a series of increasingly strict emission standards for new engines, starting in 1988. The U.S. EPA promulgated the final and cleanest standards with the 2007 Heavy-Duty Highway Rule.[1] The PM emission standard of 0.01 gram per horsepower-hour (g/hp-hr) is required for new vehicles beginning with model year 2007. Also, the NO_X and nonmethane hydrocarbon (NMHC) standards of 0.20 g/hp-hr and 0.14 g/hp-hr, respectively, were phased in together between 2007 and 2010 on a percent of sales basis: 50 percent from 2007 to 2009 and 100 percent in 2010.

[1] United States Environmental Protection Agency (U.S. EPA), *Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*, Final Rule. 40 Code of Federal Regulations, Parts 69, 80, and 86. January 18, 2001.

Emission Standards for Nonroad Diesel Engines

To reduce emissions from off-road diesel equipment, the U.S. EPA established a series of cleaner emission standards for new off-road diesel engines. Tier 1 standards were phased in from 1996 to 2000 (year of manufacture), depending on the engine horsepower category. Tier 2 standards were phased in from 2001 to 2006. Tier 3 standards were phased in from 2006 to 2008. Tier 4 standards, which generally require add-on emission control equipment to attain them, are being phased in from 2008 to 2015.

3.2 State of California

California Air Resources Board

CARB's statewide comprehensive air toxics program was established in 1983 with AB 1807 the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control measure (ATCM) for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology (T-BACT) to minimize emissions.
CARB also administers the state's mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, the AB 2588 was amended by Senate Bill (SB) 1731 which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Diesel Risk Reduction Plan

The identification of DPM as a TAC in 1998 led CARB to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (DRRP) in October 2000. The DRRP's goals include an 85 percent reduction in DPM by 2020 from the 2000 baseline.[2] CARB estimates that emissions of DPM in 2035 will be less than half those in 2010, further reducing statewide cancer risk and non-cancer health effects.[3] The DRRP includes regulations to establish cleaner new diesel engines, cleaner in-use diesel engines (retrofits), and cleaner diesel fuel.

Truck and Bus Regulation Reducing Emissions from Existing Diesel Vehicles

On December 12, 2008, CARB approved the Truck and Bus Regulation to significantly reduce particulate matter (PM) and oxides of nitrogen (NO_X) emissions from existing diesel vehicles operating in California. The regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Heavier trucks must be retrofitted with PM filters beginning January 1, 2012, and older trucks

[2] California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, October 2000.
[3] California Air Resources Board, *Overview: Diesel Exhaust & Health*, available at: https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health, accessed February 21, 2020.

must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses would need to have 2010 model year engines or equivalent.

The regulation applies to most privately and federally-owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. Small fleets with three or fewer diesel trucks can delay compliance for heavier trucks and there are several extensions for low-mileage construction trucks, early PM filter retrofits, adding cleaner vehicles, and other situations. Privately and publicly owned school buses have different requirements.

Heavy-Duty Vehicle Idling Emission Reduction Program

The purpose of the CARB ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling is to reduce public exposure to diesel particulate matter and criteria pollutants by limiting the idling of diesel-fueled commercial vehicles. The driver of any vehicle subject to this ATCM is prohibited from idling the vehicle's primary diesel engine for greater than five minutes at any location and is prohibited from idling a diesel-fueled auxiliary power system (APS) for more than five minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle if it has a sleeper berth and the truck is located within 100 feet of a restricted area (homes and schools).

CARB Final Regulation Order, Requirements to Reduce Idling Emissions from New and In-Use Trucks, beginning in 2008, would require that new 2008 and subsequent model-year heavy-duty diesel engines be equipped with an engine shutdown system that automatically shuts down the engine after 300 seconds of continuous idling operation once the vehicle is stopped, the transmission is set to "neutral" or "park", and the parking brake is engaged.

Section 2485 and Section 2449 of Title 13 of the California Code of Regulations limits diesel-fueled motor vehicle idling to no more than five minutes. Section 2485 limits idling for diesel-fueled commercial motor vehicles with gross vehicle weight ratings of greater than 10,000 pounds that are or must be licensed to operate on publicly maintained highways and streets within California. Section 2449 limits idling for off-road diesel-fueled fleets.

CalEnviroScreen

OEHHA has developed CalEnviroScreen 4.0, which is a mapping tool that helps identify California communities that are most affected by many sources of pollution, and where people are often especially vulnerable to pollution's effects. CalEnviroScreen uses environmental, health, and socioeconomic information to produce scores for every census tract in the State. The scores are mapped so that different communities can be compared. An area with a high score is one that experiences a much higher pollution burden than areas with low scores.

According to CalEnviroScreen, the Project site and the nearest residences to the northeast are located within Census Tract 6071002704, which is within the 80th percentile.[4] It should be noted that the CalEnviroScreen scores are relative to other census tracts and are not an expression of health risk, and do not provide quantitative information on increases in cumulative impacts for specific sites or projects.

[4] California Office of Environmental Health Hazard Assessment, *CalEnviroScreen 4.0 Results (October 2021 Update)*, https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40, accessed May 2022.

Further, as a comparative screening tool, the results do not provide a basis for determining when differences between scores are significant in relation to public health or the environment.

CARB Advanced Clean Truck Regulation

CARB adopted the Advanced Clean Truck Regulation in June 2020 requiring truck manufacturers to transition from diesel trucks and vans to electric zero-emission trucks beginning in 2024. By 2045, every new truck sold in California is required to be zero-emission. This rule directly addresses disproportionate risks and health and pollution burdens and puts California on the path for an all zero-emission short-haul drayage fleet in ports and railyards by 2035, and zero-emission "last-mile" delivery trucks and vans by 2040. The Advanced Clean Truck Regulation accelerates the transition of zero-emission medium-and heavy-duty vehicles from Class 2b to Class 8. The regulation has two components including a manufacturer sales requirement, and a reporting requirement:

- Zero-Emission Truck Sales: Manufacturers who certify Class 2b through 8 chassis or complete vehicles with combustion engines are required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales need to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 straight truck sales, and 40 percent of truck tractor sales.

- Company and Fleet Reporting: Large employers including retailers, manufacturers, brokers and others would be required to report information about shipments and shuttle services. Fleet owners, with 50 or more trucks, would be required to report about their existing fleet operations. This information would help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

Executive Order N-79-20

Signed in September 2020, Executive Order N-79-20 establishes as a goal that where feasible, all new passenger cars and trucks, as well as all drayage/cargo trucks and off-road vehicles and equipment, sold in California, will be zero-emission by 2035. The executive order sets a similar goal requiring that all medium and heavy-duty vehicles will be zero-emission by 2045 where feasible. It also directs CARB to develop and propose rulemaking for passenger vehicles and trucks, medium-and heavy-duty fleets where feasible, drayage trucks, and off-road vehicles and equipment "requiring increasing volumes" of new zero emission vehicles (ZEVs) "towards the target of 100 percent." The executive order directs the California Environmental Protection Agency, the California Geologic Energy Management Division (CalGEM), and the California Natural Resources Agency to transition and repurpose oil production facilities with a goal toward meeting carbon neutrality by 2045. Executive Order N-79-20 builds upon the CARB Advanced Clean Trucks regulation, which was adopted by CARB in July 2020.

3.3 Regional

South Coast Air Quality Management District

The CCAA provides the SCAQMD with the authority to manage transportation activities at indirect sources and regulate stationary source emissions. Indirect sources of pollution are generated when minor sources collectively emit a substantial amount of pollution. An example of this would be the motor vehicles at an

intersection, a mall, and on highways. As a State agency, CARB regulates motor vehicles and fuels for their emissions.

Air Toxics Control Plan

The Air Toxics Control Plan (March 2000, revised March 26, 2004) is a planning document designed to examine the overall direction of the SCAQMD's air toxics control program. It includes development and implementation of strategic initiatives to monitor and control air toxics emissions. Control strategies that are deemed viable and are within the SCAQMD's jurisdiction will each be brought to the SCAQMD Board for further consideration through the normal public review process. Strategies that are to be implemented by other agencies will be developed in a cooperative effort, and the progress will be reported back to the Board periodically.

Multiple Air Toxics Exposure Study

The SCAQMD conducted an in-depth analysis of the toxic air contaminants and their resulting health risks for all of Southern California. The Multiple Air Toxics Exposure Study in the SCAB (MATES V) (August 2021) shows that carcinogenic risk from air toxics in the SCAB, based on the average concentrations at the 10 monitoring sites, is approximately 40 percent lower than the monitored average in MATES IV and 84 percent lower than the average in MATES II.

MATES V is the most comprehensive dataset documenting the ambient air toxic levels and health risks associated with the SCAB emissions. Therefore, MATES V study represents the baseline health risk for a cumulative analysis. MATES V estimates the average excess cancer risk level from exposure to TACs is 424 in one million basin wide. In comparison, the MATES IV basin average risk was 897 per million. These model estimates were based on monitoring data collected at ten fixed sites within the SCAB. None of the fixed monitoring sites are near the Project site. However, MATES V has extrapolated the excess cancer risk levels throughout the SCAB by modeling the specific grids. MATES V modeling predicted an excess cancer risk of 455 in one million for the Project area[5]. DPM is included in this cancer risk along with all other TAC sources. DPM accounts for a majority of the total risk shown in MATES V in this area.

[5] South Coast Air Quality Management District, *MATES V Estimated Risk*, https://experience.arcgis.com/experience/79d3b6304912414bb21ebdde80100b23/page/home/?data_id=dataSource_105-a5ba9580e3aa43508a793fac819a5a4d%3A358&views=view_38%2Cview_1

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 Health Risk Analysis Thresholds

Project health risks are determined by examining the types and levels of air toxics generated and the associated impacts on factors that affect air quality. While the final determination of significance thresholds is within the purview of the lead agency pursuant to the State CEQA Guidelines, the SCAQMD recommends that the following air pollution thresholds be used by lead agencies in determining whether the impacts from the Project are significant. If the lead agency finds that the Project has the potential to exceed the air pollution thresholds, the Project should be considered significant. The thresholds for air toxic emissions are as follows.

- **Cancer Risk:** Emit contaminants that exceed the maximum individual cancer risk of 10 in one million.
- **Non-Cancer Risk:** Emit contaminants that exceed the maximum hazard quotient of 1.

Cancer risk is expressed in terms of expected incremental incidence per million population. The SCAQMD has established an incidence rate of 10 persons per million as the maximum acceptable incremental cancer risk due to DPM exposure. This threshold serves to determine whether or not a given project has a potentially significant development-specific and cumulative impact. The 10 in one million standard is a health-protective significance threshold. A risk level of 10 in one million implies a likelihood that up to 10 persons, out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the levels of toxic air contaminants over a specified duration of time. This risk would be an excess cancer that is in addition to any cancer risk borne by a person not exposed to these air toxics.

The SCAQMD has also established non-carcinogenic risk parameters for use in HRAs. Noncarcinogenic risks are quantified by calculating a "hazard index," expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). An REL is a concentration at or below which health effects are not likely to occur. A hazard index of less than 1.0 means that adverse health effects are not expected. Within this analysis, non-carcinogenic exposures of less than 1.0 are considered less than significant.

4.2 Methodology

This HRA evaluates potential health risks associated with the emission of diesel particulate matter resulting from the implementation of the proposed Project. Construction equipment and associated heavy-duty truck traffic generate diesel exhaust, which is a known TAC. Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors. Operational activities would also include the use of heavy-duty diesel trucks.

Construction Sources

Construction would generate DPM emissions from the use of off-road diesel equipment required for demolition, grading and excavation, paving, and other construction activities. For construction activity, DPM is the primary toxic air contaminant of concern. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment were included in the analysis, although they are typically less of a concern because they would not stay on the site for long durations. Diesel

exhaust from construction equipment operating at the site potentially poses a health risk to nearby sensitive receptors. The closest sensitive receptors to the Project site are residences approximately 700 feet east.

Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The use of diesel-powered construction equipment would be episodic and would occur throughout the Project site. Construction activities would limit idling to no more than five minutes, which would further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. Furthermore, even during the most intense period of construction, emissions of DPM would be generated from different locations on the Project Site rather than in a single location because different types of construction activities (e.g., site preparation and building construction) would not occur at the same place at the same time. Construction emissions rates for PM_{10} (DPM) were calculated from the CalEEMod construction emissions modeling conducted for the project Air Quality Assessment. The duration of construction activities are anticipated to occur concurrently over an approximately nine-month period and would start as early as November 2022 and ending in July 2023.

Operational Sources

Mobile Sources. The Project is located near existing residential uses. Due to the increased truck traffic from the Project, the resulting emissions could result in pollutant concentrations at existing sensitive receptors. Average daily trips from truck traffic to the Project were obtained from the Project Traffic Study (Kimley-Horn, 2022). An emission rate for PM_{10} (DPM) was calculated using trip data and a CARB 2021 EMission FACtor model (EMFAC)[6] model run for Riverside County; refer to Appendix A. EMFAC generates emission factors in terms of grams of pollutant emitted per vehicle activity and can calculate a matrix of emission factors at specific values of vehicle speed and type. The model was run for heavy-duty diesel vehicles traveling along off-site roads, circulating the Project site, and idling at proposed loading docks. The analysis includes onsite idling and truck traffic on the following roadways and vehicle speeds are:

- Locust Avenue (45 miles per hour)
- On-Site Circulation (15 miles per hour)
- On-Site Idling (idle)

Truck traffic on surrounding roadways are based on the truck trip generation and distribution from the Traffic Scoping Agreement, which used Institute of Transportation Engineers (ITE) Warehousing land use rate (ITE code 150). Additionally, idling emissions assumed 15 minutes of idling[7] for each truck. The emissions rates were calculated using 2024 emissions factors since project construction would be completed in towards the end of 2023; refer to Appendix A. This approach is conservative as it assumes no cleaner technology in future years.

Off-Road Equipment. Off-road cargo handling equipment (i.e., forklifts) used during operational activities would to be electrically powered/zero emission.

[6] California Air Resources Board, *EMFAC 2021 Web Database,* www.arb.ca.gov/emfac accessed March 2022.

[7] An idling time of 15 minutes per truck has been used per SCAQMD recommendations. Although the Project is required to comply with CARB's idling limit of 5 minutes, the SCAQMD recommends the on-site idling emissions should be estimated for 15 minutes of truck idling, which would take into account on-site idling that occurs while the trucks are waiting to pull up to the truck bays, idling at the bays, idling at check-in and check-out, etc.

Emergency Backup Generators. As the Project warehouse is speculative, it is unknown whether emergency backup generators would be used. Backup generators would only be used in the event of a power failure and would not be part of the Project's normal daily operations. Nonetheless, emissions associated with this equipment were included to be conservative. If backup generators are required, the end user would be required to obtain a permit from the SCAQMD prior to installation. Emergency backup generators must meet SCAQMD's Best Available Control Technology (BACT) requirements and comply with SCAQMD Rule 1470 (Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines), which would minimize emissions.

Dispersion Modeling

The construction and operational air dispersion modeling for the HRA was performed using the U.S. EPA AERMOD dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources. AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. Surface and upper air meteorological data is provided by the SCAQMD. Surface and upper air meteorological data from the Fontana Monitoring Station was selected as being the most representative for meteorology based on proximity to the Project site.

The emission sources in the model are line volume sources (comprised of smaller adjacent volume sources) for construction and trucks operations. Construction line volume sources were assigned a release height of 12 feet (3.7 meters). Operational sources include the loading dock idling areas, on-site truck circulation, and off-site truck routes. Heavy duty operational vehicle emissions were assigned a release height of 12 feet (3.7 meters), a plume height of 20.6 feet (6.3 meters). A release height of 12 feet is the average stack height for trucks and the plume height is based on U.S. EPA guidance for vehicle volume sources. Backup generators were modeled as point sources and were included for each proposed building. Point sources were assigned a release height of 5 meters.

AERMOD was run to obtain the peak 1-hour and annual average (period) concentration in micrograms per cubic meter ($\mu g/m^3$) of PM_{10} at the nearby sensitive receptors. According to the SCAQMD's Supplemental Guidelines for Preparing Risk Assessments for AB 2588, air dispersion modeling is required to estimate annual average concentrations to calculate the Maximally Exposed Individual Resident (MEIR), the maximum chronic HI, the zones of impact, and excess cancer burden, as well as peak hourly concentrations to calculate the health impact from substances with acute non-cancer health effects. To achieve these goals, a receptor grid was placed over the nearest sensitive receptors to cover the zone of impact. According to the SCAQMD, in order "to identify the maximum impacted receptors (i.e. peak cancer risk and peak hazard indices) a grid spacing of 100 meters or less must be used" (see page 16 of SCAQMD's Supplemental Guidelines). Due to the size of the Project site, receptors were modeled with a maximum of 50-meter grid spacing. In addition, National Elevation Dataset (NED) terrain data was imported into AERMOD for the Project. The modeling and analysis was prepared in accordance with the SCAQMD Modeling Guidance for AERMOD.[8]

Note that the concentration estimate developed using this methodology is conservative and is not a specific prediction of the actual concentrations that would occur at the Project site any one point in time. Actual 1-hour and annual average concentrations are dependent on many variables, particularly the

[8] South Coast Air Quality Management District, *SCAQMD Modeling Guidance for AERMOD*, http://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance, accessed March 2022.

number and type of vehicles and equipment operating at specific distances during time periods of adverse meteorology. A health risk computation was performed to determine the risk of developing an excess cancer risk calculated on these worst-case exposure duration scenarios. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the OEHHA Guidance Manual. Only the risk associated with the worst-case location of the Project was assessed.

Risk and Hazard Assessment

Cancer Risk. Based on the OEHHA methodology, residential inhalation cancer risk from annual average DPM and benzene concentrations are calculated by multiplying the daily inhalation dose, cancer potency factor, age sensitivity factor (ASF), frequency of time spent at home, and exposure duration divided by averaging time, yielding the excess cancer risk. These factors are discussed in more detail below. It is important to note that exposure duration is based on continual heavy truck operation along nearby roadways. Exposure through inhalation (Dose-air) is a function of breathing rate, exposure frequency, and concentration of substance in the air. To estimate cancer risk, the dose was estimated by applying the following formula to each ground-level concentration:

$$\text{Dose-air} = C_{air} * (BR/BW) * A * EF * 10^{-6}$$

Dose-air =	dose through inhalation (mg/kg/day)
C_{air} =	air concentration ($\mu g/m^3$) from air dispersion model
(DBR/BW) =	daily breathing rate normalized to body weight (L/kg bodyweight-day)
A =	inhalation absorption factor (unitless)
EF =	exposure frequency (approximately 350 days per year for residential)
10^{-6} =	conversion factor (micrograms to milligrams, liters to cubic meters)

OEHHA developed ASFs to consider the increased sensitivity to carcinogens during early-life exposure. In the absence of chemical-specific data, OEHHA recommends default ASFs presented in Table 2: Age Sensitivity Factors, Fraction of Time at Home, and Daily Breathing Rates. Fraction of time at home (FAH) during the day is used to adjust exposure duration and cancer risk from a specific facility's emissions, based on the assumption that exposure to the facility's emissions are not occurring away from home. OEHHA recommends the FAH values presented in Table 3.

Table 2: Age Sensitivity Factors, Fraction of Time at Home, and Daily Breathing Rates					
Age	**Exposure Frequency (days/year)**	**Exposure Duration (years)**	**Age Sensitivity Factor[1] (ASF)**	**Fraction of Time at Home (FAH)**	**Daily Breathing Rate (L/kg BW-day[2])**
Residential					
Third trimester	350	0.25	10	100%	361
0 to 2 years	350	2	10	100%	1,090
Ages 2 through 15 years	350	14	3	100%	572
Ages 16 and greater	350	14	1	73%	261
Worker[3]	250	25	1	N/A	230
Student[3]	180	9	3	N/A	640

[1] Accounts for potential increased sensitivity to carcinogens during childhood.
[2] Daily breathing rate normalized to body weight (L/kg body weight - day) (95th percentile for 3rd trimester to 2 years and 80th percentile for other age groups).
3 Worker and Student breathing rates are 95th percentile 8-hour breathing rates based on moderate intensity activity.

Source: California Office of Environmental Health Hazard Assessment, *Air Toxics Program Guidance Manual for the Preparation of Health Risk Assessments*, February 2015 and South Coast Air Quality Management District, Permit Application Package "N" Risk Assessment Procedures for Rules 1401, 1401.1, and 212 Version 8.1.

To estimate the cancer risk, the dose is multiplied by the cancer potency factor, the ASF, the exposure duration divided by averaging time, and the frequency of time spent at home (for residents only):

$$Risk_{inh\text{-}res} = (Dose_{air} * CPF * ASF * (ED/AT) * FAH)$$

$Risk_{inh\text{-}res}$ = residential inhalation cancer risk (potential chances per million)
$Dose_{air}$ = daily dose through inhalation (mg/kg-day)
CPF = inhalation cancer potency factor ($mg/kg\text{-}day^{-1}$)
ASF = age sensitivity factor for a specified age group (unitless)
ED = exposure duration (years)
AT = averaging time of lifetime cancer risk (years)
FAH = fraction of time spent at home (unitless)

Chronic Non-Cancer Hazard. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The following equation was used to determine the non-cancer risk:

$$\text{Hazard Quotient} = C_i/REL_i$$

C_i = concentration in the air of substance i (annual average concentration in $\mu g/m^3$)
REL_i = chronic noncancer Reference Exposure Level for substance ($\mu g/m^3$)

Health Risk Computation. A health risk computation was performed to determine the risk of developing an excess cancer risk calculated on a 30-year exposure scenario using the approach described in the OEHHA *Air Toxics Program Guidance Manual for the Preparation of Health Risk Assessments* (February 2015) and the daily breathing rates, age sensitivity factors, exposure duration, and fraction of time at home specified in the SCAQMD, Permit Application Package "N" Risk Assessment Procedures for Rules 1401, 1401.1, and 212 Version 8.1 (refer to Table 3). Health risk were analyzed at the point of maximum

impact and are a conservative estimate. The pollutant concentrations are then used to estimate the long-term cancer health risk to an individual as well as the non-cancer chronic health index.

The off-site impacts would occur from the diesel trucks accessing the proposed Project. The cancer and chronic health risks are based on the annual average concentration of PM_{10} (used as a proxy for DPM). As noted above, the chronic and carcinogenic health risk calculations are based on the standardized equations contained in the U.S. EPA *Human Health Evaluation Manual* (1991) and the OEHHA Guidance Manual (2015).

5 POTENTIAL HEALTH RISK IMPACTS

CARB identified DPM as a TAC in 1998. Mobile sources (including trucks, buses, automobiles, trains, ships, and farm equipment) are by far the largest source of diesel emissions. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Diesel exhaust is composed of two phases, either gas or particulate – both contribute to the risk. The gas phase is composed of many of the urban TACs, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde, and polycyclic aromatic hydrocarbons. The particulate phase has many different types that can be classified by size or composition. The sizes of diesel particulates of greatest health concern are fine and ultrafine particles. These particles may be composed of elemental carbon with adsorbed compounds such as organics, sulfates, nitrates, metals, and other trace elements. Diesel exhaust is emitted from a broad range of on- and off-road diesel engines. As the Project is proposed near existing sensitive receptors (single-family residences), an analysis of DPM was performed using the EPA-approved AERMOD model.

5.1 Carcinogenic Risk

Construction-related activities would result in Project-generated emissions of DPM from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); paving; application of architectural coatings; on-road truck travel; and other miscellaneous activities. For construction activity, DPM is the primary toxic air contaminant of concern. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they would not stay on the site for long durations. Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors.

Operational vehicle DPM emissions were estimated using emission factors for course particulate matter less than 10 microns in diameter (PM_{10}) generated with the EMFAC developed by CARB. EMFAC is a mathematical model that was developed to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by CARB to project changes in future emissions from on-road mobile sources. EMFAC, incorporates regional motor vehicle data, information and estimates regarding the distribution of vehicle miles traveled (VMT) by speed, and number of starts per day. The model includes the emissions benefits of the truck and bus rule and the previously adopted rules for other on-road diesel equipment. The closest sensitive receptors to the Project site are residences approximately 45 feet east of Commerce Center I.

Table 4: Carcinogenic Risk Assessment shows the unmitigated and mitigated health risk for the combined construction and operation of the Project. Based on OEHHA *Risk Assessment Guidelines*, the exposure duration for a resident is 30 years, beginning with the third trimester; the exposure duration for workers is 25 years. Operations would commence following construction. As such, construction would not overlap with operations. The analysis calculates risk based on exposure to construction concentrations during the initial nine months of the exposure duration and operational concentrations for the remainder of the exposure duration. Combined construction and operations would result in a maximum cancer risk of 1.45 in one million, which would not exceed the SCAQMD threshold of 10 in one million; refer to Table 4. Therefore, impacts associated with carcinogenic risk would be less than significant.

Table 3: Carcinogenic Risk Assessment			
Exposure Scenario	**Cancer Risk Without Design Features (Risk per Million)[1, 2]**	**Significance Threshold (Risk per Million)**	**Exceeds Significance Threshold?**
Residential Receptors at the western terminus of W. Candlewood Avenue	1.45	10	No

[1] Refer to Appendix A.
[2] The reported annual pollutant concentration is at the closest maximally exposed individual resident (MEIR) to the Project site.

As described above, PM_{10} exhaust construction emissions over the entire construction period were used in AERMOD to approximate construction DPM emissions. Risk levels were calculated based on the California Office of Environmental Health Hazard Assessment (OEHHA) guidance document, Air Toxics Hot Spots Program Risk Assessment Guidelines (February 2015).

5.2 Non-Carcinogenic Hazard

The significance thresholds for TAC exposure also require an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. RELs are designed to protect sensitive individuals within the population.

Chronic non-carcinogenic impacts are shown in Table 5: Chronic Hazard Assessment. A chronic and acute hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the chronic exposure by the reference exposure level. The chronic hazard was calculated based on the highest annual average concentration at the maximally exposed individual receptor and the acute hazard is based on the 1-hour concentration. The highest maximum chronic and acute hazard index associated with unmitigated DPM emissions from the Project would be 0.0014 and 0.17, respectively. Therefore, non-carcinogenic hazards are calculated to be within acceptable limits and a less than significant impact would occur. Impacts would be less than significant.

Table 4: Chronic Hazard Assessment				
Emissions Sources	**Annual Concentration ($\mu g/m^3$) [1, 2]**	**Chronic Hazard**	**1-Hour Concentration ($\mu g/m^3$) [1, 2]**	**Acute Hazard**
Construction	0.007	0.0014	0.413	0.17
Operations	0.0005	0.0001	0.193	0.08
SCAQMD Threshold	*N/A*	*1.0*	*N/A*	*1.0*
Threshold Exceeded?	**N/A**	**No**	**N/A**	**No**

[1] Refer to Appendix A.
[2] The reported pollutant concentration is at the closest receptor (maximally exposed individual receptor).

5.3 Conclusion

As described above, impacts related to cancer risk would be less than significant. Additionally, non-carcinogenic hazards are calculated to be within acceptable limits. It should be noted that the impacts assess the Project's incremental contribution to health risk impacts, consistent with the SCAQMD guidance and methodology. The SCAQMD has not established separate cumulative thresholds and does not require combining impacts from cumulative projects. The SCAQMD considers projects that do not

exceed the project-specific thresholds to generally not be cumulatively significant.[9] Therefore, impacts related to health risk from the Project would be less than significant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

[9] South Coast Air Quality Management District, *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution*, August 2003.

6 REFERENCES

1. California Air Pollution Control Officers Association, *Health Risk Assessment for Proposed Land Use Projects*, July 2009.
2. California Air Resources Board, *EMFAC 2021 Web Database*, www.arb.ca.gov/emfac, accessed May 2022.
3. California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, October 2000.
4. California Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Risk Assessment Guidelines*, August 2003.
5. California Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Risk Assessment Guidance Manual for Preparation of Health Risk Assessments*, February 2015.
6. California Office of Environmental Health Hazard Assessment*, CalEnviroScreen 4.0 Results (October 2021 Update)*, https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40, accessed May 2022.
7. Health Effects Institute, *Advanced Collaborative Emissions Study (ACES): Lifetime Cancer and Non-Cancer Assessment in Rats Exposed to New-Technology Diesel Exhaust*, January 2015.
8. HPA Architecture, *Conceptual Site Plan – Locust Avenue and Lowell Street*, April 5, 2022.
9. *Thrifty Rialto Warehouse – Traffic Scoping Agreement*, May 11, 2022.
10. Lakes Environmental, *AERMOD View Gaussian Plume Air Dispersion Model*, Version 10.2.1.
11. Ralph Propper, et al., *Ambient and Emission Trends of Toxic Air Contaminants in California*, Environmental Science and Technology, September 2015.
12. South Coast Air Quality Management District, *Air Toxics Control Plan for the Next Ten Years*, March 2000.
13. South Coast Air Quality Management District, Addendum to the *Air Toxics Control Plan*, March 2004.
14. South Coast Air Quality Management District, *SCAQMD Meteorological Data for AERMOD,* http://www.aqmd.gov/home/air-quality/meteorological-data, accessed May 2022.
15. South Coast Air Quality Management District, *Multiple Air Toxics Exposure Study (MATES V)*, August 2021.
16. South Coast Air Quality Management District, *SCAQMD Modeling Guidance for AERMOD*, http://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance, accessed March 2022.
17. South Coast Air Quality Management District, *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution*, August 2003.
18. United States Environmental Protection Agency, *Exposure Factors Handbook: 2011 Edition*, September 2011.
19. United States Environmental Protection Agency (U.S. EPA), *Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*, Final Rule. 40 Code of Federal Regulations, Parts 69, 80, and 86. January 18, 2001.

Appendix A

Modeling Data

Construction

PM_{10} Exhaust On-Site

	Unmitigated			Mitigated		
Year	**Tons/Year**	**g/s**	**Weighted g/s**	**Tons/Year**	**g/s**	**Weighted g/s**
2022	2.53E-02	0.018497	0.005895044	2.53E-02	0.018497	0.005711976
2023	5.46E-02	0.010293		4.98E-02	0.009399	

	2022	**2023**	**Total**
Const Duration (Days):	43	167	210

	Trips		Miles		Weighted
	Vendor	**Hauling**	**Vendor**	**Hauling**	**Trip length**
2022	1	1614	6.9	20	19.99
2023	34	0	6.9	20	6.90

PM_{10} Exhaust Off-Site

	Unmitigated				Mitigated			
	Tons/Year	**g/s**	**g/s per mile**	**Weighted g/s**	**Tons/Year**	**g/s**	**g/s per mile**	**Weighted g/s**
2022	1.31E-03	0.000960	4.80068E-05	2.24E-05	1.31E-03	0.000960	4.80068E-05	2.24E-05
2023	5.80E-04	0.000109	1.5855E-05		5.80E-04	0.000109	1.5855E-05	

Construction Route		**Length (meters)**	**Length (Miles)**	**Emissions (g/sec per mile)**	**Unmitigated Emission Rate (g/sec)**	**Mitigated Emission Rate (g/sec)**
SLINE2	Locust Avenue	1029.6	0.64	2.24E-05	1.44E-05	1.44E-05

On-Site Construction PM_{10} Exhaust (tons/yr)

Year	**Phase**	**Unitigated**	**Mitigated**
2022	Demo	1.24E-02	1.24E-02
2022	Site Prep	4.30E-03	4.30E-03
2022	Grading	6.12E-03	6.12E-03
2022	Building Constru	2.43E-03	2.43E-03
	Total 2022	2.53E-02	2.53E-02
2023	Building Constru	4.55E-02	4.55E-02
2023	Paving	3.92E-03	3.92E-03
2023	A Coating	5.15E-03	4.10E-04
	Total 2023	5.46E-02	4.98E-02

Off-Site Construction PM_{10} Exhaust (tons/yr)

Year	**Phase**	**Unitigated**	**Mitigated**
2022	Demo	3.20E-04	3.20E-04
2022	Site Prep	0.00E+00	0.00E+00
2022	Grading	9.30E-04	9.30E-04
2022	Building Construc	6.00E-05	6.00E-05
	Total 2022	1.31E-03	1.31E-03
2023	Building Construc	5.60E-04	5.60E-04
2023	Paving	1.00E-05	1.00E-05
2023	A Coating	1.00E-05	1.00E-05
	Total 2023	5.80E-04	5.80E-04

Opeational Emissions Rates

Truck Route Emissions	Speed (mph)	Trips (veh/day)	Emission Factor (g/mi)	Length (meters)	Length (mi/veh)	Emissions (g/day)	Emission Rate (g/sec)
Locust Avenue	45	68	0.01043	1037	0.64	4.57E-01	5.29E-06
On-Site	15	68	0.01118	119.8	0.07	5.66E-02	6.55E-07

Loading Dock Idling	Speed (mph)	Trips (veh/day)	Emission Factor (g/hr)	Duration (hr/veh)	Emissions (g/day)	Emission Rate (g/sec)
Loading Dock	Idle	34	0.001947436	0.25	1.66E-02	1.92E-07

Note: Project does not include cold storage.

Source: EMFAC2021 (v1.0.2) Emission Rates		Project Mix	Idle (g/trip)	15 mph (g/mi)	45 mph (g/mi)
Region Type: Sub-Area	HHDT	0.71	0.002176877	0.008792873	0.012003243
Region: San Bernardino (SC)	LHDT2	0.01	0.001280451	0.033971591	0.013343322
Calendar Year: 2024	MHDT	0.28	0.001402899	0.016016486	0.006298676
Season: Annual	Weighted Rates		0.001947436	0.011181511	0.010429027

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for CVMT and EVMT, g/mile for RUNEX, PMBW and PMTW, mph for Speed, kWh/mile for Energy Consumption, gallon/mile for Fuel Consump

Region	Calenc	Vehicle	Model Yea	Speed	Fuel	Population	Total VMT	Trips	PM10_IDLEX	
San Bernardino (SC)	2024	HHDT	Aggregate	Aggreg	Gasolin	5.565987525	200.7100937	111.3642784	0	0
San Bernardino (SC)	2024	HHDT	Aggregate	Aggreg	Diesel	14231.95658	1766161.303	214453.6698	0.033230689	472.9377237
San Bernardino (SC)	2024	HHDT	Aggregate	Aggreg	Electrici	48.62871821	4853.771805	623.9730499	0	0
San Bernardino (SC)	2024	HHDT	Aggregate	Aggreg	Natural	2469.470738	160346.0479	14202.53174	0.010698415	26.41942156
San Bernardino (SC)	2024	LHDT2	Aggregate	Aggreg	Gasolin	2883.702401	102543.2335	42962.86906	0	0
San Bernardino (SC)	2024	LHDT2	Aggregate	Aggreg	Diesel	4825.532255	186665.6444	60699.12524	0.027554577	132.9654999
San Bernardino (SC)	2024	LHDT2	Aggregate	Aggreg	Electrici	13.65084178	961.9374735	180.6957961	0	0
San Bernardino (SC)	2024	MHDT	Aggregate	Aggreg	Gasolin	1460.602089	78395.7093	29223.7266	0	0
San Bernardino (SC)	2024	MHDT	Aggregate	Aggreg	Diesel	14946.4736	650565.6856	183244.348	0.019924612	297.8026823
San Bernardino (SC)	2024	MHDT	Aggregate	Aggreg	Electrici	46.13645649	2344.169726	591.8184755	0	0
San Bernardino (SC)	2024	MHDT	Aggregate	Aggreg	Natural	195.6757264	9502.554663	1810.47792	0.018595911	3.638768311

Region	Calenc	Vehicle	Model Yea	Speed	Fuel	Total VMT	PM10_RUNEX	
San Bernardino (SC)	2024	HHDT	Aggregate	15	Gasolin	0.13382381	0.010304669	0.00137901
San Bernardino (SC)	2024	HHDT	Aggregate	15	Diesel	745.720957	0.009344453	6.968354289
San Bernardino (SC)	2024	HHDT	Aggregate	15	Electrici	2.141926262	0	0
San Bernardino (SC)	2024	HHDT	Aggregate	15	Natural	95.43676874	0.004678177	0.446470051
San Bernardino (SC)	2024	LHDT2	Aggregate	15	Gasolin	125.4486088	0.001984008	0.248891032
San Bernardino (SC)	2024	LHDT2	Aggregate	15	Diesel	147.2675212	0.061422367	9.045519676
San Bernardino (SC)	2024	LHDT2	Aggregate	15	Electrici	0.877495106	0	0
San Bernardino (SC)	2024	MHDT	Aggregate	15	Gasolin	231.3375275	0.002921026	0.675742984
San Bernardino (SC)	2024	MHDT	Aggregate	15	Diesel	1973.800575	0.017785807	35.10563574
San Bernardino (SC)	2024	MHDT	Aggregate	15	Electrici	6.968659988	0	0
San Bernardino (SC)	2024	MHDT	Aggregate	15	Natural	26.17126438	0.002597113	0.067969742

Region	Calenc	Vehicle	Model Yea	Speed	Fuel	Total VMT	PM10_RUNEX	
San Bernardino (SC)	2024	HHDT	Aggregate	45	Gasolin	13.29975927	0.003553592	0.047261921
San Bernardino (SC)	2024	HHDT	Aggregate	45	Diesel	83750.43514	0.01324642	1109.393444
San Bernardino (SC)	2024	HHDT	Aggregate	45	Electrici	234.2654523	0	0
San Bernardino (SC)	2024	HHDT	Aggregate	45	Natural	9797.572547	0.001674942	16.41036418
San Bernardino (SC)	2024	LHDT2	Aggregate	45	Gasolin	8292.72837	0.000770831	6.392295186
San Bernardino (SC)	2024	LHDT2	Aggregate	45	Diesel	12344.41842	0.021862375	269.8783057
San Bernardino (SC)	2024	LHDT2	Aggregate	45	Electrici	67.63742244	0	0
San Bernardino (SC)	2024	MHDT	Aggregate	45	Gasolin	6773.018387	0.000777359	5.265068562
San Bernardino (SC)	2024	MHDT	Aggregate	45	Diesel	58634.53238	0.007037166	412.6209427
San Bernardino (SC)	2024	MHDT	Aggregate	45	Electrici	207.6788674	0	0
San Bernardino (SC)	2024	MHDT	Aggregate	45	Natural	813.471443	0.000647653	0.526847487

Emergency Backup Generator Emissions

	Fuel Type	Quantity	HP	LF	Hours/Year per Unit	Hours per Day	HP-hr per day	Total hp-hr per year
Standard Generator	Diesel	1	750	0.74	50	1	750	37,500

	PM
Emissions Rates (g/hp-hr)	0.15
Pounds/Day	0.25
Tons/Year	0.01

Source: Emissions rates from CalEEMod Guide Appenix D, Table 12.1

tons	0.01	
grams	5.63E+03	
hours/year	50	
seconds/year	180000	
g/s	0.03	(each generator (point source))

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 10.2.1
** Lakes Environmental Software Inc.
** Date: 5/23/2022
** File: C:\Lakes\AERMOD View\Rialto Locust_Const\Rialto Locust_Const.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE Rialto Locust - Construction
   MODELOPT DFAULT CONC
   AVERTIME 1 PERIOD
   URBANOPT 2035210
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL "Rialto Locust_Const.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC On-Site
** PREFIX
** Length of Side = 9.20
** Configuration = Adjacent
** Emission Rate = 0.00589
** Vertical Dimension = 6.12
** SZINIT = 2.85
** Nodes = 18
** 462196.015, 3779139.882, 496.12, 0.00, 4.28
** 462194.547, 3779255.507, 498.31, 0.00, 4.28
** 462180.221, 3779255.248, 498.34, 0.00, 4.28
** 462181.119, 3779139.178, 496.16, 0.00, 4.28
```

```
** 462162.553, 3779139.521, 496.55, 0.00, 4.28
** 462163.265, 3779252.834, 498.93, 0.00, 4.28
** 462144.739, 3779251.794, 499.36, 0.00, 4.28
** 462145.413, 3779139.915, 496.76, 0.00, 4.28
** 462128.928, 3779140.038, 496.74, 0.00, 4.28
** 462130.961, 3779251.059, 499.34, 0.00, 4.28
** 462111.241, 3779251.430, 499.66, 0.00, 4.28
** 462111.822, 3779141.584, 496.95, 0.00, 4.28
** 462093.583, 3779140.735, 497.03, 0.00, 4.28
** 462094.786, 3779250.307, 499.91, 0.00, 4.28
** 462079.678, 3779250.174, 499.91, 0.00, 4.28
** 462078.973, 3779142.801, 497.12, 0.00, 4.28
** 462061.838, 3779142.070, 497.51, 0.00, 4.28
** 462062.990, 3779254.691, 500.16, 0.00, 4.28
** ----------------------------------------------------------------
   LOCATION L0008113     VOLUME   462195.957 3779144.482 496.33
   LOCATION L0008114     VOLUME   462195.840 3779153.681 496.62
   LOCATION L0008115     VOLUME   462195.723 3779162.880 496.80
   LOCATION L0008116     VOLUME   462195.607 3779172.080 496.94
   LOCATION L0008117     VOLUME   462195.490 3779181.279 497.08
   LOCATION L0008118     VOLUME   462195.373 3779190.478 497.21
   LOCATION L0008119     VOLUME   462195.256 3779199.677 497.32
   LOCATION L0008120     VOLUME   462195.139 3779208.877 497.43
   LOCATION L0008121     VOLUME   462195.023 3779218.076 497.54
   LOCATION L0008122     VOLUME   462194.906 3779227.275 497.76
   LOCATION L0008123     VOLUME   462194.789 3779236.475 497.97
   LOCATION L0008124     VOLUME   462194.672 3779245.674 498.18
   LOCATION L0008125     VOLUME   462194.555 3779254.873 498.34
   LOCATION L0008126     VOLUME   462185.983 3779255.352 498.54
   LOCATION L0008127     VOLUME   462180.247 3779251.811 498.64
   LOCATION L0008128     VOLUME   462180.319 3779242.612 498.45
   LOCATION L0008129     VOLUME   462180.390 3779233.412 498.22
   LOCATION L0008130     VOLUME   462180.461 3779224.212 498.00
   LOCATION L0008131     VOLUME   462180.532 3779215.013 497.81
   LOCATION L0008132     VOLUME   462180.603 3779205.813 497.72
   LOCATION L0008133     VOLUME   462180.674 3779196.613 497.62
   LOCATION L0008134     VOLUME   462180.746 3779187.413 497.52
   LOCATION L0008135     VOLUME   462180.817 3779178.214 497.39
   LOCATION L0008136     VOLUME   462180.888 3779169.014 497.25
   LOCATION L0008137     VOLUME   462180.959 3779159.814 497.12
   LOCATION L0008138     VOLUME   462181.030 3779150.614 496.86
   LOCATION L0008139     VOLUME   462181.101 3779141.415 496.54
   LOCATION L0008140     VOLUME   462174.156 3779139.307 496.58
   LOCATION L0008141     VOLUME   462164.958 3779139.477 496.73
   LOCATION L0008142     VOLUME   462162.596 3779146.316 497.01
   LOCATION L0008143     VOLUME   462162.654 3779155.516 497.36
   LOCATION L0008144     VOLUME   462162.712 3779164.715 497.54
   LOCATION L0008145     VOLUME   462162.769 3779173.915 497.68
   LOCATION L0008146     VOLUME   462162.827 3779183.115 497.83
   LOCATION L0008147     VOLUME   462162.885 3779192.315 497.95
```

```
LOCATION L0008148     VOLUME   462162.942 3779201.515 498.04
LOCATION L0008149     VOLUME   462163.000 3779210.714 498.14
LOCATION L0008150     VOLUME   462163.058 3779219.914 498.26
LOCATION L0008151     VOLUME   462163.116 3779229.114 498.49
LOCATION L0008152     VOLUME   462163.173 3779238.314 498.73
LOCATION L0008153     VOLUME   462163.231 3779247.514 498.96
LOCATION L0008154     VOLUME   462159.391 3779252.616 499.09
LOCATION L0008155     VOLUME   462150.205 3779252.101 499.24
LOCATION L0008156     VOLUME   462144.761 3779248.069 499.29
LOCATION L0008157     VOLUME   462144.817 3779238.869 499.07
LOCATION L0008158     VOLUME   462144.872 3779229.670 498.85
LOCATION L0008159     VOLUME   462144.928 3779220.470 498.63
LOCATION L0008160     VOLUME   462144.983 3779211.270 498.49
LOCATION L0008161     VOLUME   462145.039 3779202.070 498.38
LOCATION L0008162     VOLUME   462145.094 3779192.870 498.26
LOCATION L0008163     VOLUME   462145.149 3779183.670 498.11
LOCATION L0008164     VOLUME   462145.205 3779174.471 497.92
LOCATION L0008165     VOLUME   462145.260 3779165.271 497.72
LOCATION L0008166     VOLUME   462145.316 3779156.071 497.51
LOCATION L0008167     VOLUME   462145.371 3779146.871 497.16
LOCATION L0008168     VOLUME   462143.169 3779139.932 496.91
LOCATION L0008169     VOLUME   462133.969 3779140.000 496.95
LOCATION L0008170     VOLUME   462129.004 3779144.196 497.12
LOCATION L0008171     VOLUME   462129.173 3779153.394 497.46
LOCATION L0008172     VOLUME   462129.341 3779162.593 497.73
LOCATION L0008173     VOLUME   462129.510 3779171.791 497.97
LOCATION L0008174     VOLUME   462129.678 3779180.990 498.21
LOCATION L0008175     VOLUME   462129.846 3779190.188 498.42
LOCATION L0008176     VOLUME   462130.015 3779199.387 498.57
LOCATION L0008177     VOLUME   462130.183 3779208.585 498.71
LOCATION L0008178     VOLUME   462130.351 3779217.784 498.85
LOCATION L0008179     VOLUME   462130.520 3779226.982 499.03
LOCATION L0008180     VOLUME   462130.688 3779236.181 499.22
LOCATION L0008181     VOLUME   462130.857 3779245.379 499.41
LOCATION L0008182     VOLUME   462127.443 3779251.126 499.54
LOCATION L0008183     VOLUME   462118.244 3779251.298 499.65
LOCATION L0008184     VOLUME   462111.253 3779249.234 499.71
LOCATION L0008185     VOLUME   462111.301 3779240.035 499.55
LOCATION L0008186     VOLUME   462111.350 3779230.835 499.40
LOCATION L0008187     VOLUME   462111.399 3779221.635 499.24
LOCATION L0008188     VOLUME   462111.447 3779212.435 499.06
LOCATION L0008189     VOLUME   462111.496 3779203.235 498.87
LOCATION L0008190     VOLUME   462111.545 3779194.035 498.68
LOCATION L0008191     VOLUME   462111.593 3779184.835 498.47
LOCATION L0008192     VOLUME   462111.642 3779175.635 498.18
LOCATION L0008193     VOLUME   462111.691 3779166.436 497.90
LOCATION L0008194     VOLUME   462111.739 3779157.236 497.62
LOCATION L0008195     VOLUME   462111.788 3779148.036 497.30
LOCATION L0008196     VOLUME   462109.077 3779141.456 497.09
LOCATION L0008197     VOLUME   462099.887 3779141.028 497.11
```

```
   LOCATION L0008198     VOLUME   462093.615 3779143.624 497.22
   LOCATION L0008199     VOLUME   462093.716 3779152.823 497.51
   LOCATION L0008200     VOLUME   462093.817 3779162.023 497.81
   LOCATION L0008201     VOLUME   462093.918 3779171.222 498.11
   LOCATION L0008202     VOLUME   462094.019 3779180.422 498.41
   LOCATION L0008203     VOLUME   462094.120 3779189.621 498.69
   LOCATION L0008204     VOLUME   462094.221 3779198.821 498.92
   LOCATION L0008205     VOLUME   462094.322 3779208.020 499.15
   LOCATION L0008206     VOLUME   462094.422 3779217.220 499.38
   LOCATION L0008207     VOLUME   462094.523 3779226.419 499.53
   LOCATION L0008208     VOLUME   462094.624 3779235.618 499.67
   LOCATION L0008209     VOLUME   462094.725 3779244.818 499.80
   LOCATION L0008210     VOLUME   462091.075 3779250.274 499.92
   LOCATION L0008211     VOLUME   462081.876 3779250.194 500.00
   LOCATION L0008212     VOLUME   462079.632 3779243.172 499.93
   LOCATION L0008213     VOLUME   462079.572 3779233.972 499.79
   LOCATION L0008214     VOLUME   462079.511 3779224.773 499.66
   LOCATION L0008215     VOLUME   462079.451 3779215.573 499.50
   LOCATION L0008216     VOLUME   462079.390 3779206.373 499.28
   LOCATION L0008217     VOLUME   462079.330 3779197.173 499.05
   LOCATION L0008218     VOLUME   462079.270 3779187.973 498.82
   LOCATION L0008219     VOLUME   462079.209 3779178.774 498.54
   LOCATION L0008220     VOLUME   462079.149 3779169.574 498.25
   LOCATION L0008221     VOLUME   462079.088 3779160.374 497.96
   LOCATION L0008222     VOLUME   462079.028 3779151.174 497.66
   LOCATION L0008223     VOLUME   462078.147 3779142.766 497.40
   LOCATION L0008224     VOLUME   462068.955 3779142.374 497.54
   LOCATION L0008225     VOLUME   462061.859 3779144.146 497.72
   LOCATION L0008226     VOLUME   462061.953 3779153.346 498.05
   LOCATION L0008227     VOLUME   462062.048 3779162.545 498.34
   LOCATION L0008228     VOLUME   462062.142 3779171.745 498.60
   LOCATION L0008229     VOLUME   462062.236 3779180.944 498.86
   LOCATION L0008230     VOLUME   462062.330 3779190.144 499.11
   LOCATION L0008231     VOLUME   462062.424 3779199.343 499.32
   LOCATION L0008232     VOLUME   462062.518 3779208.543 499.52
   LOCATION L0008233     VOLUME   462062.612 3779217.742 499.73
   LOCATION L0008234     VOLUME   462062.706 3779226.942 499.87
   LOCATION L0008235     VOLUME   462062.800 3779236.141 500.00
   LOCATION L0008236     VOLUME   462062.895 3779245.341 500.14
   LOCATION L0008237     VOLUME   462062.989 3779254.540 500.25
** End of LINE VOLUME Source ID = SLINE1
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC Locust
** PREFIX
** Length of Side = 9.20
** Configuration = Adjacent
** Emission Rate = 1.44E-06
** Vertical Dimension = 6.12
```

```
** SZINIT = 2.85
** Nodes = 2
** 462220.685, 3779222.023, 497.09, 3.06, 4.28
** 462224.271, 3778192.477, 476.03, 3.06, 4.28
** ------------------------------------------------------------------
   LOCATION L0008001     VOLUME   462220.701 3779217.423 497.06
   LOCATION L0008002     VOLUME   462220.733 3779208.223 496.89
   LOCATION L0008003     VOLUME   462220.765 3779199.023 496.71
   LOCATION L0008004     VOLUME   462220.797 3779189.824 496.53
   LOCATION L0008005     VOLUME   462220.829 3779180.624 496.35
   LOCATION L0008006     VOLUME   462220.861 3779171.424 496.17
   LOCATION L0008007     VOLUME   462220.893 3779162.224 495.99
   LOCATION L0008008     VOLUME   462220.926 3779153.024 495.81
   LOCATION L0008009     VOLUME   462220.958 3779143.824 495.63
   LOCATION L0008010     VOLUME   462220.990 3779134.624 495.44
   LOCATION L0008011     VOLUME   462221.022 3779125.424 495.26
   LOCATION L0008012     VOLUME   462221.054 3779116.224 495.13
   LOCATION L0008013     VOLUME   462221.086 3779107.024 495.00
   LOCATION L0008014     VOLUME   462221.118 3779097.824 494.88
   LOCATION L0008015     VOLUME   462221.150 3779088.624 494.72
   LOCATION L0008016     VOLUME   462221.182 3779079.424 494.55
   LOCATION L0008017     VOLUME   462221.214 3779070.224 494.37
   LOCATION L0008018     VOLUME   462221.246 3779061.024 494.19
   LOCATION L0008019     VOLUME   462221.278 3779051.824 493.97
   LOCATION L0008020     VOLUME   462221.310 3779042.624 493.76
   LOCATION L0008021     VOLUME   462221.342 3779033.424 493.54
   LOCATION L0008022     VOLUME   462221.374 3779024.225 493.34
   LOCATION L0008023     VOLUME   462221.406 3779015.025 493.14
   LOCATION L0008024     VOLUME   462221.438 3779005.825 492.93
   LOCATION L0008025     VOLUME   462221.470 3778996.625 492.74
   LOCATION L0008026     VOLUME   462221.502 3778987.425 492.56
   LOCATION L0008027     VOLUME   462221.534 3778978.225 492.38
   LOCATION L0008028     VOLUME   462221.566 3778969.025 492.19
   LOCATION L0008029     VOLUME   462221.598 3778959.825 492.01
   LOCATION L0008030     VOLUME   462221.631 3778950.625 491.82
   LOCATION L0008031     VOLUME   462221.663 3778941.425 491.63
   LOCATION L0008032     VOLUME   462221.695 3778932.225 491.44
   LOCATION L0008033     VOLUME   462221.727 3778923.025 491.25
   LOCATION L0008034     VOLUME   462221.759 3778913.825 491.05
   LOCATION L0008035     VOLUME   462221.791 3778904.625 490.86
   LOCATION L0008036     VOLUME   462221.823 3778895.425 490.67
   LOCATION L0008037     VOLUME   462221.855 3778886.225 490.47
   LOCATION L0008038     VOLUME   462221.887 3778877.025 490.29
   LOCATION L0008039     VOLUME   462221.919 3778867.826 490.12
   LOCATION L0008040     VOLUME   462221.951 3778858.626 489.96
   LOCATION L0008041     VOLUME   462221.983 3778849.426 489.80
   LOCATION L0008042     VOLUME   462222.015 3778840.226 489.62
   LOCATION L0008043     VOLUME   462222.047 3778831.026 489.43
   LOCATION L0008044     VOLUME   462222.079 3778821.826 489.25
   LOCATION L0008045     VOLUME   462222.111 3778812.626 489.05
```

```
LOCATION L0008046     VOLUME   462222.143 3778803.426 488.82
LOCATION L0008047     VOLUME   462222.175 3778794.226 488.60
LOCATION L0008048     VOLUME   462222.207 3778785.026 488.37
LOCATION L0008049     VOLUME   462222.239 3778775.826 488.14
LOCATION L0008050     VOLUME   462222.271 3778766.626 487.90
LOCATION L0008051     VOLUME   462222.304 3778757.426 487.67
LOCATION L0008052     VOLUME   462222.336 3778748.226 487.46
LOCATION L0008053     VOLUME   462222.368 3778739.026 487.25
LOCATION L0008054     VOLUME   462222.400 3778729.826 487.05
LOCATION L0008055     VOLUME   462222.432 3778720.626 486.83
LOCATION L0008056     VOLUME   462222.464 3778711.426 486.61
LOCATION L0008057     VOLUME   462222.496 3778702.227 486.39
LOCATION L0008058     VOLUME   462222.528 3778693.027 486.16
LOCATION L0008059     VOLUME   462222.560 3778683.827 485.92
LOCATION L0008060     VOLUME   462222.592 3778674.627 485.67
LOCATION L0008061     VOLUME   462222.624 3778665.427 485.42
LOCATION L0008062     VOLUME   462222.656 3778656.227 485.17
LOCATION L0008063     VOLUME   462222.688 3778647.027 484.91
LOCATION L0008064     VOLUME   462222.720 3778637.827 484.65
LOCATION L0008065     VOLUME   462222.752 3778628.627 484.40
LOCATION L0008066     VOLUME   462222.784 3778619.427 484.18
LOCATION L0008067     VOLUME   462222.816 3778610.227 483.96
LOCATION L0008068     VOLUME   462222.848 3778601.027 483.74
LOCATION L0008069     VOLUME   462222.880 3778591.827 483.55
LOCATION L0008070     VOLUME   462222.912 3778582.627 483.36
LOCATION L0008071     VOLUME   462222.944 3778573.427 483.18
LOCATION L0008072     VOLUME   462222.976 3778564.227 483.02
LOCATION L0008073     VOLUME   462223.009 3778555.027 482.88
LOCATION L0008074     VOLUME   462223.041 3778545.827 482.73
LOCATION L0008075     VOLUME   462223.073 3778536.628 482.58
LOCATION L0008076     VOLUME   462223.105 3778527.428 482.43
LOCATION L0008077     VOLUME   462223.137 3778518.228 482.29
LOCATION L0008078     VOLUME   462223.169 3778509.028 482.14
LOCATION L0008079     VOLUME   462223.201 3778499.828 481.99
LOCATION L0008080     VOLUME   462223.233 3778490.628 481.84
LOCATION L0008081     VOLUME   462223.265 3778481.428 481.68
LOCATION L0008082     VOLUME   462223.297 3778472.228 481.52
LOCATION L0008083     VOLUME   462223.329 3778463.028 481.34
LOCATION L0008084     VOLUME   462223.361 3778453.828 481.17
LOCATION L0008085     VOLUME   462223.393 3778444.628 481.00
LOCATION L0008086     VOLUME   462223.425 3778435.428 480.84
LOCATION L0008087     VOLUME   462223.457 3778426.228 480.67
LOCATION L0008088     VOLUME   462223.489 3778417.028 480.51
LOCATION L0008089     VOLUME   462223.521 3778407.828 480.29
LOCATION L0008090     VOLUME   462223.553 3778398.628 480.07
LOCATION L0008091     VOLUME   462223.585 3778389.428 479.86
LOCATION L0008092     VOLUME   462223.617 3778380.228 479.68
LOCATION L0008093     VOLUME   462223.649 3778371.029 479.53
LOCATION L0008094     VOLUME   462223.682 3778361.829 479.38
LOCATION L0008095     VOLUME   462223.714 3778352.629 479.22
```

```
   LOCATION L0008096     VOLUME   462223.746 3778343.429 479.07
   LOCATION L0008097     VOLUME   462223.778 3778334.229 478.92
   LOCATION L0008098     VOLUME   462223.810 3778325.029 478.76
   LOCATION L0008099     VOLUME   462223.842 3778315.829 478.53
   LOCATION L0008100     VOLUME   462223.874 3778306.629 478.29
   LOCATION L0008101     VOLUME   462223.906 3778297.429 478.05
   LOCATION L0008102     VOLUME   462223.938 3778288.229 477.85
   LOCATION L0008103     VOLUME   462223.970 3778279.029 477.68
   LOCATION L0008104     VOLUME   462224.002 3778269.829 477.50
   LOCATION L0008105     VOLUME   462224.034 3778260.629 477.33
   LOCATION L0008106     VOLUME   462224.066 3778251.429 477.17
   LOCATION L0008107     VOLUME   462224.098 3778242.229 477.00
   LOCATION L0008108     VOLUME   462224.130 3778233.029 476.84
   LOCATION L0008109     VOLUME   462224.162 3778223.829 476.67
   LOCATION L0008110     VOLUME   462224.194 3778214.629 476.50
   LOCATION L0008111     VOLUME   462224.226 3778205.430 476.33
   LOCATION L0008112     VOLUME   462224.258 3778196.230 476.15
** End of LINE VOLUME Source ID = SLINE2
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0008113     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008114     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008115     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008116     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008117     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008118     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008119     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008120     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008121     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008122     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008123     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008124     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008125     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008126     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008127     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008128     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008129     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008130     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008131     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008132     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008133     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008134     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008135     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008136     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008137     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008138     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008139     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008140     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008141     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008142     0.00004712      0.00      4.28      2.85
```

```
SRCPARAM L0008143     0.00004712      0.00      4.28      2.85
SRCPARAM L0008144     0.00004712      0.00      4.28      2.85
SRCPARAM L0008145     0.00004712      0.00      4.28      2.85
SRCPARAM L0008146     0.00004712      0.00      4.28      2.85
SRCPARAM L0008147     0.00004712      0.00      4.28      2.85
SRCPARAM L0008148     0.00004712      0.00      4.28      2.85
SRCPARAM L0008149     0.00004712      0.00      4.28      2.85
SRCPARAM L0008150     0.00004712      0.00      4.28      2.85
SRCPARAM L0008151     0.00004712      0.00      4.28      2.85
SRCPARAM L0008152     0.00004712      0.00      4.28      2.85
SRCPARAM L0008153     0.00004712      0.00      4.28      2.85
SRCPARAM L0008154     0.00004712      0.00      4.28      2.85
SRCPARAM L0008155     0.00004712      0.00      4.28      2.85
SRCPARAM L0008156     0.00004712      0.00      4.28      2.85
SRCPARAM L0008157     0.00004712      0.00      4.28      2.85
SRCPARAM L0008158     0.00004712      0.00      4.28      2.85
SRCPARAM L0008159     0.00004712      0.00      4.28      2.85
SRCPARAM L0008160     0.00004712      0.00      4.28      2.85
SRCPARAM L0008161     0.00004712      0.00      4.28      2.85
SRCPARAM L0008162     0.00004712      0.00      4.28      2.85
SRCPARAM L0008163     0.00004712      0.00      4.28      2.85
SRCPARAM L0008164     0.00004712      0.00      4.28      2.85
SRCPARAM L0008165     0.00004712      0.00      4.28      2.85
SRCPARAM L0008166     0.00004712      0.00      4.28      2.85
SRCPARAM L0008167     0.00004712      0.00      4.28      2.85
SRCPARAM L0008168     0.00004712      0.00      4.28      2.85
SRCPARAM L0008169     0.00004712      0.00      4.28      2.85
SRCPARAM L0008170     0.00004712      0.00      4.28      2.85
SRCPARAM L0008171     0.00004712      0.00      4.28      2.85
SRCPARAM L0008172     0.00004712      0.00      4.28      2.85
SRCPARAM L0008173     0.00004712      0.00      4.28      2.85
SRCPARAM L0008174     0.00004712      0.00      4.28      2.85
SRCPARAM L0008175     0.00004712      0.00      4.28      2.85
SRCPARAM L0008176     0.00004712      0.00      4.28      2.85
SRCPARAM L0008177     0.00004712      0.00      4.28      2.85
SRCPARAM L0008178     0.00004712      0.00      4.28      2.85
SRCPARAM L0008179     0.00004712      0.00      4.28      2.85
SRCPARAM L0008180     0.00004712      0.00      4.28      2.85
SRCPARAM L0008181     0.00004712      0.00      4.28      2.85
SRCPARAM L0008182     0.00004712      0.00      4.28      2.85
SRCPARAM L0008183     0.00004712      0.00      4.28      2.85
SRCPARAM L0008184     0.00004712      0.00      4.28      2.85
SRCPARAM L0008185     0.00004712      0.00      4.28      2.85
SRCPARAM L0008186     0.00004712      0.00      4.28      2.85
SRCPARAM L0008187     0.00004712      0.00      4.28      2.85
SRCPARAM L0008188     0.00004712      0.00      4.28      2.85
SRCPARAM L0008189     0.00004712      0.00      4.28      2.85
SRCPARAM L0008190     0.00004712      0.00      4.28      2.85
SRCPARAM L0008191     0.00004712      0.00      4.28      2.85
SRCPARAM L0008192     0.00004712      0.00      4.28      2.85
```

```
   SRCPARAM L0008193     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008194     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008195     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008196     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008197     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008198     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008199     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008200     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008201     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008202     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008203     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008204     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008205     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008206     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008207     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008208     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008209     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008210     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008211     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008212     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008213     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008214     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008215     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008216     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008217     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008218     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008219     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008220     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008221     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008222     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008223     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008224     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008225     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008226     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008227     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008228     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008229     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008230     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008231     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008232     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008233     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008234     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008235     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008236     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008237     0.00004712      0.00      4.28      2.85
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0008001     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008002     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008003     0.00000001286      3.06      4.28      2.85
```

```
SRCPARAM L0008004     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008005     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008006     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008007     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008008     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008009     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008010     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008011     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008012     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008013     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008014     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008015     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008016     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008017     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008018     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008019     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008020     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008021     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008022     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008023     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008024     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008025     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008026     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008027     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008028     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008029     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008030     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008031     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008032     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008033     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008034     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008035     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008036     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008037     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008038     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008039     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008040     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008041     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008042     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008043     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008044     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008045     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008046     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008047     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008048     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008049     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008050     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008051     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008052     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008053     0.00000001286      3.06      4.28      2.85
```

```
SRCPARAM L0008054     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008055     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008056     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008057     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008058     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008059     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008060     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008061     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008062     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008063     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008064     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008065     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008066     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008067     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008068     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008069     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008070     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008071     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008072     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008073     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008074     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008075     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008076     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008077     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008078     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008079     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008080     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008081     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008082     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008083     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008084     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008085     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008086     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008087     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008088     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008089     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008090     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008091     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008092     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008093     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008094     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008095     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008096     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008097     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008098     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008099     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008100     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008101     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008102     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008103     0.00000001286      3.06      4.28      2.85
```

```
   SRCPARAM L0008104     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008105     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008106     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008107     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008108     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008109     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008110     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008111     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008112     0.00000001286      3.06      4.28      2.85
** ------------------------------------------------------------------
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 3"
** WeekDays:
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008113     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008113     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008114     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008115     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008116     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008117     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008118     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008119     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008120     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008121     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008121     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
```

```
EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008122     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008123     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008124     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008125     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008126     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008127     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008128     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008129     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008130     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008131     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008132     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008133     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008133     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008134     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008134     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008135     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008136     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008137     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008138     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008139     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008140     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008141     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008142     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008143     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008144     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008145     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008146     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008146     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
```

```
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008147     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008148     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008149     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008150     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008151     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008152     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008153     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008154     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008155     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008156     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008157     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008158     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008158     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008159     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008159     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008160     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008161     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008162     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008163     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008164     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008165     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008166     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008167     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008168     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008169     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008170     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008171     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008171     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
```

```
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008172     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008173     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008174     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008175     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008176     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008177     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008178     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008179     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008180     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008181     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008182     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008183     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008183     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008184     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008184     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008185     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008186     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008187     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008188     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008189     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008190     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008191     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008192     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008193     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008194     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008195     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008196     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008196     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
```

```
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008197     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008198     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008199     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008200     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008201     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008202     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008203     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008204     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008205     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008206     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008207     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008208     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008208     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008209     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008209     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008210     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008211     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008212     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008213     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008214     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008215     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008216     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008217     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008218     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008219     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008220     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008221     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008221     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
```

```
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008222     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008223     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008224     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008225     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008226     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008227     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008228     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008229     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008230     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008231     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008232     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008233     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008233     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT L0008234     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008234     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008235     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008236     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008237     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008001     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008001     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008002     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008003     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008004     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008005     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008006     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008007     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008008     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008009     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008009     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008010     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008011     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008012     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008013     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008014     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008015     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008016     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008017     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008018     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008019     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008020     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008021     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
```

```
EMISFACT L0008021     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008022     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008023     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008024     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008025     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008026     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008027     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008028     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008029     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008030     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008031     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008032     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008033     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008034     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008034     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008035     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008036     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008037     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008038     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008039     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008040     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008041     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008042     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008043     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008044     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008045     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008046     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
```

```
EMISFACT L0008046     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008047     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008048     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008049     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008050     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008051     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008052     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008053     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008054     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008055     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008056     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008057     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008058     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008059     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008059     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008060     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008061     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008062     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008063     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008064     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008065     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008066     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008067     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008068     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008069     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008070     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008071     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
```

```
EMISFACT L0008071     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008072     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008073     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008074     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008075     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008076     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008077     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008078     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008079     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008080     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008081     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008082     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008083     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008084     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008084     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008085     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008086     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008087     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008088     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008089     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008090     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008091     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008092     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008093     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008094     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008095     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008096     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
```

```
EMISFACT L0008096     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008097     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008098     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008099     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008100     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008101     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008102     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008103     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008104     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008105     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008106     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008107     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008108     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008109     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008109     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008110     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008111     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008112     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED "Rialto Locust_Const.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE FONT_V9_ADJU\FONT_v9.SFC
   PROFFILE FONT_V9_ADJU\FONT_v9.PFL
   SURFDATA 3102 2011
   UAIRDATA 3190 2011
   SITEDATA 99999 2011
   PROFBASE 367.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST "RIALTO LOCUST_CONST.AD\01H1GALL.PLT" 31
```

```
   PLOTFILE PERIOD ALL "RIALTO LOCUST_CONST.AD\PE00GALL.PLT" 32
   SUMMFILE "Rialto Locust_Const.sum"
OU FINISHED
**
**************************************
** Project Parameters
**************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    World Geodetic System 1984
** DTMRGN   Global Definition
** UNITS    m
** ZONE     11
** ZONEINX  0
**
```

```
** Lakes Environmental AERMOD MPI
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 10.2.1
** Lakes Environmental Software Inc.
** Date: 5/23/2022
** File: C:\Lakes\AERMOD View\Rialto Locust_Const\Rialto Locust_Const.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE Rialto Locust - Construction
   MODELOPT DFAULT CONC
   AVERTIME 1 PERIOD
   URBANOPT 2035210
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL "Rialto Locust_Const.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC On-Site
** PREFIX
** Length of Side = 9.20
** Configuration = Adjacent
** Emission Rate = 0.00589
** Vertical Dimension = 6.12
** SZINIT = 2.85
** Nodes = 18
** 462196.015, 3779139.882, 496.12, 0.00, 4.28
** 462194.547, 3779255.507, 498.31, 0.00, 4.28
** 462180.221, 3779255.248, 498.34, 0.00, 4.28
```

```
** 462181.119, 3779139.178, 496.16, 0.00, 4.28
** 462162.553, 3779139.521, 496.55, 0.00, 4.28
** 462163.265, 3779252.834, 498.93, 0.00, 4.28
** 462144.739, 3779251.794, 499.36, 0.00, 4.28
** 462145.413, 3779139.915, 496.76, 0.00, 4.28
** 462128.928, 3779140.038, 496.74, 0.00, 4.28
** 462130.961, 3779251.059, 499.34, 0.00, 4.28
** 462111.241, 3779251.430, 499.66, 0.00, 4.28
** 462111.822, 3779141.584, 496.95, 0.00, 4.28
** 462093.583, 3779140.735, 497.03, 0.00, 4.28
** 462094.786, 3779250.307, 499.91, 0.00, 4.28
** 462079.678, 3779250.174, 499.91, 0.00, 4.28
** 462078.973, 3779142.801, 497.12, 0.00, 4.28
** 462061.838, 3779142.070, 497.51, 0.00, 4.28
** 462062.990, 3779254.691, 500.16, 0.00, 4.28
** ----------------------------------------------------------------------
   LOCATION L0008113     VOLUME   462195.957 3779144.482 496.33
   LOCATION L0008114     VOLUME   462195.840 3779153.681 496.62
   LOCATION L0008115     VOLUME   462195.723 3779162.880 496.80
   LOCATION L0008116     VOLUME   462195.607 3779172.080 496.94
   LOCATION L0008117     VOLUME   462195.490 3779181.279 497.08
   LOCATION L0008118     VOLUME   462195.373 3779190.478 497.21
   LOCATION L0008119     VOLUME   462195.256 3779199.677 497.32
   LOCATION L0008120     VOLUME   462195.139 3779208.877 497.43
   LOCATION L0008121     VOLUME   462195.023 3779218.076 497.54
   LOCATION L0008122     VOLUME   462194.906 3779227.275 497.76
   LOCATION L0008123     VOLUME   462194.789 3779236.475 497.97
   LOCATION L0008124     VOLUME   462194.672 3779245.674 498.18
   LOCATION L0008125     VOLUME   462194.555 3779254.873 498.34
   LOCATION L0008126     VOLUME   462185.983 3779255.352 498.54
   LOCATION L0008127     VOLUME   462180.247 3779251.811 498.64
   LOCATION L0008128     VOLUME   462180.319 3779242.612 498.45
   LOCATION L0008129     VOLUME   462180.390 3779233.412 498.22
   LOCATION L0008130     VOLUME   462180.461 3779224.212 498.00
   LOCATION L0008131     VOLUME   462180.532 3779215.013 497.81
   LOCATION L0008132     VOLUME   462180.603 3779205.813 497.72
   LOCATION L0008133     VOLUME   462180.674 3779196.613 497.62
   LOCATION L0008134     VOLUME   462180.746 3779187.413 497.52
   LOCATION L0008135     VOLUME   462180.817 3779178.214 497.39
   LOCATION L0008136     VOLUME   462180.888 3779169.014 497.25
   LOCATION L0008137     VOLUME   462180.959 3779159.814 497.12
   LOCATION L0008138     VOLUME   462181.030 3779150.614 496.86
   LOCATION L0008139     VOLUME   462181.101 3779141.415 496.54
   LOCATION L0008140     VOLUME   462174.156 3779139.307 496.58
   LOCATION L0008141     VOLUME   462164.958 3779139.477 496.73
   LOCATION L0008142     VOLUME   462162.596 3779146.316 497.01
   LOCATION L0008143     VOLUME   462162.654 3779155.516 497.36
   LOCATION L0008144     VOLUME   462162.712 3779164.715 497.54
   LOCATION L0008145     VOLUME   462162.769 3779173.915 497.68
   LOCATION L0008146     VOLUME   462162.827 3779183.115 497.83
```

```
LOCATION L0008147     VOLUME   462162.885 3779192.315 497.95
LOCATION L0008148     VOLUME   462162.942 3779201.515 498.04
LOCATION L0008149     VOLUME   462163.000 3779210.714 498.14
LOCATION L0008150     VOLUME   462163.058 3779219.914 498.26
LOCATION L0008151     VOLUME   462163.116 3779229.114 498.49
LOCATION L0008152     VOLUME   462163.173 3779238.314 498.73
LOCATION L0008153     VOLUME   462163.231 3779247.514 498.96
LOCATION L0008154     VOLUME   462159.391 3779252.616 499.09
LOCATION L0008155     VOLUME   462150.205 3779252.101 499.24
LOCATION L0008156     VOLUME   462144.761 3779248.069 499.29
LOCATION L0008157     VOLUME   462144.817 3779238.869 499.07
LOCATION L0008158     VOLUME   462144.872 3779229.670 498.85
LOCATION L0008159     VOLUME   462144.928 3779220.470 498.63
LOCATION L0008160     VOLUME   462144.983 3779211.270 498.49
LOCATION L0008161     VOLUME   462145.039 3779202.070 498.38
LOCATION L0008162     VOLUME   462145.094 3779192.870 498.26
LOCATION L0008163     VOLUME   462145.149 3779183.670 498.11
LOCATION L0008164     VOLUME   462145.205 3779174.471 497.92
LOCATION L0008165     VOLUME   462145.260 3779165.271 497.72
LOCATION L0008166     VOLUME   462145.316 3779156.071 497.51
LOCATION L0008167     VOLUME   462145.371 3779146.871 497.16
LOCATION L0008168     VOLUME   462143.169 3779139.932 496.91
LOCATION L0008169     VOLUME   462133.969 3779140.000 496.95
LOCATION L0008170     VOLUME   462129.004 3779144.196 497.12
LOCATION L0008171     VOLUME   462129.173 3779153.394 497.46
LOCATION L0008172     VOLUME   462129.341 3779162.593 497.73
LOCATION L0008173     VOLUME   462129.510 3779171.791 497.97
LOCATION L0008174     VOLUME   462129.678 3779180.990 498.21
LOCATION L0008175     VOLUME   462129.846 3779190.188 498.42
LOCATION L0008176     VOLUME   462130.015 3779199.387 498.57
LOCATION L0008177     VOLUME   462130.183 3779208.585 498.71
LOCATION L0008178     VOLUME   462130.351 3779217.784 498.85
LOCATION L0008179     VOLUME   462130.520 3779226.982 499.03
LOCATION L0008180     VOLUME   462130.688 3779236.181 499.22
LOCATION L0008181     VOLUME   462130.857 3779245.379 499.41
LOCATION L0008182     VOLUME   462127.443 3779251.126 499.54
LOCATION L0008183     VOLUME   462118.244 3779251.298 499.65
LOCATION L0008184     VOLUME   462111.253 3779249.234 499.71
LOCATION L0008185     VOLUME   462111.301 3779240.035 499.55
LOCATION L0008186     VOLUME   462111.350 3779230.835 499.40
LOCATION L0008187     VOLUME   462111.399 3779221.635 499.24
LOCATION L0008188     VOLUME   462111.447 3779212.435 499.06
LOCATION L0008189     VOLUME   462111.496 3779203.235 498.87
LOCATION L0008190     VOLUME   462111.545 3779194.035 498.68
LOCATION L0008191     VOLUME   462111.593 3779184.835 498.47
LOCATION L0008192     VOLUME   462111.642 3779175.635 498.18
LOCATION L0008193     VOLUME   462111.691 3779166.436 497.90
LOCATION L0008194     VOLUME   462111.739 3779157.236 497.62
LOCATION L0008195     VOLUME   462111.788 3779148.036 497.30
LOCATION L0008196     VOLUME   462109.077 3779141.456 497.09
```

```
   LOCATION L0008197     VOLUME   462099.887 3779141.028 497.11
   LOCATION L0008198     VOLUME   462093.615 3779143.624 497.22
   LOCATION L0008199     VOLUME   462093.716 3779152.823 497.51
   LOCATION L0008200     VOLUME   462093.817 3779162.023 497.81
   LOCATION L0008201     VOLUME   462093.918 3779171.222 498.11
   LOCATION L0008202     VOLUME   462094.019 3779180.422 498.41
   LOCATION L0008203     VOLUME   462094.120 3779189.621 498.69
   LOCATION L0008204     VOLUME   462094.221 3779198.821 498.92
   LOCATION L0008205     VOLUME   462094.322 3779208.020 499.15
   LOCATION L0008206     VOLUME   462094.422 3779217.220 499.38
   LOCATION L0008207     VOLUME   462094.523 3779226.419 499.53
   LOCATION L0008208     VOLUME   462094.624 3779235.618 499.67
   LOCATION L0008209     VOLUME   462094.725 3779244.818 499.80
   LOCATION L0008210     VOLUME   462091.075 3779250.274 499.92
   LOCATION L0008211     VOLUME   462081.876 3779250.194 500.00
   LOCATION L0008212     VOLUME   462079.632 3779243.172 499.93
   LOCATION L0008213     VOLUME   462079.572 3779233.972 499.79
   LOCATION L0008214     VOLUME   462079.511 3779224.773 499.66
   LOCATION L0008215     VOLUME   462079.451 3779215.573 499.50
   LOCATION L0008216     VOLUME   462079.390 3779206.373 499.28
   LOCATION L0008217     VOLUME   462079.330 3779197.173 499.05
   LOCATION L0008218     VOLUME   462079.270 3779187.973 498.82
   LOCATION L0008219     VOLUME   462079.209 3779178.774 498.54
   LOCATION L0008220     VOLUME   462079.149 3779169.574 498.25
   LOCATION L0008221     VOLUME   462079.088 3779160.374 497.96
   LOCATION L0008222     VOLUME   462079.028 3779151.174 497.66
   LOCATION L0008223     VOLUME   462078.147 3779142.766 497.40
   LOCATION L0008224     VOLUME   462068.955 3779142.374 497.54
   LOCATION L0008225     VOLUME   462061.859 3779144.146 497.72
   LOCATION L0008226     VOLUME   462061.953 3779153.346 498.05
   LOCATION L0008227     VOLUME   462062.048 3779162.545 498.34
   LOCATION L0008228     VOLUME   462062.142 3779171.745 498.60
   LOCATION L0008229     VOLUME   462062.236 3779180.944 498.86
   LOCATION L0008230     VOLUME   462062.330 3779190.144 499.11
   LOCATION L0008231     VOLUME   462062.424 3779199.343 499.32
   LOCATION L0008232     VOLUME   462062.518 3779208.543 499.52
   LOCATION L0008233     VOLUME   462062.612 3779217.742 499.73
   LOCATION L0008234     VOLUME   462062.706 3779226.942 499.87
   LOCATION L0008235     VOLUME   462062.800 3779236.141 500.00
   LOCATION L0008236     VOLUME   462062.895 3779245.341 500.14
   LOCATION L0008237     VOLUME   462062.989 3779254.540 500.25
** End of LINE VOLUME Source ID = SLINE1
** ----------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC Locust
** PREFIX
** Length of Side = 9.20
** Configuration = Adjacent
** Emission Rate = 1.44E-06
```

```
** Vertical Dimension = 6.12
** SZINIT = 2.85
** Nodes = 2
** 462220.685, 3779222.023, 497.09, 3.06, 4.28
** 462224.271, 3778192.477, 476.03, 3.06, 4.28
** ------------------------------------------------------------------
   LOCATION L0008001     VOLUME   462220.701 3779217.423 497.06
   LOCATION L0008002     VOLUME   462220.733 3779208.223 496.89
   LOCATION L0008003     VOLUME   462220.765 3779199.023 496.71
   LOCATION L0008004     VOLUME   462220.797 3779189.824 496.53
   LOCATION L0008005     VOLUME   462220.829 3779180.624 496.35
   LOCATION L0008006     VOLUME   462220.861 3779171.424 496.17
   LOCATION L0008007     VOLUME   462220.893 3779162.224 495.99
   LOCATION L0008008     VOLUME   462220.926 3779153.024 495.81
   LOCATION L0008009     VOLUME   462220.958 3779143.824 495.63
   LOCATION L0008010     VOLUME   462220.990 3779134.624 495.44
   LOCATION L0008011     VOLUME   462221.022 3779125.424 495.26
   LOCATION L0008012     VOLUME   462221.054 3779116.224 495.13
   LOCATION L0008013     VOLUME   462221.086 3779107.024 495.00
   LOCATION L0008014     VOLUME   462221.118 3779097.824 494.88
   LOCATION L0008015     VOLUME   462221.150 3779088.624 494.72
   LOCATION L0008016     VOLUME   462221.182 3779079.424 494.55
   LOCATION L0008017     VOLUME   462221.214 3779070.224 494.37
   LOCATION L0008018     VOLUME   462221.246 3779061.024 494.19
   LOCATION L0008019     VOLUME   462221.278 3779051.824 493.97
   LOCATION L0008020     VOLUME   462221.310 3779042.624 493.76
   LOCATION L0008021     VOLUME   462221.342 3779033.424 493.54
   LOCATION L0008022     VOLUME   462221.374 3779024.225 493.34
   LOCATION L0008023     VOLUME   462221.406 3779015.025 493.14
   LOCATION L0008024     VOLUME   462221.438 3779005.825 492.93
   LOCATION L0008025     VOLUME   462221.470 3778996.625 492.74
   LOCATION L0008026     VOLUME   462221.502 3778987.425 492.56
   LOCATION L0008027     VOLUME   462221.534 3778978.225 492.38
   LOCATION L0008028     VOLUME   462221.566 3778969.025 492.19
   LOCATION L0008029     VOLUME   462221.598 3778959.825 492.01
   LOCATION L0008030     VOLUME   462221.631 3778950.625 491.82
   LOCATION L0008031     VOLUME   462221.663 3778941.425 491.63
   LOCATION L0008032     VOLUME   462221.695 3778932.225 491.44
   LOCATION L0008033     VOLUME   462221.727 3778923.025 491.25
   LOCATION L0008034     VOLUME   462221.759 3778913.825 491.05
   LOCATION L0008035     VOLUME   462221.791 3778904.625 490.86
   LOCATION L0008036     VOLUME   462221.823 3778895.425 490.67
   LOCATION L0008037     VOLUME   462221.855 3778886.225 490.47
   LOCATION L0008038     VOLUME   462221.887 3778877.025 490.29
   LOCATION L0008039     VOLUME   462221.919 3778867.826 490.12
   LOCATION L0008040     VOLUME   462221.951 3778858.626 489.96
   LOCATION L0008041     VOLUME   462221.983 3778849.426 489.80
   LOCATION L0008042     VOLUME   462222.015 3778840.226 489.62
   LOCATION L0008043     VOLUME   462222.047 3778831.026 489.43
   LOCATION L0008044     VOLUME   462222.079 3778821.826 489.25
```

```
LOCATION L0008045     VOLUME   462222.111 3778812.626 489.05
LOCATION L0008046     VOLUME   462222.143 3778803.426 488.82
LOCATION L0008047     VOLUME   462222.175 3778794.226 488.60
LOCATION L0008048     VOLUME   462222.207 3778785.026 488.37
LOCATION L0008049     VOLUME   462222.239 3778775.826 488.14
LOCATION L0008050     VOLUME   462222.271 3778766.626 487.90
LOCATION L0008051     VOLUME   462222.304 3778757.426 487.67
LOCATION L0008052     VOLUME   462222.336 3778748.226 487.46
LOCATION L0008053     VOLUME   462222.368 3778739.026 487.25
LOCATION L0008054     VOLUME   462222.400 3778729.826 487.05
LOCATION L0008055     VOLUME   462222.432 3778720.626 486.83
LOCATION L0008056     VOLUME   462222.464 3778711.426 486.61
LOCATION L0008057     VOLUME   462222.496 3778702.227 486.39
LOCATION L0008058     VOLUME   462222.528 3778693.027 486.16
LOCATION L0008059     VOLUME   462222.560 3778683.827 485.92
LOCATION L0008060     VOLUME   462222.592 3778674.627 485.67
LOCATION L0008061     VOLUME   462222.624 3778665.427 485.42
LOCATION L0008062     VOLUME   462222.656 3778656.227 485.17
LOCATION L0008063     VOLUME   462222.688 3778647.027 484.91
LOCATION L0008064     VOLUME   462222.720 3778637.827 484.65
LOCATION L0008065     VOLUME   462222.752 3778628.627 484.40
LOCATION L0008066     VOLUME   462222.784 3778619.427 484.18
LOCATION L0008067     VOLUME   462222.816 3778610.227 483.96
LOCATION L0008068     VOLUME   462222.848 3778601.027 483.74
LOCATION L0008069     VOLUME   462222.880 3778591.827 483.55
LOCATION L0008070     VOLUME   462222.912 3778582.627 483.36
LOCATION L0008071     VOLUME   462222.944 3778573.427 483.18
LOCATION L0008072     VOLUME   462222.976 3778564.227 483.02
LOCATION L0008073     VOLUME   462223.009 3778555.027 482.88
LOCATION L0008074     VOLUME   462223.041 3778545.827 482.73
LOCATION L0008075     VOLUME   462223.073 3778536.628 482.58
LOCATION L0008076     VOLUME   462223.105 3778527.428 482.43
LOCATION L0008077     VOLUME   462223.137 3778518.228 482.29
LOCATION L0008078     VOLUME   462223.169 3778509.028 482.14
LOCATION L0008079     VOLUME   462223.201 3778499.828 481.99
LOCATION L0008080     VOLUME   462223.233 3778490.628 481.84
LOCATION L0008081     VOLUME   462223.265 3778481.428 481.68
LOCATION L0008082     VOLUME   462223.297 3778472.228 481.52
LOCATION L0008083     VOLUME   462223.329 3778463.028 481.34
LOCATION L0008084     VOLUME   462223.361 3778453.828 481.17
LOCATION L0008085     VOLUME   462223.393 3778444.628 481.00
LOCATION L0008086     VOLUME   462223.425 3778435.428 480.84
LOCATION L0008087     VOLUME   462223.457 3778426.228 480.67
LOCATION L0008088     VOLUME   462223.489 3778417.028 480.51
LOCATION L0008089     VOLUME   462223.521 3778407.828 480.29
LOCATION L0008090     VOLUME   462223.553 3778398.628 480.07
LOCATION L0008091     VOLUME   462223.585 3778389.428 479.86
LOCATION L0008092     VOLUME   462223.617 3778380.228 479.68
LOCATION L0008093     VOLUME   462223.649 3778371.029 479.53
LOCATION L0008094     VOLUME   462223.682 3778361.829 479.38
```

```
   LOCATION L0008095     VOLUME   462223.714 3778352.629 479.22
   LOCATION L0008096     VOLUME   462223.746 3778343.429 479.07
   LOCATION L0008097     VOLUME   462223.778 3778334.229 478.92
   LOCATION L0008098     VOLUME   462223.810 3778325.029 478.76
   LOCATION L0008099     VOLUME   462223.842 3778315.829 478.53
   LOCATION L0008100     VOLUME   462223.874 3778306.629 478.29
   LOCATION L0008101     VOLUME   462223.906 3778297.429 478.05
   LOCATION L0008102     VOLUME   462223.938 3778288.229 477.85
   LOCATION L0008103     VOLUME   462223.970 3778279.029 477.68
   LOCATION L0008104     VOLUME   462224.002 3778269.829 477.50
   LOCATION L0008105     VOLUME   462224.034 3778260.629 477.33
   LOCATION L0008106     VOLUME   462224.066 3778251.429 477.17
   LOCATION L0008107     VOLUME   462224.098 3778242.229 477.00
   LOCATION L0008108     VOLUME   462224.130 3778233.029 476.84
   LOCATION L0008109     VOLUME   462224.162 3778223.829 476.67
   LOCATION L0008110     VOLUME   462224.194 3778214.629 476.50
   LOCATION L0008111     VOLUME   462224.226 3778205.430 476.33
   LOCATION L0008112     VOLUME   462224.258 3778196.230 476.15
** End of LINE VOLUME Source ID = SLINE2
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0008113     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008114     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008115     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008116     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008117     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008118     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008119     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008120     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008121     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008122     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008123     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008124     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008125     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008126     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008127     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008128     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008129     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008130     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008131     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008132     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008133     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008134     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008135     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008136     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008137     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008138     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008139     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008140     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008141     0.00004712      0.00      4.28      2.85
```

```
SRCPARAM L0008142     0.00004712      0.00      4.28      2.85
SRCPARAM L0008143     0.00004712      0.00      4.28      2.85
SRCPARAM L0008144     0.00004712      0.00      4.28      2.85
SRCPARAM L0008145     0.00004712      0.00      4.28      2.85
SRCPARAM L0008146     0.00004712      0.00      4.28      2.85
SRCPARAM L0008147     0.00004712      0.00      4.28      2.85
SRCPARAM L0008148     0.00004712      0.00      4.28      2.85
SRCPARAM L0008149     0.00004712      0.00      4.28      2.85
SRCPARAM L0008150     0.00004712      0.00      4.28      2.85
SRCPARAM L0008151     0.00004712      0.00      4.28      2.85
SRCPARAM L0008152     0.00004712      0.00      4.28      2.85
SRCPARAM L0008153     0.00004712      0.00      4.28      2.85
SRCPARAM L0008154     0.00004712      0.00      4.28      2.85
SRCPARAM L0008155     0.00004712      0.00      4.28      2.85
SRCPARAM L0008156     0.00004712      0.00      4.28      2.85
SRCPARAM L0008157     0.00004712      0.00      4.28      2.85
SRCPARAM L0008158     0.00004712      0.00      4.28      2.85
SRCPARAM L0008159     0.00004712      0.00      4.28      2.85
SRCPARAM L0008160     0.00004712      0.00      4.28      2.85
SRCPARAM L0008161     0.00004712      0.00      4.28      2.85
SRCPARAM L0008162     0.00004712      0.00      4.28      2.85
SRCPARAM L0008163     0.00004712      0.00      4.28      2.85
SRCPARAM L0008164     0.00004712      0.00      4.28      2.85
SRCPARAM L0008165     0.00004712      0.00      4.28      2.85
SRCPARAM L0008166     0.00004712      0.00      4.28      2.85
SRCPARAM L0008167     0.00004712      0.00      4.28      2.85
SRCPARAM L0008168     0.00004712      0.00      4.28      2.85
SRCPARAM L0008169     0.00004712      0.00      4.28      2.85
SRCPARAM L0008170     0.00004712      0.00      4.28      2.85
SRCPARAM L0008171     0.00004712      0.00      4.28      2.85
SRCPARAM L0008172     0.00004712      0.00      4.28      2.85
SRCPARAM L0008173     0.00004712      0.00      4.28      2.85
SRCPARAM L0008174     0.00004712      0.00      4.28      2.85
SRCPARAM L0008175     0.00004712      0.00      4.28      2.85
SRCPARAM L0008176     0.00004712      0.00      4.28      2.85
SRCPARAM L0008177     0.00004712      0.00      4.28      2.85
SRCPARAM L0008178     0.00004712      0.00      4.28      2.85
SRCPARAM L0008179     0.00004712      0.00      4.28      2.85
SRCPARAM L0008180     0.00004712      0.00      4.28      2.85
SRCPARAM L0008181     0.00004712      0.00      4.28      2.85
SRCPARAM L0008182     0.00004712      0.00      4.28      2.85
SRCPARAM L0008183     0.00004712      0.00      4.28      2.85
SRCPARAM L0008184     0.00004712      0.00      4.28      2.85
SRCPARAM L0008185     0.00004712      0.00      4.28      2.85
SRCPARAM L0008186     0.00004712      0.00      4.28      2.85
SRCPARAM L0008187     0.00004712      0.00      4.28      2.85
SRCPARAM L0008188     0.00004712      0.00      4.28      2.85
SRCPARAM L0008189     0.00004712      0.00      4.28      2.85
SRCPARAM L0008190     0.00004712      0.00      4.28      2.85
SRCPARAM L0008191     0.00004712      0.00      4.28      2.85
```

```
   SRCPARAM L0008192     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008193     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008194     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008195     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008196     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008197     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008198     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008199     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008200     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008201     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008202     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008203     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008204     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008205     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008206     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008207     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008208     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008209     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008210     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008211     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008212     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008213     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008214     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008215     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008216     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008217     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008218     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008219     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008220     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008221     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008222     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008223     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008224     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008225     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008226     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008227     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008228     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008229     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008230     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008231     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008232     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008233     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008234     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008235     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008236     0.00004712      0.00      4.28      2.85
   SRCPARAM L0008237     0.00004712      0.00      4.28      2.85
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0008001     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008002     0.00000001286      3.06      4.28      2.85
```

```
SRCPARAM L0008003     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008004     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008005     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008006     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008007     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008008     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008009     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008010     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008011     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008012     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008013     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008014     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008015     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008016     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008017     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008018     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008019     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008020     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008021     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008022     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008023     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008024     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008025     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008026     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008027     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008028     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008029     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008030     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008031     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008032     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008033     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008034     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008035     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008036     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008037     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008038     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008039     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008040     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008041     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008042     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008043     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008044     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008045     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008046     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008047     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008048     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008049     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008050     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008051     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008052     0.00000001286      3.06      4.28      2.85
```

```
SRCPARAM L0008053     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008054     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008055     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008056     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008057     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008058     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008059     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008060     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008061     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008062     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008063     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008064     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008065     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008066     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008067     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008068     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008069     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008070     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008071     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008072     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008073     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008074     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008075     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008076     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008077     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008078     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008079     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008080     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008081     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008082     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008083     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008084     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008085     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008086     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008087     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008088     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008089     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008090     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008091     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008092     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008093     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008094     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008095     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008096     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008097     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008098     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008099     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008100     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008101     0.00000001286      3.06      4.28      2.85
SRCPARAM L0008102     0.00000001286      3.06      4.28      2.85
```

```
   SRCPARAM L0008103     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008104     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008105     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008106     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008107     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008108     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008109     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008110     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008111     0.00000001286      3.06      4.28      2.85
   SRCPARAM L0008112     0.00000001286      3.06      4.28      2.85
** ------------------------------------------------------------------
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 3"
** WeekDays:
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008113     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008113     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008114     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008115     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008116     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008117     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008118     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008119     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008120     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008121     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
```

```
EMISFACT L0008121     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008122     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008123     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008124     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008125     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008126     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008127     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008128     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008129     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008130     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008131     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008132     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008133     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008133     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008134     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008134     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008135     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008136     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008137     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008138     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008139     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008140     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008141     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008142     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008143     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008144     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008145     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008146     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
```

```
EMISFACT L0008146     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008147     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008148     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008149     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008150     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008151     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008152     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008153     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008154     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008155     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008156     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008157     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008158     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008158     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008159     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008159     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008160     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008161     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008162     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008163     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008164     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008165     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008166     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008167     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008168     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008169     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008170     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008171     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
```

```
EMISFACT L0008171     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008172     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008173     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008174     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008175     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008176     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008177     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008178     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008179     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008180     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008181     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008182     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008183     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008183     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008184     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008184     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008185     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008186     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008187     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008188     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008189     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008190     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008191     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008192     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008193     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008194     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008195     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008196     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
```

```
EMISFACT L0008196     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008197     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008198     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008199     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008200     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008201     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008202     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008203     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008204     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008205     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008206     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008207     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008208     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008208     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008209     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008209     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008210     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008211     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008212     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008213     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008214     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008215     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008216     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008217     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008218     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008219     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008220     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008221     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
```

```
EMISFACT L0008221     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008222     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008223     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008224     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008225     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008226     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008227     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008228     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008229     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008230     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008231     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008232     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008233     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008233     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008234     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008234     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008235     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008236     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008237     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008113     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008114     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008115     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008116     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008121     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008122     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008123     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008124     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008125     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008126     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008127     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008128     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008129     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008130     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008131     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008132     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008133     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008134     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008135     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008136     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008137     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008138     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008139     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008140     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008141     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008142     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008143     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008144     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008145     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008146     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008147     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008148     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008149     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008150     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008151     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008152     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008153     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008154     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008155     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008156     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008157     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008158     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008159     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008160     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008161     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008162     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008163     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008164     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008165     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008166     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008167     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008168     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008169     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008170     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008171     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008172     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008173     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008174     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008175     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008176     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008177     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008178     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008179     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008180     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008181     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008182     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008183     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008184     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008185     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008186     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008187     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008188     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008189     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008001     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008001     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008002     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008003     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008004     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008005     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008006     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008007     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008008     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
```

```
EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008009     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008009     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008010     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008011     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008012     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008013     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008014     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008015     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008016     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008017     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008018     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008019     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008020     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008021     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008021     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008022     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008023     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008024     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008025     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008026     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008027     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008028     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008029     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008030     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008031     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008032     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008033     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
```

```
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008034     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008034     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008035     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008036     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008037     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008038     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008039     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008040     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008041     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008042     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008043     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008044     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008045     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008046     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008046     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008047     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008048     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008049     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008050     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008051     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008052     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008053     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008054     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008055     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008056     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008057     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008058     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
```

```
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008059     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008059     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008060     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008061     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008062     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008063     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008064     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008065     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008066     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008067     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008068     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008069     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008070     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008071     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008071     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008072     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008073     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008074     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008075     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008076     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008077     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008078     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008079     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008080     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008081     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008082     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008083     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
```

```
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008084     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008084     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008085     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008086     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008087     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008088     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008089     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008090     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008091     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008092     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008093     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008094     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008095     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008096     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008096     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008097     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008098     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008099     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008100     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008101     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008102     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008103     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008104     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008105     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008106     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008107     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0008108     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
```

```
   EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008109     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008109     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008110     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008111     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0008112     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008028     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008035     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008036     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008037     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008038     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008039     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008040     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008041     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008042     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008044     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008045     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008053     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008054     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008055     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008056     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008057     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008058     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008059     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008060     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008061     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008062     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008063     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008064     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008065     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008066     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008067     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008068     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008069     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008070     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008071     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008072     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008073     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008074     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008075     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008076     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008077     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008078     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008079     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008080     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008081     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008082     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008083     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008084     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008085     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008086     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008087     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008089     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008091     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008092     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
EMISFACT L0008096     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008097     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008098     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008099     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008100     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008101     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008102     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008103     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008104     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008105     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008106     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008107     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008108     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008109     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008110     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008111     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0008112     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**********************************
** AERMOD Receptor Pathway
**********************************
**
**
RE STARTING
   INCLUDED "Rialto Locust_Const.rou"
RE FINISHED
**
**********************************
** AERMOD Meteorology Pathway
**********************************
**
**
ME STARTING
   SURFFILE FONT_V9_ADJU\FONT_v9.SFC
   PROFFILE FONT_V9_ADJU\FONT_v9.PFL
   SURFDATA 3102 2011
   UAIRDATA 3190 2011
   SITEDATA 99999 2011
   PROFBASE 367.0 METERS
ME FINISHED
**
**********************************
** AERMOD Output Pathway
**********************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
```

```
   PLOTFILE 1 ALL 1ST "RIALTO LOCUST_CONST.AD\01H1GALL.PLT" 31
   PLOTFILE PERIOD ALL "RIALTO LOCUST_CONST.AD\PE00GALL.PLT" 32
   SUMMFILE "Rialto Locust_Const.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    3439       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
     0.50
 ME W187    3439       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET


 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                           ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                           ***       17:52:44

                                     PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                              ***     MODEL SETUP OPTIONS SUMMARY
 ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F
```

```
 **Model Uses URBAN Dispersion Algorithm for the SBL for   237 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   2035210.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. Urban Roughness Length of 1.0 Meter Assumed.

 **Other Options Specified:
        ADJ_U*   - Use ADJ_U* option for SBL in AERMET
        TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Assumes No FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  PM_10

 **Model Calculates  1 Short Term Average(s) of:   1-HR
     and Calculates PERIOD Averages

 **This Run Includes:    237 Source(s);       1 Source Group(s); and     673
Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:    237 VOLUME source(s)
                 and:      0 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 RLINE/RLINEXT source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with a total of     0 line(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  16216

 **Output Options Selected:
          Model Outputs Tables of PERIOD Averages by Receptor
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE
Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE
Keyword)
          Model Outputs Separate Summary File of High Ranked Values (SUMMFILE
Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
```

m for Missing Hours
b for Both Calm and
Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 367.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ;
Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 3.8 MB of RAM.

**Input Runstream File: aermod.inp

**Output Print File: aermod.out

**Detailed Error/Message File: Rialto Locust_Const.err

**File for Summary of Results: Rialto Locust_Const.sum

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE VARY BY
L0008113	0	0.47120E-04	462196.0	3779144.5	496.3	0.00	4.28	2.85	YES	HRDOW
L0008114	0	0.47120E-04	462195.8	3779153.7	496.6	0.00	4.28	2.85	YES	HRDOW
L0008115	0	0.47120E-04	462195.7	3779162.9	496.8	0.00	4.28	2.85	YES	HRDOW
L0008116	0	0.47120E-04	462195.6	3779172.1	496.9	0.00	4.28	2.85	YES	HRDOW
L0008117	0	0.47120E-04	462195.5	3779181.3	497.1	0.00	4.28			

```
2.85     YES   HRDOW
 L0008118         0   0.47120E-04  462195.4 3779190.5   497.2     0.00     4.28
2.85     YES   HRDOW
 L0008119         0   0.47120E-04  462195.3 3779199.7   497.3     0.00     4.28
2.85     YES   HRDOW
 L0008120         0   0.47120E-04  462195.1 3779208.9   497.4     0.00     4.28
2.85     YES   HRDOW
 L0008121         0   0.47120E-04  462195.0 3779218.1   497.5     0.00     4.28
2.85     YES   HRDOW
 L0008122         0   0.47120E-04  462194.9 3779227.3   497.8     0.00     4.28
2.85     YES   HRDOW
 L0008123         0   0.47120E-04  462194.8 3779236.5   498.0     0.00     4.28
2.85     YES   HRDOW
 L0008124         0   0.47120E-04  462194.7 3779245.7   498.2     0.00     4.28
2.85     YES   HRDOW
 L0008125         0   0.47120E-04  462194.6 3779254.9   498.3     0.00     4.28
2.85     YES   HRDOW
 L0008126         0   0.47120E-04  462186.0 3779255.4   498.5     0.00     4.28
2.85     YES   HRDOW
 L0008127         0   0.47120E-04  462180.2 3779251.8   498.6     0.00     4.28
2.85     YES   HRDOW
 L0008128         0   0.47120E-04  462180.3 3779242.6   498.4     0.00     4.28
2.85     YES   HRDOW
 L0008129         0   0.47120E-04  462180.4 3779233.4   498.2     0.00     4.28
2.85     YES   HRDOW
 L0008130         0   0.47120E-04  462180.5 3779224.2   498.0     0.00     4.28
2.85     YES   HRDOW
 L0008131         0   0.47120E-04  462180.5 3779215.0   497.8     0.00     4.28
2.85     YES   HRDOW
 L0008132         0   0.47120E-04  462180.6 3779205.8   497.7     0.00     4.28
2.85     YES   HRDOW
 L0008133         0   0.47120E-04  462180.7 3779196.6   497.6     0.00     4.28
2.85     YES   HRDOW
 L0008134         0   0.47120E-04  462180.7 3779187.4   497.5     0.00     4.28
2.85     YES   HRDOW
 L0008135         0   0.47120E-04  462180.8 3779178.2   497.4     0.00     4.28
2.85     YES   HRDOW
 L0008136         0   0.47120E-04  462180.9 3779169.0   497.2     0.00     4.28
2.85     YES   HRDOW
 L0008137         0   0.47120E-04  462181.0 3779159.8   497.1     0.00     4.28
2.85     YES   HRDOW
 L0008138         0   0.47120E-04  462181.0 3779150.6   496.9     0.00     4.28
2.85     YES   HRDOW
 L0008139         0   0.47120E-04  462181.1 3779141.4   496.5     0.00     4.28
2.85     YES   HRDOW
 L0008140         0   0.47120E-04  462174.2 3779139.3   496.6     0.00     4.28
2.85     YES   HRDOW
 L0008141         0   0.47120E-04  462165.0 3779139.5   496.7     0.00     4.28
2.85     YES   HRDOW
 L0008142         0   0.47120E-04  462162.6 3779146.3   497.0     0.00     4.28
```

```
2.85     YES   HRDOW
 L0008143         0   0.47120E-04  462162.7 3779155.5   497.4     0.00     4.28
2.85     YES   HRDOW
 L0008144         0   0.47120E-04  462162.7 3779164.7   497.5     0.00     4.28
2.85     YES   HRDOW
 L0008145         0   0.47120E-04  462162.8 3779173.9   497.7     0.00     4.28
2.85     YES   HRDOW
 L0008146         0   0.47120E-04  462162.8 3779183.1   497.8     0.00     4.28
2.85     YES   HRDOW
 L0008147         0   0.47120E-04  462162.9 3779192.3   497.9     0.00     4.28
2.85     YES   HRDOW
 L0008148         0   0.47120E-04  462162.9 3779201.5   498.0     0.00     4.28
2.85     YES   HRDOW
 L0008149         0   0.47120E-04  462163.0 3779210.7   498.1     0.00     4.28
2.85     YES   HRDOW
 L0008150         0   0.47120E-04  462163.1 3779219.9   498.3     0.00     4.28
2.85     YES   HRDOW
 L0008151         0   0.47120E-04  462163.1 3779229.1   498.5     0.00     4.28
2.85     YES   HRDOW
 L0008152         0   0.47120E-04  462163.2 3779238.3   498.7     0.00     4.28
2.85     YES   HRDOW
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***       05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE   3
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0008153         0   0.47120E-04  462163.2 3779247.5   499.0     0.00     4.28
2.85     YES   HRDOW
 L0008154         0   0.47120E-04  462159.4 3779252.6   499.1     0.00     4.28
2.85     YES   HRDOW
 L0008155         0   0.47120E-04  462150.2 3779252.1   499.2     0.00     4.28
2.85     YES   HRDOW
 L0008156         0   0.47120E-04  462144.8 3779248.1   499.3     0.00     4.28
2.85     YES   HRDOW
 L0008157         0   0.47120E-04  462144.8 3779238.9   499.1     0.00     4.28
```

```
2.85     YES   HRDOW
 L0008158         0   0.47120E-04  462144.9 3779229.7   498.9     0.00     4.28
2.85     YES   HRDOW
 L0008159         0   0.47120E-04  462144.9 3779220.5   498.6     0.00     4.28
2.85     YES   HRDOW
 L0008160         0   0.47120E-04  462145.0 3779211.3   498.5     0.00     4.28
2.85     YES   HRDOW
 L0008161         0   0.47120E-04  462145.0 3779202.1   498.4     0.00     4.28
2.85     YES   HRDOW
 L0008162         0   0.47120E-04  462145.1 3779192.9   498.3     0.00     4.28
2.85     YES   HRDOW
 L0008163         0   0.47120E-04  462145.1 3779183.7   498.1     0.00     4.28
2.85     YES   HRDOW
 L0008164         0   0.47120E-04  462145.2 3779174.5   497.9     0.00     4.28
2.85     YES   HRDOW
 L0008165         0   0.47120E-04  462145.3 3779165.3   497.7     0.00     4.28
2.85     YES   HRDOW
 L0008166         0   0.47120E-04  462145.3 3779156.1   497.5     0.00     4.28
2.85     YES   HRDOW
 L0008167         0   0.47120E-04  462145.4 3779146.9   497.2     0.00     4.28
2.85     YES   HRDOW
 L0008168         0   0.47120E-04  462143.2 3779139.9   496.9     0.00     4.28
2.85     YES   HRDOW
 L0008169         0   0.47120E-04  462134.0 3779140.0   496.9     0.00     4.28
2.85     YES   HRDOW
 L0008170         0   0.47120E-04  462129.0 3779144.2   497.1     0.00     4.28
2.85     YES   HRDOW
 L0008171         0   0.47120E-04  462129.2 3779153.4   497.5     0.00     4.28
2.85     YES   HRDOW
 L0008172         0   0.47120E-04  462129.3 3779162.6   497.7     0.00     4.28
2.85     YES   HRDOW
 L0008173         0   0.47120E-04  462129.5 3779171.8   498.0     0.00     4.28
2.85     YES   HRDOW
 L0008174         0   0.47120E-04  462129.7 3779181.0   498.2     0.00     4.28
2.85     YES   HRDOW
 L0008175         0   0.47120E-04  462129.8 3779190.2   498.4     0.00     4.28
2.85     YES   HRDOW
 L0008176         0   0.47120E-04  462130.0 3779199.4   498.6     0.00     4.28
2.85     YES   HRDOW
 L0008177         0   0.47120E-04  462130.2 3779208.6   498.7     0.00     4.28
2.85     YES   HRDOW
 L0008178         0   0.47120E-04  462130.4 3779217.8   498.9     0.00     4.28
2.85     YES   HRDOW
 L0008179         0   0.47120E-04  462130.5 3779227.0   499.0     0.00     4.28
2.85     YES   HRDOW
 L0008180         0   0.47120E-04  462130.7 3779236.2   499.2     0.00     4.28
2.85     YES   HRDOW
 L0008181         0   0.47120E-04  462130.9 3779245.4   499.4     0.00     4.28
2.85     YES   HRDOW
 L0008182         0   0.47120E-04  462127.4 3779251.1   499.5     0.00     4.28
```

```
2.85     YES   HRDOW
 L0008183         0   0.47120E-04  462118.2 3779251.3   499.7     0.00     4.28
2.85     YES   HRDOW
 L0008184         0   0.47120E-04  462111.3 3779249.2   499.7     0.00     4.28
2.85     YES   HRDOW
 L0008185         0   0.47120E-04  462111.3 3779240.0   499.6     0.00     4.28
2.85     YES   HRDOW
 L0008186         0   0.47120E-04  462111.3 3779230.8   499.4     0.00     4.28
2.85     YES   HRDOW
 L0008187         0   0.47120E-04  462111.4 3779221.6   499.2     0.00     4.28
2.85     YES   HRDOW
 L0008188         0   0.47120E-04  462111.4 3779212.4   499.1     0.00     4.28
2.85     YES   HRDOW
 L0008189         0   0.47120E-04  462111.5 3779203.2   498.9     0.00     4.28
2.85     YES   HRDOW
 L0008190         0   0.47120E-04  462111.5 3779194.0   498.7     0.00     4.28
2.85     YES   HRDOW
 L0008191         0   0.47120E-04  462111.6 3779184.8   498.5     0.00     4.28
2.85     YES   HRDOW
 L0008192         0   0.47120E-04  462111.6 3779175.6   498.2     0.00     4.28
2.85     YES   HRDOW
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***       05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE   4
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0008193         0   0.47120E-04  462111.7 3779166.4   497.9     0.00     4.28
2.85     YES   HRDOW
 L0008194         0   0.47120E-04  462111.7 3779157.2   497.6     0.00     4.28
2.85     YES   HRDOW
 L0008195         0   0.47120E-04  462111.8 3779148.0   497.3     0.00     4.28
2.85     YES   HRDOW
 L0008196         0   0.47120E-04  462109.1 3779141.5   497.1     0.00     4.28
2.85     YES   HRDOW
 L0008197         0   0.47120E-04  462099.9 3779141.0   497.1     0.00     4.28
```

```
2.85     YES   HRDOW
 L0008198         0   0.47120E-04  462093.6 3779143.6   497.2     0.00     4.28
2.85     YES   HRDOW
 L0008199         0   0.47120E-04  462093.7 3779152.8   497.5     0.00     4.28
2.85     YES   HRDOW
 L0008200         0   0.47120E-04  462093.8 3779162.0   497.8     0.00     4.28
2.85     YES   HRDOW
 L0008201         0   0.47120E-04  462093.9 3779171.2   498.1     0.00     4.28
2.85     YES   HRDOW
 L0008202         0   0.47120E-04  462094.0 3779180.4   498.4     0.00     4.28
2.85     YES   HRDOW
 L0008203         0   0.47120E-04  462094.1 3779189.6   498.7     0.00     4.28
2.85     YES   HRDOW
 L0008204         0   0.47120E-04  462094.2 3779198.8   498.9     0.00     4.28
2.85     YES   HRDOW
 L0008205         0   0.47120E-04  462094.3 3779208.0   499.2     0.00     4.28
2.85     YES   HRDOW
 L0008206         0   0.47120E-04  462094.4 3779217.2   499.4     0.00     4.28
2.85     YES   HRDOW
 L0008207         0   0.47120E-04  462094.5 3779226.4   499.5     0.00     4.28
2.85     YES   HRDOW
 L0008208         0   0.47120E-04  462094.6 3779235.6   499.7     0.00     4.28
2.85     YES   HRDOW
 L0008209         0   0.47120E-04  462094.7 3779244.8   499.8     0.00     4.28
2.85     YES   HRDOW
 L0008210         0   0.47120E-04  462091.1 3779250.3   499.9     0.00     4.28
2.85     YES   HRDOW
 L0008211         0   0.47120E-04  462081.9 3779250.2   500.0     0.00     4.28
2.85     YES   HRDOW
 L0008212         0   0.47120E-04  462079.6 3779243.2   499.9     0.00     4.28
2.85     YES   HRDOW
 L0008213         0   0.47120E-04  462079.6 3779234.0   499.8     0.00     4.28
2.85     YES   HRDOW
 L0008214         0   0.47120E-04  462079.5 3779224.8   499.7     0.00     4.28
2.85     YES   HRDOW
 L0008215         0   0.47120E-04  462079.5 3779215.6   499.5     0.00     4.28
2.85     YES   HRDOW
 L0008216         0   0.47120E-04  462079.4 3779206.4   499.3     0.00     4.28
2.85     YES   HRDOW
 L0008217         0   0.47120E-04  462079.3 3779197.2   499.1     0.00     4.28
2.85     YES   HRDOW
 L0008218         0   0.47120E-04  462079.3 3779188.0   498.8     0.00     4.28
2.85     YES   HRDOW
 L0008219         0   0.47120E-04  462079.2 3779178.8   498.5     0.00     4.28
2.85     YES   HRDOW
 L0008220         0   0.47120E-04  462079.1 3779169.6   498.2     0.00     4.28
2.85     YES   HRDOW
 L0008221         0   0.47120E-04  462079.1 3779160.4   498.0     0.00     4.28
2.85     YES   HRDOW
 L0008222         0   0.47120E-04  462079.0 3779151.2   497.7     0.00     4.28
```

```
2.85     YES   HRDOW
 L0008223         0   0.47120E-04  462078.1 3779142.8   497.4     0.00     4.28
2.85     YES   HRDOW
 L0008224         0   0.47120E-04  462069.0 3779142.4   497.5     0.00     4.28
2.85     YES   HRDOW
 L0008225         0   0.47120E-04  462061.9 3779144.1   497.7     0.00     4.28
2.85     YES   HRDOW
 L0008226         0   0.47120E-04  462062.0 3779153.3   498.1     0.00     4.28
2.85     YES   HRDOW
 L0008227         0   0.47120E-04  462062.0 3779162.5   498.3     0.00     4.28
2.85     YES   HRDOW
 L0008228         0   0.47120E-04  462062.1 3779171.7   498.6     0.00     4.28
2.85     YES   HRDOW
 L0008229         0   0.47120E-04  462062.2 3779180.9   498.9     0.00     4.28
2.85     YES   HRDOW
 L0008230         0   0.47120E-04  462062.3 3779190.1   499.1     0.00     4.28
2.85     YES   HRDOW
 L0008231         0   0.47120E-04  462062.4 3779199.3   499.3     0.00     4.28
2.85     YES   HRDOW
 L0008232         0   0.47120E-04  462062.5 3779208.5   499.5     0.00     4.28
2.85     YES   HRDOW
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***       05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE   5
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0008233         0   0.47120E-04  462062.6 3779217.7   499.7     0.00     4.28
2.85     YES   HRDOW
 L0008234         0   0.47120E-04  462062.7 3779226.9   499.9     0.00     4.28
2.85     YES   HRDOW
 L0008235         0   0.47120E-04  462062.8 3779236.1   500.0     0.00     4.28
2.85     YES   HRDOW
 L0008236         0   0.47120E-04  462062.9 3779245.3   500.1     0.00     4.28
2.85     YES   HRDOW
 L0008237         0   0.47120E-04  462063.0 3779254.5   500.2     0.00     4.28
```

```
2.85     YES   HRDOW
 L0008001         0   0.12860E-07  462220.7 3779217.4   497.1     3.06     4.28
2.85     YES   HRDOW
 L0008002         0   0.12860E-07  462220.7 3779208.2   496.9     3.06     4.28
2.85     YES   HRDOW
 L0008003         0   0.12860E-07  462220.8 3779199.0   496.7     3.06     4.28
2.85     YES   HRDOW
 L0008004         0   0.12860E-07  462220.8 3779189.8   496.5     3.06     4.28
2.85     YES   HRDOW
 L0008005         0   0.12860E-07  462220.8 3779180.6   496.4     3.06     4.28
2.85     YES   HRDOW
 L0008006         0   0.12860E-07  462220.9 3779171.4   496.2     3.06     4.28
2.85     YES   HRDOW
 L0008007         0   0.12860E-07  462220.9 3779162.2   496.0     3.06     4.28
2.85     YES   HRDOW
 L0008008         0   0.12860E-07  462220.9 3779153.0   495.8     3.06     4.28
2.85     YES   HRDOW
 L0008009         0   0.12860E-07  462221.0 3779143.8   495.6     3.06     4.28
2.85     YES   HRDOW
 L0008010         0   0.12860E-07  462221.0 3779134.6   495.4     3.06     4.28
2.85     YES   HRDOW
 L0008011         0   0.12860E-07  462221.0 3779125.4   495.3     3.06     4.28
2.85     YES   HRDOW
 L0008012         0   0.12860E-07  462221.1 3779116.2   495.1     3.06     4.28
2.85     YES   HRDOW
 L0008013         0   0.12860E-07  462221.1 3779107.0   495.0     3.06     4.28
2.85     YES   HRDOW
 L0008014         0   0.12860E-07  462221.1 3779097.8   494.9     3.06     4.28
2.85     YES   HRDOW
 L0008015         0   0.12860E-07  462221.1 3779088.6   494.7     3.06     4.28
2.85     YES   HRDOW
 L0008016         0   0.12860E-07  462221.2 3779079.4   494.6     3.06     4.28
2.85     YES   HRDOW
 L0008017         0   0.12860E-07  462221.2 3779070.2   494.4     3.06     4.28
2.85     YES   HRDOW
 L0008018         0   0.12860E-07  462221.2 3779061.0   494.2     3.06     4.28
2.85     YES   HRDOW
 L0008019         0   0.12860E-07  462221.3 3779051.8   494.0     3.06     4.28
2.85     YES   HRDOW
 L0008020         0   0.12860E-07  462221.3 3779042.6   493.8     3.06     4.28
2.85     YES   HRDOW
 L0008021         0   0.12860E-07  462221.3 3779033.4   493.5     3.06     4.28
2.85     YES   HRDOW
 L0008022         0   0.12860E-07  462221.4 3779024.2   493.3     3.06     4.28
2.85     YES   HRDOW
 L0008023         0   0.12860E-07  462221.4 3779015.0   493.1     3.06     4.28
2.85     YES   HRDOW
 L0008024         0   0.12860E-07  462221.4 3779005.8   492.9     3.06     4.28
2.85     YES   HRDOW
 L0008025         0   0.12860E-07  462221.5 3778996.6   492.7     3.06     4.28
```

```
2.85     YES   HRDOW
 L0008026         0   0.12860E-07  462221.5 3778987.4   492.6     3.06     4.28
2.85     YES   HRDOW
 L0008027         0   0.12860E-07  462221.5 3778978.2   492.4     3.06     4.28
2.85     YES   HRDOW
 L0008028         0   0.12860E-07  462221.6 3778969.0   492.2     3.06     4.28
2.85     YES   HRDOW
 L0008029         0   0.12860E-07  462221.6 3778959.8   492.0     3.06     4.28
2.85     YES   HRDOW
 L0008030         0   0.12860E-07  462221.6 3778950.6   491.8     3.06     4.28
2.85     YES   HRDOW
 L0008031         0   0.12860E-07  462221.7 3778941.4   491.6     3.06     4.28
2.85     YES   HRDOW
 L0008032         0   0.12860E-07  462221.7 3778932.2   491.4     3.06     4.28
2.85     YES   HRDOW
 L0008033         0   0.12860E-07  462221.7 3778923.0   491.2     3.06     4.28
2.85     YES   HRDOW
 L0008034         0   0.12860E-07  462221.8 3778913.8   491.1     3.06     4.28
2.85     YES   HRDOW
 L0008035         0   0.12860E-07  462221.8 3778904.6   490.9     3.06     4.28
2.85     YES   HRDOW
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***       05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE   6
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0008036         0   0.12860E-07  462221.8 3778895.4   490.7     3.06     4.28
2.85     YES   HRDOW
 L0008037         0   0.12860E-07  462221.9 3778886.2   490.5     3.06     4.28
2.85     YES   HRDOW
 L0008038         0   0.12860E-07  462221.9 3778877.0   490.3     3.06     4.28
2.85     YES   HRDOW
 L0008039         0   0.12860E-07  462221.9 3778867.8   490.1     3.06     4.28
2.85     YES   HRDOW
 L0008040         0   0.12860E-07  462222.0 3778858.6   490.0     3.06     4.28
```

```
2.85     YES   HRDOW
 L0008041         0   0.12860E-07  462222.0 3778849.4   489.8     3.06     4.28
2.85     YES   HRDOW
 L0008042         0   0.12860E-07  462222.0 3778840.2   489.6     3.06     4.28
2.85     YES   HRDOW
 L0008043         0   0.12860E-07  462222.0 3778831.0   489.4     3.06     4.28
2.85     YES   HRDOW
 L0008044         0   0.12860E-07  462222.1 3778821.8   489.2     3.06     4.28
2.85     YES   HRDOW
 L0008045         0   0.12860E-07  462222.1 3778812.6   489.1     3.06     4.28
2.85     YES   HRDOW
 L0008046         0   0.12860E-07  462222.1 3778803.4   488.8     3.06     4.28
2.85     YES   HRDOW
 L0008047         0   0.12860E-07  462222.2 3778794.2   488.6     3.06     4.28
2.85     YES   HRDOW
 L0008048         0   0.12860E-07  462222.2 3778785.0   488.4     3.06     4.28
2.85     YES   HRDOW
 L0008049         0   0.12860E-07  462222.2 3778775.8   488.1     3.06     4.28
2.85     YES   HRDOW
 L0008050         0   0.12860E-07  462222.3 3778766.6   487.9     3.06     4.28
2.85     YES   HRDOW
 L0008051         0   0.12860E-07  462222.3 3778757.4   487.7     3.06     4.28
2.85     YES   HRDOW
 L0008052         0   0.12860E-07  462222.3 3778748.2   487.5     3.06     4.28
2.85     YES   HRDOW
 L0008053         0   0.12860E-07  462222.4 3778739.0   487.2     3.06     4.28
2.85     YES   HRDOW
 L0008054         0   0.12860E-07  462222.4 3778729.8   487.1     3.06     4.28
2.85     YES   HRDOW
 L0008055         0   0.12860E-07  462222.4 3778720.6   486.8     3.06     4.28
2.85     YES   HRDOW
 L0008056         0   0.12860E-07  462222.5 3778711.4   486.6     3.06     4.28
2.85     YES   HRDOW
 L0008057         0   0.12860E-07  462222.5 3778702.2   486.4     3.06     4.28
2.85     YES   HRDOW
 L0008058         0   0.12860E-07  462222.5 3778693.0   486.2     3.06     4.28
2.85     YES   HRDOW
 L0008059         0   0.12860E-07  462222.6 3778683.8   485.9     3.06     4.28
2.85     YES   HRDOW
 L0008060         0   0.12860E-07  462222.6 3778674.6   485.7     3.06     4.28
2.85     YES   HRDOW
 L0008061         0   0.12860E-07  462222.6 3778665.4   485.4     3.06     4.28
2.85     YES   HRDOW
 L0008062         0   0.12860E-07  462222.7 3778656.2   485.2     3.06     4.28
2.85     YES   HRDOW
 L0008063         0   0.12860E-07  462222.7 3778647.0   484.9     3.06     4.28
2.85     YES   HRDOW
 L0008064         0   0.12860E-07  462222.7 3778637.8   484.7     3.06     4.28
2.85     YES   HRDOW
 L0008065         0   0.12860E-07  462222.8 3778628.6   484.4     3.06     4.28
```

2.85   YES   HRDOW
 L0008066   0   0.12860E-07 462222.8 3778619.4   484.2   3.06   4.28
2.85   YES   HRDOW
 L0008067   0   0.12860E-07 462222.8 3778610.2   484.0   3.06   4.28
2.85   YES   HRDOW
 L0008068   0   0.12860E-07 462222.8 3778601.0   483.7   3.06   4.28
2.85   YES   HRDOW
 L0008069   0   0.12860E-07 462222.9 3778591.8   483.6   3.06   4.28
2.85   YES   HRDOW
 L0008070   0   0.12860E-07 462222.9 3778582.6   483.4   3.06   4.28
2.85   YES   HRDOW
 L0008071   0   0.12860E-07 462222.9 3778573.4   483.2   3.06   4.28
2.85   YES   HRDOW
 L0008072   0   0.12860E-07 462223.0 3778564.2   483.0   3.06   4.28
2.85   YES   HRDOW
 L0008073   0   0.12860E-07 462223.0 3778555.0   482.9   3.06   4.28
2.85   YES   HRDOW
 L0008074   0   0.12860E-07 462223.0 3778545.8   482.7   3.06   4.28
2.85   YES   HRDOW
 L0008075   0   0.12860E-07 462223.1 3778536.6   482.6   3.06   4.28
2.85   YES   HRDOW

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE   BASE   RELEASE   INIT.
INIT.   URBAN EMISSION RATE
   SOURCE   PART. (GRAMS/SEC)   X   Y   ELEV.   HEIGHT   SY
SZ   SOURCE SCALAR VARY
     ID   CATS.   (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)   BY
 -
- - - - - - - - - - - - - - - - - - - -

 L0008076   0   0.12860E-07 462223.1 3778527.4   482.4   3.06   4.28
2.85   YES   HRDOW
 L0008077   0   0.12860E-07 462223.1 3778518.2   482.3   3.06   4.28
2.85   YES   HRDOW
 L0008078   0   0.12860E-07 462223.2 3778509.0   482.1   3.06   4.28
2.85   YES   HRDOW
 L0008079   0   0.12860E-07 462223.2 3778499.8   482.0   3.06   4.28
2.85   YES   HRDOW
 L0008080   0   0.12860E-07 462223.2 3778490.6   481.8   3.06   4.28

```
2.85     YES   HRDOW
 L0008081         0   0.12860E-07  462223.3 3778481.4   481.7     3.06     4.28
2.85     YES   HRDOW
 L0008082         0   0.12860E-07  462223.3 3778472.2   481.5     3.06     4.28
2.85     YES   HRDOW
 L0008083         0   0.12860E-07  462223.3 3778463.0   481.3     3.06     4.28
2.85     YES   HRDOW
 L0008084         0   0.12860E-07  462223.4 3778453.8   481.2     3.06     4.28
2.85     YES   HRDOW
 L0008085         0   0.12860E-07  462223.4 3778444.6   481.0     3.06     4.28
2.85     YES   HRDOW
 L0008086         0   0.12860E-07  462223.4 3778435.4   480.8     3.06     4.28
2.85     YES   HRDOW
 L0008087         0   0.12860E-07  462223.5 3778426.2   480.7     3.06     4.28
2.85     YES   HRDOW
 L0008088         0   0.12860E-07  462223.5 3778417.0   480.5     3.06     4.28
2.85     YES   HRDOW
 L0008089         0   0.12860E-07  462223.5 3778407.8   480.3     3.06     4.28
2.85     YES   HRDOW
 L0008090         0   0.12860E-07  462223.6 3778398.6   480.1     3.06     4.28
2.85     YES   HRDOW
 L0008091         0   0.12860E-07  462223.6 3778389.4   479.9     3.06     4.28
2.85     YES   HRDOW
 L0008092         0   0.12860E-07  462223.6 3778380.2   479.7     3.06     4.28
2.85     YES   HRDOW
 L0008093         0   0.12860E-07  462223.6 3778371.0   479.5     3.06     4.28
2.85     YES   HRDOW
 L0008094         0   0.12860E-07  462223.7 3778361.8   479.4     3.06     4.28
2.85     YES   HRDOW
 L0008095         0   0.12860E-07  462223.7 3778352.6   479.2     3.06     4.28
2.85     YES   HRDOW
 L0008096         0   0.12860E-07  462223.7 3778343.4   479.1     3.06     4.28
2.85     YES   HRDOW
 L0008097         0   0.12860E-07  462223.8 3778334.2   478.9     3.06     4.28
2.85     YES   HRDOW
 L0008098         0   0.12860E-07  462223.8 3778325.0   478.8     3.06     4.28
2.85     YES   HRDOW
 L0008099         0   0.12860E-07  462223.8 3778315.8   478.5     3.06     4.28
2.85     YES   HRDOW
 L0008100         0   0.12860E-07  462223.9 3778306.6   478.3     3.06     4.28
2.85     YES   HRDOW
 L0008101         0   0.12860E-07  462223.9 3778297.4   478.1     3.06     4.28
2.85     YES   HRDOW
 L0008102         0   0.12860E-07  462223.9 3778288.2   477.9     3.06     4.28
2.85     YES   HRDOW
 L0008103         0   0.12860E-07  462224.0 3778279.0   477.7     3.06     4.28
2.85     YES   HRDOW
 L0008104         0   0.12860E-07  462224.0 3778269.8   477.5     3.06     4.28
2.85     YES   HRDOW
 L0008105         0   0.12860E-07  462224.0 3778260.6   477.3     3.06     4.28
```

```
2.85     YES   HRDOW
 L0008106         0   0.12860E-07  462224.1 3778251.4   477.2     3.06     4.28
2.85     YES   HRDOW
 L0008107         0   0.12860E-07  462224.1 3778242.2   477.0     3.06     4.28
2.85     YES   HRDOW
 L0008108         0   0.12860E-07  462224.1 3778233.0   476.8     3.06     4.28
2.85     YES   HRDOW
 L0008109         0   0.12860E-07  462224.2 3778223.8   476.7     3.06     4.28
2.85     YES   HRDOW
 L0008110         0   0.12860E-07  462224.2 3778214.6   476.5     3.06     4.28
2.85     YES   HRDOW
 L0008111         0   0.12860E-07  462224.2 3778205.4   476.3     3.06     4.28
2.85     YES   HRDOW
 L0008112         0   0.12860E-07  462224.3 3778196.2   476.2     3.06     4.28
2.85     YES   HRDOW
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE   8
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                *** SOURCE IDs DEFINING SOURCE GROUPS ***

 SRCGROUP ID                                                SOURCE IDs
 -----------                                                ----------


  ALL        L0008113    , L0008114    , L0008115    , L0008116    , L0008117    ,
L0008118    , L0008119    , L0008120    ,

             L0008121    , L0008122    , L0008123    , L0008124    , L0008125    ,
L0008126    , L0008127    , L0008128    ,

             L0008129    , L0008130    , L0008131    , L0008132    , L0008133    ,
L0008134    , L0008135    , L0008136    ,

             L0008137    , L0008138    , L0008139    , L0008140    , L0008141    ,
L0008142    , L0008143    , L0008144    ,

             L0008145    , L0008146    , L0008147    , L0008148    , L0008149    ,
L0008150    , L0008151    , L0008152    ,

             L0008153    , L0008154    , L0008155    , L0008156    , L0008157    ,
L0008158    , L0008159    , L0008160    ,

             L0008161    , L0008162    , L0008163    , L0008164    , L0008165    ,
L0008166    , L0008167    , L0008168    ,
```

```
             L0008169    , L0008170    , L0008171    , L0008172    , L0008173    ,
L0008174    , L0008175    , L0008176    ,

             L0008177    , L0008178    , L0008179    , L0008180    , L0008181    ,
L0008182    , L0008183    , L0008184    ,

             L0008185    , L0008186    , L0008187    , L0008188    , L0008189    ,
L0008190    , L0008191    , L0008192    ,

             L0008193    , L0008194    , L0008195    , L0008196    , L0008197    ,
L0008198    , L0008199    , L0008200    ,

             L0008201    , L0008202    , L0008203    , L0008204    , L0008205    ,
L0008206    , L0008207    , L0008208    ,

             L0008209    , L0008210    , L0008211    , L0008212    , L0008213    ,
L0008214    , L0008215    , L0008216    ,

             L0008217    , L0008218    , L0008219    , L0008220    , L0008221    ,
L0008222    , L0008223    , L0008224    ,

             L0008225    , L0008226    , L0008227    , L0008228    , L0008229    ,
L0008230    , L0008231    , L0008232    ,

             L0008233    , L0008234    , L0008235    , L0008236    , L0008237    ,
L0008001    , L0008002    , L0008003    ,

             L0008004    , L0008005    , L0008006    , L0008007    , L0008008    ,
L0008009    , L0008010    , L0008011    ,

             L0008012    , L0008013    , L0008014    , L0008015    , L0008016    ,
L0008017    , L0008018    , L0008019    ,

             L0008020    , L0008021    , L0008022    , L0008023    , L0008024    ,
L0008025    , L0008026    , L0008027    ,

             L0008028    , L0008029    , L0008030    , L0008031    , L0008032    ,
L0008033    , L0008034    , L0008035    ,
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        17:52:44

                                    PAGE   9
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                *** SOURCE IDs DEFINING SOURCE GROUPS ***
```

```
 SRCGROUP ID                                                SOURCE IDs
 -----------                                                ----------


             L0008036    , L0008037    , L0008038    , L0008039    , L0008040    ,
L0008041    , L0008042    , L0008043    ,

             L0008044    , L0008045    , L0008046    , L0008047    , L0008048    ,
L0008049    , L0008050    , L0008051    ,

             L0008052    , L0008053    , L0008054    , L0008055    , L0008056    ,
L0008057    , L0008058    , L0008059    ,

             L0008060    , L0008061    , L0008062    , L0008063    , L0008064    ,
L0008065    , L0008066    , L0008067    ,

             L0008068    , L0008069    , L0008070    , L0008071    , L0008072    ,
L0008073    , L0008074    , L0008075    ,

             L0008076    , L0008077    , L0008078    , L0008079    , L0008080    ,
L0008081    , L0008082    , L0008083    ,

             L0008084    , L0008085    , L0008086    , L0008087    , L0008088    ,
L0008089    , L0008090    , L0008091    ,

             L0008092    , L0008093    , L0008094    , L0008095    , L0008096    ,
L0008097    , L0008098    , L0008099    ,

             L0008100    , L0008101    , L0008102    , L0008103    , L0008104    ,
L0008105    , L0008106    , L0008107    ,

             L0008108    , L0008109    , L0008110    , L0008111    , L0008112    ,
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                           ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                          ***        17:52:44

                                   PAGE  10
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                        *** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP                                     SOURCE IDs
  --------   ---------                                     ----------


              2035210.   L0008113    , L0008114    , L0008115    , L0008116    ,
L0008117    , L0008118    , L0008119    ,
```

```
 L0008120    ,

             L0008121    , L0008122    , L0008123    , L0008124    , L0008125    ,
L0008126    , L0008127    , L0008128    ,

             L0008129    , L0008130    , L0008131    , L0008132    , L0008133    ,
L0008134    , L0008135    , L0008136    ,

             L0008137    , L0008138    , L0008139    , L0008140    , L0008141    ,
L0008142    , L0008143    , L0008144    ,

             L0008145    , L0008146    , L0008147    , L0008148    , L0008149    ,
L0008150    , L0008151    , L0008152    ,

             L0008153    , L0008154    , L0008155    , L0008156    , L0008157    ,
L0008158    , L0008159    , L0008160    ,

             L0008161    , L0008162    , L0008163    , L0008164    , L0008165    ,
L0008166    , L0008167    , L0008168    ,

             L0008169    , L0008170    , L0008171    , L0008172    , L0008173    ,
L0008174    , L0008175    , L0008176    ,

             L0008177    , L0008178    , L0008179    , L0008180    , L0008181    ,
L0008182    , L0008183    , L0008184    ,

             L0008185    , L0008186    , L0008187    , L0008188    , L0008189    ,
L0008190    , L0008191    , L0008192    ,

             L0008193    , L0008194    , L0008195    , L0008196    , L0008197    ,
L0008198    , L0008199    , L0008200    ,

             L0008201    , L0008202    , L0008203    , L0008204    , L0008205    ,
L0008206    , L0008207    , L0008208    ,

             L0008209    , L0008210    , L0008211    , L0008212    , L0008213    ,
L0008214    , L0008215    , L0008216    ,

             L0008217    , L0008218    , L0008219    , L0008220    , L0008221    ,
L0008222    , L0008223    , L0008224    ,

             L0008225    , L0008226    , L0008227    , L0008228    , L0008229    ,
L0008230    , L0008231    , L0008232    ,

             L0008233    , L0008234    , L0008235    , L0008236    , L0008237    ,
L0008001    , L0008002    , L0008003    ,

             L0008004    , L0008005    , L0008006    , L0008007    , L0008008    ,
L0008009    , L0008010    , L0008011    ,
```

```
             L0008012    , L0008013    , L0008014    , L0008015    , L0008016    ,
L0008017    , L0008018    , L0008019    ,

             L0008020    , L0008021    , L0008022    , L0008023    , L0008024    ,
L0008025    , L0008026    , L0008027    ,

             L0008028    , L0008029    , L0008030    , L0008031    , L0008032    ,
L0008033    , L0008034    , L0008035    ,
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                           ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                           ***        17:52:44

                                    PAGE  11
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                          *** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP                                    SOURCE IDs
  --------   ---------                                    ----------


             L0008036    , L0008037    , L0008038    , L0008039    , L0008040    ,
L0008041    , L0008042    , L0008043    ,

             L0008044    , L0008045    , L0008046    , L0008047    , L0008048    ,
L0008049    , L0008050    , L0008051    ,

             L0008052    , L0008053    , L0008054    , L0008055    , L0008056    ,
L0008057    , L0008058    , L0008059    ,

             L0008060    , L0008061    , L0008062    , L0008063    , L0008064    ,
L0008065    , L0008066    , L0008067    ,

             L0008068    , L0008069    , L0008070    , L0008071    , L0008072    ,
L0008073    , L0008074    , L0008075    ,

             L0008076    , L0008077    , L0008078    , L0008079    , L0008080    ,
L0008081    , L0008082    , L0008083    ,

             L0008084    , L0008085    , L0008086    , L0008087    , L0008088    ,
L0008089    , L0008090    , L0008091    ,

             L0008092    , L0008093    , L0008094    , L0008095    , L0008096    ,
L0008097    , L0008098    , L0008099    ,

             L0008100    , L0008101    , L0008102    , L0008103    , L0008104    ,
L0008105    , L0008106    , L0008107    ,
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008113 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

```
 SOURCE ID = L0008114     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***       17:52:44

                                  PAGE  14
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008115     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                          ***       17:52:44

                                   PAGE  15
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008116     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008117 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008118 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

```
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -
```

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE  19
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008120     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
```

```
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  20
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008121     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  21
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008122     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE  22
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008123     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE  23
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008124     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008125 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

↟ *** AERMOD - VERSION 21112 *** *** Rialto Locust - Construction
*** 05/23/22
*** AERMET - VERSION 16216 *** ***
*** 17:52:44

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008126 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***       17:52:44

                                  PAGE  26
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008127     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                          ***       17:52:44

                                    PAGE  27
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008128     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                          ***       17:52:44

                                    PAGE  28
```

```
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008129     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                        ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  29
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008130     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
```

```
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***       17:52:44

                                  PAGE  30
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008131     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

```
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  31
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008132     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  32
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
```

```
                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008133     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***       17:52:44

                                  PAGE  33
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008134     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
```

```
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE  34
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008135     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
```

14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008136   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

```
 SOURCE ID = L0008137     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  37
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008138     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                           ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                           ***       17:52:44

                                    PAGE  38
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008139     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
```

```
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***        17:52:44

                                   PAGE  39
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008140     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                  DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***        17:52:44

                                   PAGE  40
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008141     ; SOURCE TYPE = VOLUME   :
```

```
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                             ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                            ***       17:52:44

                                    PAGE  41
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008142     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008143   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008144   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008145   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR

```
 - - -
```

```
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                        ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  46
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008147     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                        ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008148 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008149 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

```
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                    PAGE  49
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008150     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
```

```
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  50
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008151     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008152 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008153 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00

```
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                  PAGE  53
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008154     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                             ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                            ***        17:52:44

                                    PAGE  54
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008155     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                  DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                             ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                            ***        17:52:44

                                    PAGE  55
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
```

```
                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008156     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***        17:52:44

                                   PAGE  56
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008157     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
```

```
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE  57
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008158     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
```

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  58
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008159     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  59
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
```

```
WEEK (HRDOW) *

 SOURCE ID = L0008160     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                  PAGE  60
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008161     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
```

```
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE  61
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008162     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  62
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008163     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  63
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *
```

```
 SOURCE ID = L0008164     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***       17:52:44

                                  PAGE  64
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008165     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE  65
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008166     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008167 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008168 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

```
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -
```

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE  69
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008170     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
```

```
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  70
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008171     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  71
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008172     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                  DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE  72
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008173     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                  DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        17:52:44

                                   PAGE  73
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008174     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        17:52:44
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008175 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

↟ *** AERMOD - VERSION 21112 *** *** Rialto Locust - Construction
*** *** 05/23/22
*** AERMET - VERSION 16216 *** ***
*** 17:52:44

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008176 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***       17:52:44

                                  PAGE  76
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008177     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                    PAGE  77
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008178     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                    PAGE  78
```

```
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008179     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                        ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                PAGE  79
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008180     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
```

```
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE  80
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008181     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

```
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  81
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008182     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  82
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
```

```
                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008183     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***       17:52:44

                                   PAGE  83
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008184     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
```

```
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                    PAGE  84
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008185     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
```

```
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        17:52:44

                                    PAGE  85
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008186     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        17:52:44

                                    PAGE  86
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *
```

```
 SOURCE ID = L0008187     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  87
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008188     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  88
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008189     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
```

22 .0000E+00   23 .0000E+00   24 .0000E+00
↟ *** AERMOD - VERSION 21112 ***   *** Rialto Locust - Construction
                          ***   05/23/22
 *** AERMET - VERSION 16216 ***   ***
                         ***   17:52:44

                                    PAGE 89
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008190   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
↟ *** AERMOD - VERSION 21112 ***   *** Rialto Locust - Construction
                          ***   05/23/22
 *** AERMET - VERSION 16216 ***   ***
                         ***   17:52:44

                                    PAGE 90
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008191   ; SOURCE TYPE = VOLUME   :

```
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***       17:52:44

                                   PAGE  91
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008192     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

```
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                        ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  92
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008193     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
```

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008194   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008195   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR

```
 - - -
```

```
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                        ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE  96
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008197     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                        ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008198 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008199 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

```
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                    PAGE  99
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008200     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
```

```
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                  PAGE 100
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008201     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008202 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008203 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00

```
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                  PAGE 103
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008204     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                             ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                            ***        17:52:44

                                    PAGE 104
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008205     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                             ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                            ***        17:52:44

                                    PAGE 105
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
```

```
                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008206     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***        17:52:44

                                   PAGE 106
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008207     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
```

```
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                  PAGE 107
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008208     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
```

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                        ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 108
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008209     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                        ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 109
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
```

```
WEEK (HRDOW) *

 SOURCE ID = L0008210     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 110
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008211     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
```

```
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                  PAGE 111
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008212     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 112
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008213     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 113
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *
```

```
 SOURCE ID = L0008214     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***       17:52:44

                                PAGE 114
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008215     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 115
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008216     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008217 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008218 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

```
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -
```

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                    PAGE 119
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008220     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
```

```
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 120
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008221     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 121
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008222     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                    DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 122
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008223     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                    DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 123
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008224     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008225 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008226 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 126
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008227     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008228 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

```
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008229     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                        ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 129
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008230     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
```

```
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 130
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008231     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

```
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                 PAGE 131
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008232     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                             DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                             DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                             DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                 PAGE 132
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
```

```
                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008233     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***       17:52:44

                                  PAGE 133
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008234     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
```

```
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 134
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008235     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
```

```
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        17:52:44

                                    PAGE 135
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008236     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        17:52:44

                                    PAGE 136
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *
```

```
 SOURCE ID = L0008237     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 137
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008001     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                           ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                           ***       17:52:44

                                    PAGE 138
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008002     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
```

```
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***        17:52:44

                                   PAGE 139
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008003     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***        17:52:44

                                   PAGE 140
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008004     ; SOURCE TYPE = VOLUME   :
```

```
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***       17:52:44

                                  PAGE 141
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008005     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008006   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008007   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008008   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR

```
 - - -
```

```
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***        17:52:44

                                  PAGE 146
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008010     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008011 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008012 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

```
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                    PAGE 149
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008013     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
```

```
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                  PAGE 150
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008014     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008015 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008016 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00

```
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 153
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008017     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                             ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                            ***        17:52:44

                                    PAGE 154
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008018     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                             ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                            ***        17:52:44

                                    PAGE 155
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
```

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008019   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -

```
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                  PAGE 157
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008021     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
```

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                            ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                            ***       17:52:44

                                    PAGE 158
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008022     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                            ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                            ***       17:52:44

                                    PAGE 159
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
```

```
WEEK (HRDOW) *

 SOURCE ID = L0008023     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                  PAGE 160
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008024     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
```

```
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 161
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008025     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 162
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008026     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 163
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *
```

```
 SOURCE ID = L0008027     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                  PAGE 164
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008028     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 165
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008029     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008030 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008031 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

```
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -
```

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 169
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008033     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
```

```
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 170
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008034     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 171
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008035     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                  DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 172
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008036     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                  DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        17:52:44

                                   PAGE 173
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008037     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        17:52:44
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008038 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008039 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00

                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00

                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                        ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***       17:52:44

                                  PAGE 176
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008040     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00

                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008041 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008042 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008043 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01

```
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 180
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008044     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

```
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 181
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008045     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 182
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
```

```
                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008046     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***       17:52:44

                                  PAGE 183
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008047     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
```

```
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                    PAGE 184
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008048     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
```

```
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        17:52:44

                                    PAGE 185
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008049     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        17:52:44

                                    PAGE 186
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *
```

```
 SOURCE ID = L0008050     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 187
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008051     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                           ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                           ***       17:52:44

                                    PAGE 188
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008052     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
```

```
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***        17:52:44

                                   PAGE 189
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008053     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***        17:52:44

                                   PAGE 190
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008054     ; SOURCE TYPE = VOLUME   :
```

```
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***       17:52:44

                                  PAGE 191
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008055     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

```
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***       17:52:44

                                  PAGE 192
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008056     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
```

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008057   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008058   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR

```
 - - -
```

```
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***        17:52:44

                                   PAGE 196
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008060     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008061 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008062 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

```
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                    PAGE 199
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008063     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
```

22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008064   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008065 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008066 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00

```
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 203
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008067     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                        ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 204
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008068     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                        ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 205
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
```

```
                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008069     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***        17:52:44

                                   PAGE 206
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008070     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
```

```
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***       17:52:44

                                  PAGE 207
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008071     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
```

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 208
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008072     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 209
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
```

```
WEEK (HRDOW) *

 SOURCE ID = L0008073     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***       17:52:44

                                  PAGE 210
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008074     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
```

```
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 211
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008075     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 212
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008076     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 213
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *
```

```
 SOURCE ID = L0008077     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                        ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***       17:52:44

                                  PAGE 214
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008078     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 215
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008079     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008080 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008081 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

```
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -
```

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 219
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008083     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
```

```
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 220
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008084     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 221
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008085     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                    DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 222
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008086     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                    DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 223
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008087     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008088 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008089 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                        ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***       17:52:44

                                  PAGE 226
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008090     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 227
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008091     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 228
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008092 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008093 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01

```
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***       17:52:44

                                  PAGE 230
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008094     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

```
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 231
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008095     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 232
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
```

```
                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008096     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***       17:52:44

                                  PAGE 233
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008097     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
```

```
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 234
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008098     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
```

14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008099   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

```
 SOURCE ID = L0008100     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 237
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008101     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                    PAGE 238
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008102     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
```

```
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***        17:52:44

                                   PAGE 239
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008103     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***        17:52:44

                                   PAGE 240
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008104     ; SOURCE TYPE = VOLUME   :
```

```
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***       17:52:44

                                  PAGE 241
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008105     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008106   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008107   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008108   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR

```
 - - -
```

```
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                        ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 246
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW) *

 SOURCE ID = L0008110     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                        ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008111 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0008112 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

```
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                    PAGE 249
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                         *** GRIDDED RECEPTOR NETWORK SUMMARY ***

                                       *** NETWORK ID: UCART1   ;  NETWORK TYPE: GRIDCART
***

                                           *** X-COORDINATES OF GRID ***
                                                    (METERS)

       462429.7,  462479.7,  462529.7,  462579.7,  462629.7,  462679.7,  462729.7,
462779.7,  462829.7,  462879.7,
       462929.7,  462979.7,  463029.7,  463079.7,  463129.7,

                                           *** Y-COORDINATES OF GRID ***
                                                    (METERS)

      3778187.8, 3778237.8, 3778287.8, 3778337.8, 3778387.8, 3778437.8, 3778487.8,
3778537.8, 3778587.8, 3778637.8,
      3778687.8, 3778737.8, 3778787.8, 3778837.8, 3778887.8, 3778937.8, 3778987.8,
3779037.8, 3779087.8, 3779137.8,
      3779187.8, 3779237.8, 3779287.8, 3779337.8, 3779387.8, 3779437.8, 3779487.8,
3779537.8, 3779587.8, 3779637.8,
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)									
	462429.66	462479.66	462529.66	462579.66	462629.66	462679.66	462729.66	462779.66	462829.66	
3779737.79	504.40	503.50	502.70	502.40	501.90	501.00	500.10	499.50	498.70	
3779687.79	503.70	502.60	501.60	500.60	500.80	500.10	498.80	497.70	497.00	
3779637.79	503.10	501.90	500.70	499.70	499.30	498.90	497.90	496.80	496.50	
3779587.79	502.10	501.20	500.00	498.80	498.50	498.20	498.00	496.20	494.90	
3779537.79	501.20	499.70	499.40	498.00	497.20	497.40	496.90	495.30	494.10	
3779487.79	499.80	498.40	498.30	497.20	496.50	495.40	495.00	494.20	492.70	
3779437.79	498.80	497.90	497.30	496.80	496.00	494.70	493.80	493.90	493.10	
3779387.79	498.00	496.50	496.00	495.70	495.10	494.40	493.50	493.40	493.00	
3779337.79	497.70	496.20	495.60	495.30	494.40	493.50	492.60	492.30	491.60	
3779287.79	495.80	494.50	494.10	493.70	493.10	492.10	491.10	490.80	490.20	
3779237.79	494.70	494.00	493.40	493.00	492.00	490.90	490.10	489.50	488.90	
3779187.79	493.90	492.90	492.30	491.80	490.90	490.30	489.60	488.90	488.10	
3779137.79	492.90	491.80	491.10	490.50	489.80	489.50	488.80	488.10	487.30	
3779087.79	492.00	491.40	490.80	490.10	488.90	488.10	487.30	487.00	486.00	
3779037.79	490.80	489.90	489.50	488.90	488.10	487.40	486.30	486.40	484.60	

```
  3778987.79 |        489.90       489.20       488.70       488.20       487.20
  486.50       485.60       485.10       483.80
  3778937.79 |        489.10       488.20       487.80       487.10       486.20
  485.40       484.60       484.00       483.00
  3778887.79 |        487.80       487.40       486.70       486.00       485.30
  484.80       484.10       483.20       482.30
  3778837.79 |        486.70       486.30       485.90       485.00       484.30
  483.90       483.30       482.60       481.50
  3778787.79 |        485.90       485.40       485.00       484.30       483.40
  483.10       482.20       481.60       480.90
  3778737.79 |        485.00       484.50       484.00       483.20       482.60
  482.10       481.20       480.40       480.00
  3778687.79 |        483.10       483.10       482.80       482.30       481.60
  479.90       478.90       478.40       478.00
  3778637.79 |        481.90       482.30       482.10       481.90       480.30
  478.10       477.70       477.20       477.20
  3778587.79 |        481.00       481.30       480.80       480.80       479.70
  478.20       477.60       477.20       477.20
  3778537.79 |        480.10       479.80       479.20       479.40       478.80
  477.80       477.20       477.20       477.30
  3778487.79 |        479.30       478.80       478.30       478.40       477.90
  477.40       476.90       477.10       476.80
  3778437.79 |        478.60       478.00       478.10       477.50       476.90
  476.20       475.90       475.90       476.10
  3778387.79 |        478.00       477.40       477.60       476.40       475.90
  475.30       474.00       471.50       471.50
  3778337.79 |        476.90       476.40       476.90       475.40       475.00
  474.50       473.50       471.40       471.30
  3778287.79 |        475.80       475.20       475.70       474.70       474.00
  473.40       472.80       472.00       471.30
  3778237.79 |        474.80       473.80       473.90       473.90       473.00
  472.50       472.10       471.50       470.70
  3778187.79 |        474.30       473.30       473.00       472.80       472.00
  471.60       471.10       470.70       470.10
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 251
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                   *** NETWORK ID: UCART1   ;  NETWORK TYPE: GRIDCART
***

                                              * ELEVATION HEIGHTS IN METERS *

    Y-COORD  |                                                  X-COORD (METERS)
    (METERS) |     462879.66    462929.66    462979.66    463029.66    463079.66
463129.66
```

- - - -

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)				
	462429.66	462479.66	462529.66	462579.66	462629.66
462679.66	462729.66	462779.66	462829.66		
3779737.79	504.40	503.50	502.70	502.40	501.90
501.00	500.10	499.50	498.70		
3779687.79	503.70	502.60	501.60	500.60	500.80
500.10	498.80	497.70	497.00		
3779637.79	503.10	501.90	500.70	499.70	499.30
498.90	497.90	496.80	496.50		
3779587.79	502.10	501.20	500.00	498.80	498.50
498.20	498.00	496.20	494.90		
3779537.79	501.20	499.70	499.40	498.00	497.20
497.40	496.90	495.30	494.10		
3779487.79	499.80	498.40	498.30	497.20	496.50
495.40	495.00	494.20	492.70		
3779437.79	498.80	497.90	497.30	496.80	496.00
494.70	493.80	493.90	493.10		

3779387.79 | 498.00 496.50 496.00 495.70 495.10
494.40 493.50 493.40 493.00
3779337.79 | 497.70 496.20 495.60 495.30 494.40
493.50 492.60 492.30 491.60
3779287.79 | 495.80 494.50 494.10 493.70 493.10
492.10 491.10 490.80 490.20
3779237.79 | 494.70 494.00 493.40 493.00 492.00
490.90 490.10 489.50 488.90
3779187.79 | 493.90 492.90 492.30 491.80 490.90
490.30 489.60 488.90 488.10
3779137.79 | 492.90 491.80 491.10 490.50 489.80
489.50 488.80 488.10 487.30
3779087.79 | 492.00 491.40 490.80 490.10 488.90
488.10 487.30 487.00 486.00
3779037.79 | 490.80 489.90 489.50 488.90 488.10
487.40 486.30 486.40 484.60
3778987.79 | 489.90 489.20 488.70 488.20 487.20
486.50 485.60 485.10 483.80
3778937.79 | 489.10 488.20 487.80 487.10 486.20
485.40 484.60 484.00 483.00
3778887.79 | 487.80 487.40 486.70 486.00 485.30
484.80 484.10 483.20 482.30
3778837.79 | 486.70 486.30 485.90 485.00 484.30
483.90 483.30 482.60 481.50
3778787.79 | 485.90 485.40 485.00 484.30 483.40
483.10 482.20 481.60 480.90
3778737.79 | 485.00 484.50 484.00 483.20 482.60
482.10 481.20 480.40 480.00
3778687.79 | 483.10 483.10 482.80 482.30 481.60
479.90 478.90 478.40 478.00
3778637.79 | 481.90 482.30 482.10 481.90 480.30
478.10 477.70 477.20 477.20
3778587.79 | 481.00 481.30 480.80 480.80 479.70
478.20 477.60 477.20 477.20
3778537.79 | 480.10 479.80 479.20 479.40 478.80
477.80 477.20 477.20 477.30
3778487.79 | 479.30 478.80 478.30 478.40 477.90
477.40 476.90 477.10 476.80
3778437.79 | 478.60 478.00 478.10 477.50 476.90
476.20 475.90 475.90 476.10
3778387.79 | 478.00 477.40 477.60 476.40 475.90
475.30 474.00 471.50 471.50
3778337.79 | 476.90 476.40 476.90 475.40 475.00
474.50 473.50 471.40 471.30
3778287.79 | 475.80 475.20 475.70 474.70 474.00
473.40 472.80 472.00 471.30
3778237.79 | 474.80 473.80 473.90 473.90 473.00
472.50 472.10 471.50 470.70
3778187.79 | 474.30 473.30 473.00 472.80 472.00
471.60 471.10 470.70 470.10

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)					
	462879.66	462929.66	462979.66	463029.66	463079.66	463129.66
3779737.79	497.80	497.20	496.50	495.40	494.50	493.70
3779687.79	496.20	496.10	495.50	494.80	493.80	493.20
3779637.79	495.50	494.80	494.20	493.40	492.90	492.30
3779587.79	494.20	493.50	492.70	491.50	491.30	491.20
3779537.79	493.00	492.80	491.50	491.10	490.10	489.70
3779487.79	492.10	491.20	490.90	490.10	489.50	488.70
3779437.79	491.00	490.20	490.20	489.10	488.60	488.20
3779387.79	491.00	489.70	488.80	488.70	488.70	487.50
3779337.79	490.30	489.50	488.60	487.40	487.20	487.10
3779287.79	489.30	488.40	488.00	487.40	486.60	486.50
3779237.79	488.30	487.60	487.30	486.70	485.90	485.20
3779187.79	487.50	486.80	486.70	486.00	485.70	484.20
3779137.79	486.50	486.30	486.00	485.30	484.60	483.10
3779087.79	485.50	485.50	485.10	484.50	484.00	482.60
3779037.79	484.20	484.50	484.10	483.60	482.90	482.10
3778987.79	483.20	483.50	483.30	482.30	479.90	

```
  479.70
  3778937.79 |        482.50       481.90       481.30       481.00       478.50
  478.40
  3778887.79 |        481.60       481.20       480.50       480.20       480.00
  479.10
  3778837.79 |        480.80       480.30       479.60       479.20       479.70
  478.50
  3778787.79 |        480.00       479.30       479.10       478.30       477.80
  476.60
  3778737.79 |        479.40       478.50       478.00       477.50       476.80
  475.70
  3778687.79 |        477.60       477.20       476.90       476.70       476.10
  475.50
  3778637.79 |        476.90       476.60       476.30       475.80       474.60
  473.90
  3778587.79 |        477.10       476.70       476.40       475.10       473.90
  473.10
  3778537.79 |        477.00       476.70       475.30       474.30       473.50
  472.70
  3778487.79 |        476.80       476.40       474.10       473.50       472.60
  472.00
  3778437.79 |        476.20       476.10       473.60       472.50       471.80
  471.00
  3778387.79 |        474.40       473.20       472.50       471.30       470.80
  470.30
  3778337.79 |        471.20       472.00       471.10       470.20       469.70
  469.30
  3778287.79 |        470.80       470.40       469.80       469.20       468.60
  468.00
  3778237.79 |        470.20       469.80       468.80       468.20       467.50
  466.90
  3778187.79 |        469.30       468.70       468.00       467.30       466.60
  465.70
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                  PAGE 254
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                       *** GRIDDED RECEPTOR NETWORK SUMMARY ***

                                    *** NETWORK ID: UCART2   ;  NETWORK TYPE: GRIDCART
***

                                         *** X-COORDINATES OF GRID ***
                                                  (METERS)

       461181.5,  461231.5,  461281.5,  461331.5,  461381.5,  461431.5,  461481.5,
```

461531.5, 461581.5, 461631.5,
       461681.5, 461731.5, 461781.5, 461831.5, 461881.5, 461931.5, 461981.5,
462031.5, 462081.5, 462131.5,
       462181.5,

                                          *** Y-COORDINATES OF GRID ***
                                                (METERS)

     3779751.9, 3779801.9, 3779851.9, 3779901.9, 3779951.9, 3780001.9, 3780051.9,
3780101.9,

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                    *** NETWORK ID: UCART2   ; NETWORK TYPE: GRIDCART
***

                                                * ELEVATION HEIGHTS IN METERS *

    Y-COORD | X-COORD (METERS)
    (METERS) | 461181.53   461231.53   461281.53   461331.53   461381.53
461431.53   461481.53   461531.53   461581.53
 -
- -

  3780101.90 | 532.10   531.30   530.70   529.90   529.40
  528.20   529.70   527.80   525.50
  3780051.90 | 530.40   529.60   528.80   528.70   528.60
  526.70   526.60   525.80   524.80
  3780001.90 | 529.60   528.80   527.80   527.70   527.50
  525.60   525.40   524.50   523.20
  3779951.90 | 527.90   527.20   526.40   525.50   524.70
  524.40   524.10   523.80   522.30
  3779901.90 | 526.80   526.40   525.90   524.80   523.60
  523.00   522.50   522.40   521.50
  3779851.90 | 525.80   525.40   524.40   523.90   523.00
  521.90   521.90   521.30   520.40
  3779801.90 | 524.80   524.60   523.90   523.30   522.80
  520.30   520.20   519.60   518.70
  3779751.90 | 523.10   523.40   523.20   522.60   521.80
  519.70   519.60   519.00   518.10

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART2 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)									
	461631.53	461681.53	461731.53	461781.53	461831.53	461881.53	461931.53	461981.53	462031.53	
3780101.90	524.80	524.20	523.90	523.30	522.40	521.60	520.80	520.00	519.00	
3780051.90	523.50	523.30	522.80	522.70	521.60	520.60	520.10	518.80	518.30	
3780001.90	522.00	521.70	520.50	520.60	519.80	519.00	518.60	517.00	516.60	
3779951.90	520.50	519.60	518.70	518.40	518.00	517.40	517.40	515.80	515.00	
3779901.90	520.60	519.20	518.80	518.10	517.40	516.60	516.30	515.20	514.30	
3779851.90	519.90	518.60	518.10	517.10	516.60	515.70	515.10	514.20	513.40	
3779801.90	518.10	517.10	516.40	515.80	515.40	514.00	513.30	512.70	512.10	
3779751.90	517.40	516.60	515.90	514.90	514.60	513.80	513.00	512.30	511.60	

*** AERMOD - VERSION 21112 *** *** Rialto Locust - Construction
*** 05/23/22
*** AERMET - VERSION 16216 *** ***
*** 17:52:44

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART2 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)		
	462081.53	462131.53	462181.53
3780101.90	517.80	516.90	516.00
3780051.90	516.70	516.30	515.10

```
  3780001.90 |        515.70       515.60       514.50
  3779951.90 |        514.50       514.60       513.60
  3779901.90 |        513.50       513.50       512.60
  3779851.90 |        512.50       512.40       511.60
  3779801.90 |        511.80       511.20       510.50
  3779751.90 |        511.00       510.40       509.50
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                          ***       17:52:44

                                    PAGE 258
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                    *** NETWORK ID: UCART2   ;  NETWORK TYPE: GRIDCART
***

                                                 * HILL HEIGHT SCALES IN METERS *

    Y-COORD  |                                                 X-COORD (METERS)
    (METERS) |     461181.53    461231.53    461281.53    461331.53    461381.53
461431.53    461481.53    461531.53    461581.53
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -

  3780101.90 |        532.10       531.30       530.70       529.90       529.40
  528.20       529.70       527.80       525.50
  3780051.90 |        530.40       529.60       528.80       528.70       528.60
  526.70       526.60       525.80       524.80
  3780001.90 |        529.60       528.80       527.80       527.70       527.50
  525.60       525.40       524.50       523.20
  3779951.90 |        527.90       527.20       526.40       525.50       524.70
  524.40       524.10       523.80       522.30
  3779901.90 |        526.80       526.40       525.90       524.80       523.60
  523.00       522.50       522.40       521.50
  3779851.90 |        525.80       525.40       524.40       523.90       523.00
  521.90       521.90       521.30       520.40
  3779801.90 |        524.80       524.60       523.90       523.30       522.80
  520.30       520.20       519.60       518.70
  3779751.90 |        523.10       523.40       523.20       522.60       521.80
  519.70       519.60       519.00       518.10
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                          ***       17:52:44

                                    PAGE 259
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                    *** NETWORK ID: UCART2   ;  NETWORK TYPE: GRIDCART
```

***

* HILL HEIGHT SCALES IN METERS *

| Y-COORD (METERS) | X-COORD (METERS) | | |

```
  3779801.90 |        511.80       511.20       510.50
  3779751.90 |        511.00       510.40       509.50
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***       05/23/22
 *** AERMET - VERSION  16216 ***   ***
                          ***      17:52:44

                                   PAGE 261
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                        *** GRIDDED RECEPTOR NETWORK SUMMARY ***

                                   *** NETWORK ID: UCART3   ;  NETWORK TYPE: GRIDCART
***

                                          *** X-COORDINATES OF GRID ***
                                                    (METERS)

       462239.5,  462289.5,  462339.5,  462389.5,

                                          *** Y-COORDINATES OF GRID ***
                                                    (METERS)

      3779629.5, 3779679.5, 3779729.5,
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***       05/23/22
 *** AERMET - VERSION  16216 ***   ***
                          ***      17:52:44

                                   PAGE 262
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                   *** NETWORK ID: UCART3   ;  NETWORK TYPE: GRIDCART
***

                                              * ELEVATION HEIGHTS IN METERS *

    Y-COORD  |                                              X-COORD (METERS)
    (METERS) |     462239.49    462289.49    462339.49    462389.49
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -

  3779729.52 |        508.20       507.50       506.50       505.30
  3779679.52 |        507.10       506.40       505.50       504.40
  3779629.52 |        505.80       505.30       504.50       503.80
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***       05/23/22
 *** AERMET - VERSION  16216 ***   ***
                          ***      17:52:44
```

*** NETWORK ID: UCART3 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)			
	462239.49	462289.49	462339.49	462389.49
3779729.52	508.20	507.50	506.50	505.30
3779679.52	507.10	506.40	505.50	504.40
3779629.52	505.80	505.30	504.50	503.80

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART4 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

462322.8, 462372.8, 462422.8,

*** Y-COORDINATES OF GRID ***
(METERS)

3778708.1, 3778758.1, 3778808.1,

*** NETWORK ID: UCART4 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

```
    Y-COORD  |                                                X-COORD (METERS)
    (METERS) |     462322.82    462372.82    462422.82
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

  3778808.07 |        487.60       487.00       486.30
  3778758.07 |        486.70       486.00       485.60
  3778708.07 |        485.00       484.40       484.00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 266
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                  *** NETWORK ID: UCART4   ;  NETWORK TYPE: GRIDCART
***

                                             * HILL HEIGHT SCALES IN METERS *

    Y-COORD  |                                                X-COORD (METERS)
    (METERS) |     462322.82    462372.82    462422.82
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

  3778808.07 |        487.60       487.00       486.30
  3778758.07 |        486.70       486.00       485.60
  3778708.07 |        485.00       484.40       484.00
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 267
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                       *** GRIDDED RECEPTOR NETWORK SUMMARY ***

                                  *** NETWORK ID: UCART5   ;  NETWORK TYPE: GRIDCART
***

                                        *** X-COORDINATES OF GRID ***
                                                  (METERS)

       462373.1,  462423.1,

                                        *** Y-COORDINATES OF GRID ***
                                                  (METERS)
```

*** NETWORK ID: UCART5 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)	
	462373.12	462423.12
3778876.53	488.40	487.50
3778826.53	487.30	486.60

*** NETWORK ID: UCART5 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)	
	462373.12	462423.12
3778876.53	488.40	487.50
3778826.53	487.30	486.60

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***

(1=YES; 0=NO)

```
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***

(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: FONT_V9_ADJU\FONT_v9.SFC
Met Version: 16216
Profile file: FONT_V9_ADJU\FONT_v9.PFL

Surface format: FREE

Profile format: FREE

```
   Surface station no.:     3102                  Upper air station no.:     3190
                 Name: UNKNOWN                                    Name: UNKNOWN

                 Year:   2011                                     Year:   2011

 First 24 hours of scalar data
 YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN
ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -
 11 01 01   1 01  -18.5  0.194 -9.000 -9.000 -999.  204.     41.2  0.25   2.82
1.00    1.80   69.    9.1  276.4    5.5
 11 01 01   1 02  -23.8  0.239 -9.000 -9.000 -999.  281.     63.0  0.25   2.82
1.00    2.20   52.    9.1  275.4    5.5
 11 01 01   1 03  -18.5  0.194 -9.000 -9.000 -999.  205.     41.2  0.25   2.82
1.00    1.80   32.    9.1  275.4    5.5
 11 01 01   1 04   -1.4  0.067 -9.000 -9.000 -999.   57.     18.3  0.25   2.82
1.00    0.40   27.    9.1  274.2    5.5
 11 01 01   1 05  -18.6  0.194 -9.000 -9.000 -999.  204.     41.2  0.25   2.82
1.00    1.80   51.    9.1  274.2    5.5
 11 01 01   1 06  -29.7  0.296 -9.000 -9.000 -999.  387.     96.6  0.25   2.82
1.00    2.70   53.    9.1  274.2    5.5
 11 01 01   1 07  -24.0  0.239 -9.000 -9.000 -999.  282.     63.0  0.25   2.82
1.00    2.20   70.    9.1  274.2    5.5
 11 01 01   1 08   -8.4  0.138 -9.000 -9.000 -999.  127.     27.3  0.25   2.82
0.54    1.30   72.    9.1  275.4    5.5
 11 01 01   1 09   44.3  0.280  0.571  0.005  147.  356.    -43.5  0.25   2.82
0.32    2.20   67.    9.1  277.5    5.5
 11 01 01   1 10  122.7  0.264  0.952  0.005  247.  326.    -13.2  0.25   2.82
0.25    1.80   83.    9.1  279.9    5.5
 11 01 01   1 11  179.8  0.316  1.733  0.005 1017.  426.    -15.4  0.25   2.82
0.22    2.20   58.    9.1  282.0    5.5
 11 01 01   1 12  206.0  0.320  1.940  0.008 1244.  435.    -14.0  0.25   2.82
0.21    2.20  115.    9.1  283.1    5.5
 11 01 01   1 13  132.6  0.214  1.733  0.009 1377.  243.     -6.5  0.25   2.82
0.21    1.30  147.    9.1  284.2    5.5
 11 01 01   1 14  147.0  0.216  1.818  0.009 1431.  242.     -6.0  0.25   2.82
0.23    1.30  219.    9.1  284.9    5.5
 11 01 01   1 15  104.0  0.208  1.633  0.009 1468.  228.     -7.6  0.25   2.82
0.26    1.30  126.    9.1  285.4    5.5
 11 01 01   1 16   26.4  0.140  1.037  0.009 1477.  127.     -9.1  0.25   2.82
0.35    0.90  151.    9.1  284.9    5.5
 11 01 01   1 17   -9.0  0.137 -9.000 -9.000 -999.  121.     24.9  0.25   2.82
0.63    1.30   69.    9.1  283.1    5.5
 11 01 01   1 18  -33.4  0.342 -9.000 -9.000 -999.  481.    129.0  0.25   2.82
1.00    3.10   81.    9.1  281.4    5.5
 11 01 01   1 19  -33.6  0.342 -9.000 -9.000 -999.  481.    128.9  0.25   2.82
1.00    3.10   51.    9.1  279.9    5.5
 11 01 01   1 20  -23.6  0.239 -9.000 -9.000 -999.  287.     63.1  0.25   2.82
1.00    2.20   77.    9.1  278.8    5.5
```

```
 11 01 01   1 21  -18.5  0.194 -9.000 -9.000 -999.  205.     41.2  0.25   2.82
1.00    1.80   53.    9.1  277.5    5.5
 11 01 01   1 22  -23.7  0.239 -9.000 -9.000 -999.  281.     63.0  0.25   2.82
1.00    2.20   58.    9.1  277.5    5.5
 11 01 01   1 23  -18.5  0.194 -9.000 -9.000 -999.  205.     41.2  0.25   2.82
1.00    1.80   64.    9.1  277.5    5.5
 11 01 01   1 24   -4.5  0.094 -9.000 -9.000 -999.   74.     16.3  0.25   2.82
1.00    0.90   52.    9.1  277.0    5.5


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 11 01 01 01    5.5 0 -999.  -99.00   276.5   99.0  -99.00  -99.00
 11 01 01 01    9.1 1   69.    1.80  -999.0   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***       05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 272
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL       ***
                                   INCLUDING SOURCE(S):     L0008113    , L0008114
, L0008115    , L0008116    , L0008117    ,
                  L0008118    , L0008119    , L0008120    , L0008121    , L0008122
, L0008123    , L0008124    , L0008125    ,
                  L0008126    , L0008127    , L0008128    , L0008129    , L0008130
, L0008131    , L0008132    , L0008133    ,
                  L0008134    , L0008135    , L0008136    , L0008137    , L0008138
, L0008139    , L0008140    ,  . . .      ,

                                    *** NETWORK ID: UCART1   ;  NETWORK TYPE:
GRIDCART ***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                    **

    Y-COORD  |                                                 X-COORD (METERS)
    (METERS) |     462429.66    462479.66    462529.66    462579.66    462629.66
462679.66    462729.66    462779.66    462829.66
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

  3779737.79 |       0.00101      0.00105      0.00107      0.00108      0.00107
 0.00105      0.00101      0.00096      0.00090
  3779687.79 |       0.00126      0.00130      0.00132      0.00131      0.00127
```

0.00121 0.00115 0.00107 0.00099
3779637.79 | 0.00161 0.00164 0.00163 0.00158 0.00149
0.00139 0.00129 0.00118 0.00107
3779587.79 | 0.00210 0.00209 0.00201 0.00189 0.00174
0.00158 0.00142 0.00128 0.00115
3779537.79 | 0.00278 0.00265 0.00246 0.00222 0.00199
0.00176 0.00155 0.00138 0.00122
3779487.79 | 0.00367 0.00333 0.00295 0.00257 0.00222
0.00192 0.00166 0.00145 0.00126
3779437.79 | 0.00476 0.00407 0.00343 0.00287 0.00241
0.00204 0.00173 0.00148 0.00127
3779387.79 | 0.00591 0.00475 0.00381 0.00308 0.00251
0.00207 0.00173 0.00146 0.00124
3779337.79 | 0.00682 0.00515 0.00396 0.00310 0.00247
0.00201 0.00165 0.00138 0.00117
3779287.79 | 0.00706 0.00508 0.00378 0.00290 0.00229
0.00184 0.00151 0.00126 0.00106
3779237.79 | 0.00638 0.00449 0.00331 0.00253 0.00199
0.00160 0.00132 0.00111 0.00094
3779187.79 | 0.00512 0.00363 0.00270 0.00209 0.00166
0.00136 0.00113 0.00096 0.00082
3779137.79 | 0.00388 0.00283 0.00216 0.00171 0.00138
0.00114 0.00096 0.00083 0.00072
3779087.79 | 0.00298 0.00225 0.00176 0.00142 0.00117
0.00098 0.00084 0.00072 0.00063
3779037.79 | 0.00236 0.00185 0.00148 0.00121 0.00102
0.00086 0.00074 0.00065 0.00057
3778987.79 | 0.00190 0.00154 0.00126 0.00106 0.00090
0.00077 0.00067 0.00059 0.00052
3778937.79 | 0.00154 0.00129 0.00108 0.00092 0.00079
0.00069 0.00061 0.00054 0.00048
3778887.79 | 0.00126 0.00108 0.00093 0.00081 0.00071
0.00062 0.00055 0.00050 0.00045
3778837.79 | 0.00104 0.00092 0.00081 0.00071 0.00063
0.00056 0.00050 0.00046 0.00041
3778787.79 | 0.00087 0.00078 0.00070 0.00063 0.00057
0.00051 0.00046 0.00042 0.00038
3778737.79 | 0.00073 0.00067 0.00061 0.00056 0.00051
0.00046 0.00042 0.00039 0.00036
3778687.79 | 0.00063 0.00058 0.00053 0.00049 0.00046
0.00042 0.00039 0.00036 0.00033
3778637.79 | 0.00055 0.00051 0.00047 0.00044 0.00041
0.00038 0.00036 0.00033 0.00031
3778587.79 | 0.00048 0.00045 0.00042 0.00039 0.00037
0.00035 0.00033 0.00031 0.00029
3778537.79 | 0.00043 0.00040 0.00038 0.00036 0.00034
0.00032 0.00030 0.00028 0.00027
3778487.79 | 0.00038 0.00036 0.00034 0.00032 0.00031
0.00029 0.00028 0.00026 0.00025
3778437.79 | 0.00034 0.00033 0.00031 0.00030 0.00028

```
 0.00027      0.00026      0.00025      0.00023
  3778387.79 |       0.00031      0.00030      0.00029      0.00027      0.00026
 0.00025      0.00024      0.00023      0.00022
  3778337.79 |       0.00029      0.00027      0.00026      0.00025      0.00024
 0.00023      0.00022      0.00021      0.00020
  3778287.79 |       0.00026      0.00025      0.00024      0.00023      0.00022
 0.00022      0.00021      0.00020      0.00019
  3778237.79 |       0.00024      0.00023      0.00023      0.00022      0.00021
 0.00020      0.00019      0.00019      0.00018
  3778187.79 |       0.00022      0.00022      0.00021      0.00020      0.00020
 0.00019      0.00018      0.00018      0.00017
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        17:52:44

                                    PAGE 273
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL       ***
                                    INCLUDING SOURCE(S):     L0008113    , L0008114
, L0008115    , L0008116    , L0008117    ,
                  L0008118    , L0008119    , L0008120    , L0008121    , L0008122
, L0008123    , L0008124    , L0008125    ,
                  L0008126    , L0008127    , L0008128    , L0008129    , L0008130
, L0008131    , L0008132    , L0008133    ,
                  L0008134    , L0008135    , L0008136    , L0008137    , L0008138
, L0008139    , L0008140    ,  . . .      ,

                                     *** NETWORK ID: UCART1   ;  NETWORK TYPE:
GRIDCART ***

                                         ** CONC OF PM_10    IN MICROGRAMS/M**3
                    **

    Y-COORD  |                                              X-COORD (METERS)
    (METERS) |     462879.66    462929.66    462979.66    463029.66    463079.66
463129.66
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -

  3779737.79 |       0.00084      0.00079      0.00073      0.00068      0.00063
 0.00058
  3779687.79 |       0.00091      0.00084      0.00077      0.00071      0.00065
 0.00060
  3779637.79 |       0.00098      0.00089      0.00081      0.00074      0.00068
 0.00062
  3779587.79 |       0.00104      0.00093      0.00084      0.00076      0.00069
 0.00063
```

 3779537.79 | 0.00108   0.00096   0.00086   0.00077   0.00070
0.00063
 3779487.79 | 0.00111   0.00098   0.00087   0.00077   0.00069
0.00062
 3779437.79 | 0.00111   0.00097   0.00085   0.00075   0.00067
0.00060
 3779387.79 | 0.00107   0.00093   0.00081   0.00072   0.00063
0.00057
 3779337.79 | 0.00100   0.00087   0.00076   0.00067   0.00059
0.00053
 3779287.79 | 0.00091   0.00079   0.00069   0.00061   0.00054
0.00049
 3779237.79 | 0.00081   0.00070   0.00062   0.00055   0.00049
0.00044
 3779187.79 | 0.00071   0.00063   0.00055   0.00050   0.00045
0.00040
 3779137.79 | 0.00063   0.00056   0.00050   0.00045   0.00040
0.00037
 3779087.79 | 0.00056   0.00050   0.00045   0.00041   0.00037
0.00034
 3779037.79 | 0.00051   0.00046   0.00041   0.00037   0.00034
0.00032
 3778987.79 | 0.00047   0.00042   0.00038   0.00035   0.00032
0.00030
 3778937.79 | 0.00044   0.00039   0.00036   0.00033   0.00030
0.00028
 3778887.79 | 0.00040   0.00037   0.00034   0.00031   0.00029
0.00027
 3778837.79 | 0.00038   0.00035   0.00032   0.00030   0.00027
0.00026
 3778787.79 | 0.00035   0.00032   0.00030   0.00028   0.00026
0.00024
 3778737.79 | 0.00033   0.00030   0.00028   0.00026   0.00025
0.00023
 3778687.79 | 0.00031   0.00029   0.00027   0.00025   0.00023
0.00022
 3778637.79 | 0.00029   0.00027   0.00025   0.00024   0.00022
0.00021
 3778587.79 | 0.00027   0.00025   0.00024   0.00023   0.00021
0.00020
 3778537.79 | 0.00025   0.00024   0.00023   0.00021   0.00020
0.00019
 3778487.79 | 0.00024   0.00023   0.00022   0.00020   0.00019
0.00018
 3778437.79 | 0.00022   0.00021   0.00020   0.00019   0.00019
0.00018
 3778387.79 | 0.00021   0.00020   0.00019   0.00018   0.00018
0.00017
 3778337.79 | 0.00020   0.00019   0.00018   0.00018   0.00017
0.00016

```
  3778287.79 |       0.00019      0.00018      0.00017      0.00017      0.00016
 0.00016
  3778237.79 |       0.00018      0.00017      0.00016      0.00016      0.00015
 0.00015
  3778187.79 |       0.00017      0.00016      0.00016      0.00015      0.00015
 0.00014
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***       05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 274
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL       ***
                                   INCLUDING SOURCE(S):     L0008113    , L0008114
, L0008115    , L0008116    , L0008117    ,
                   L0008118    , L0008119    , L0008120    , L0008121    , L0008122
, L0008123    , L0008124    , L0008125    ,
                   L0008126    , L0008127    , L0008128    , L0008129    , L0008130
, L0008131    , L0008132    , L0008133    ,
                   L0008134    , L0008135    , L0008136    , L0008137    , L0008138
, L0008139    , L0008140    ,  . . .      ,

                                    *** NETWORK ID: UCART2   ;  NETWORK TYPE:
GRIDCART ***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                   **

    Y-COORD  |                                                 X-COORD (METERS)
    (METERS) |     461181.53    461231.53    461281.53    461331.53    461381.53
461431.53    461481.53    461531.53    461581.53
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

  3780101.90 |       0.00012      0.00012      0.00013      0.00013      0.00014
 0.00015      0.00016      0.00017      0.00019
  3780051.90 |       0.00012      0.00013      0.00013      0.00014      0.00015
 0.00016      0.00017      0.00018      0.00020
  3780001.90 |       0.00013      0.00014      0.00014      0.00015      0.00015
 0.00016      0.00017      0.00019      0.00021
  3779951.90 |       0.00014      0.00015      0.00015      0.00016      0.00017
 0.00017      0.00019      0.00020      0.00022
  3779901.90 |       0.00015      0.00015      0.00016      0.00017      0.00018
 0.00019      0.00020      0.00021      0.00023
  3779851.90 |       0.00016      0.00017      0.00017      0.00018      0.00019
 0.00020      0.00021      0.00023      0.00025
  3779801.90 |       0.00017      0.00018      0.00019      0.00019      0.00020
```

                                *** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL   ***
                                    INCLUDING SOURCE(S):   L0008113   , L0008114
, L0008115   , L0008116   , L0008117   ,
                   L0008118   , L0008119   , L0008120   , L0008121   , L0008122
, L0008123   , L0008124   , L0008125   ,
                   L0008126   , L0008127   , L0008128   , L0008129   , L0008130
, L0008131   , L0008132   , L0008133   ,
                   L0008134   , L0008135   , L0008136   , L0008137   , L0008138
, L0008139   , L0008140   , . . .   ,

                                     *** NETWORK ID: UCART2   ; NETWORK TYPE:
GRIDCART ***

                                          ** CONC OF PM_10   IN MICROGRAMS/M**3
                   **

    Y-COORD | X-COORD (METERS)
    (METERS) | 461631.53   461681.53   461731.53   461781.53   461831.53
461881.53   461931.53   461981.53   462031.53
 -
- -

  3780101.90 | 0.00020   0.00020   0.00021   0.00021   0.00022
 0.00022   0.00023   0.00024   0.00025
  3780051.90 | 0.00021   0.00022   0.00023   0.00023   0.00024
 0.00024   0.00025   0.00026   0.00027
  3780001.90 | 0.00022   0.00024   0.00025   0.00026   0.00026
 0.00027   0.00028   0.00030   0.00031
  3779951.90 | 0.00024   0.00026   0.00028   0.00029   0.00030
 0.00031   0.00032   0.00033   0.00035
  3779901.90 | 0.00025   0.00028   0.00030   0.00032   0.00033
 0.00035   0.00036   0.00038   0.00040
  3779851.90 | 0.00027   0.00030   0.00033   0.00035   0.00037
 0.00039   0.00041   0.00043   0.00046
  3779801.90 | 0.00029   0.00033   0.00036   0.00040   0.00043
 0.00046   0.00048   0.00051   0.00054
  3779751.90 | 0.00032   0.00036   0.00040   0.00044   0.00048
 0.00052   0.00056   0.00060   0.00064

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0008113 , L0008114 , L0008115 , L0008116 , L0008117 , L0008118 , L0008119 , L0008120 , L0008121 , L0008122 , L0008123 , L0008124 , L0008125 , L0008126 , L0008127 , L0008128 , L0008129 , L0008130 , L0008131 , L0008132 , L0008133 , L0008134 , L0008135 , L0008136 , L0008137 , L0008138 , L0008139 , L0008140 , . . . ,

*** NETWORK ID: UCART2 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)		
	462081.53	462131.53	462181.53
3780101.90	0.00026	0.00028	0.00029
3780051.90	0.00029	0.00031	0.00032
3780001.90	0.00033	0.00034	0.00036
3779951.90	0.00037	0.00039	0.00041
3779901.90	0.00042	0.00044	0.00047
3779851.90	0.00049	0.00051	0.00055
3779801.90	0.00057	0.00061	0.00064
3779751.90	0.00068	0.00073	0.00077

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0008113 , L0008114 , L0008115 , L0008116 , L0008117 ,

```
                 L0008118    , L0008119    , L0008120    , L0008121    , L0008122
, L0008123    , L0008124    , L0008125    ,
                 L0008126    , L0008127    , L0008128    , L0008129    , L0008130
, L0008131    , L0008132    , L0008133    ,
                 L0008134    , L0008135    , L0008136    , L0008137    , L0008138
, L0008139    , L0008140    ,  . . .      ,

                                  *** NETWORK ID: UCART3   ;  NETWORK TYPE:
GRIDCART ***

                                       ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

    Y-COORD  |                                                 X-COORD (METERS)
    (METERS) |     462239.49    462289.49    462339.49    462389.49
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

  3779729.52 |       0.00089      0.00093      0.00097      0.00101
  3779679.52 |       0.00111      0.00116      0.00122      0.00127
  3779629.52 |       0.00143      0.00150      0.00157      0.00164
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***       05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***       17:52:44

                                  PAGE 278
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL       ***
                                  INCLUDING SOURCE(S):     L0008113    , L0008114
, L0008115    , L0008116    , L0008117    ,
                 L0008118    , L0008119    , L0008120    , L0008121    , L0008122
, L0008123    , L0008124    , L0008125    ,
                 L0008126    , L0008127    , L0008128    , L0008129    , L0008130
, L0008131    , L0008132    , L0008133    ,
                 L0008134    , L0008135    , L0008136    , L0008137    , L0008138
, L0008139    , L0008140    ,  . . .      ,

                                  *** NETWORK ID: UCART4   ;  NETWORK TYPE:
GRIDCART ***

                                       ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

    Y-COORD  |                                                 X-COORD (METERS)
    (METERS) |     462322.82    462372.82    462422.82
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
```

```
  3778808.07 |       0.00119      0.00106      0.00095
  3778758.07 |       0.00097      0.00088      0.00080
  3778708.07 |       0.00080      0.00074      0.00068
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***       05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 279
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL       ***
                                   INCLUDING SOURCE(S):     L0008113    , L0008114
, L0008115    , L0008116    , L0008117    ,
                  L0008118    , L0008119    , L0008120    , L0008121    , L0008122
, L0008123    , L0008124    , L0008125    ,
                  L0008126    , L0008127    , L0008128    , L0008129    , L0008130
, L0008131    , L0008132    , L0008133    ,
                  L0008134    , L0008135    , L0008136    , L0008137    , L0008138
, L0008139    , L0008140    ,  . . .      ,

                                    *** NETWORK ID: UCART5   ;  NETWORK TYPE:
GRIDCART ***

                                         ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

    Y-COORD  |                                              X-COORD (METERS)
    (METERS) |     462373.12    462423.12
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

  3778876.53 |       0.00143      0.00123
  3778826.53 |       0.00115      0.00101
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***       05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 280
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                               *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                   INCLUDING SOURCE(S):     L0008113    , L0008114
, L0008115    , L0008116    , L0008117    ,
                  L0008118    , L0008119    , L0008120    , L0008121    , L0008122
, L0008123    , L0008124    , L0008125    ,
```

```
                 L0008126    , L0008127    , L0008128    , L0008129    , L0008130
, L0008131    , L0008132    , L0008133    ,
                 L0008134    , L0008135    , L0008136    , L0008137    , L0008138
, L0008139    , L0008140    ,  . . .      ,

                                  *** NETWORK ID: UCART1   ;  NETWORK TYPE:
GRIDCART ***

                                       ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

  Y-COORD  |                                                  X-COORD (METERS)
  (METERS) |       462429.66               462479.66              462529.66
      462579.66              462629.66
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

 3779737.8 |      0.16358 (16021808)      0.13986 (13011008)      0.12094 (13011008)
     0.09856 (13011008)      0.09511 (12021308)
 3779687.8 |      0.16028 (13011008)      0.14098 (13011008)      0.11534 (13011008)
     0.10875 (12021308)      0.11400 (12021308)
 3779637.8 |      0.17333 (13011008)      0.14077 (13011008)      0.12604 (12021308)
     0.13210 (12021308)      0.12594 (12021308)
 3779587.8 |      0.17436 (13011008)      0.14846 (12021308)      0.15542 (12021308)
     0.14600 (12021308)      0.13780 (11111815)
 3779537.8 |      0.17874 (12021308)      0.18673 (12021308)      0.17189 (12021308)
     0.16201 (11111815)      0.12489 (11111815)
 3779487.8 |      0.23029 (12021308)      0.21412 (11111815)      0.19071 (11111815)
     0.13438 (11111815)      0.09300 (13121910)
 3779437.8 |      0.27537 (11111815)      0.22247 (11111815)      0.14205 (11111815)
     0.10452 (16120615)      0.08878 (16120615)
 3779387.8 |      0.25974 (11111815)      0.16345 (13121910)      0.12759 (16120615)
     0.10784 (13012315)      0.09559 (13121908)
 3779337.8 |      0.19903 (16120615)      0.16533 (13121908)      0.15990 (13121908)
     0.15260 (13121908)      0.14370 (13121908)
 3779287.8 |      0.28960 (13121908)      0.25302 (13121908)      0.22287 (13121908)
     0.19675 (13121908)      0.17400 (13121908)
 3779237.8 |      0.34433 (13121908)      0.27943 (13121908)      0.23121 (13121908)
     0.19456 (13121908)      0.16838 (12121715)
 3779187.8 |      0.41297 (12121715)      0.33962 (12121715)      0.28531 (12121715)
     0.24364 (12121715)      0.21072 (12121715)
 3779137.8 |      0.28873 (12121715)      0.24583 (12121715)      0.21318 (12121715)
     0.18732 (12121715)      0.16626 (12121715)
 3779087.8 |      0.25479 (11011708)      0.19607 (15011308)      0.15209 (15011308)
     0.12021 (15040108)      0.10767 (15040108)
 3779037.8 |      0.29157 (11011708)      0.22877 (11011708)      0.17315 (11011708)
     0.14145 (15011308)      0.11668 (15011308)
 3778987.8 |      0.24814 (11011708)      0.23000 (11011708)      0.19836 (11011708)
     0.16244 (11011708)      0.12786 (11011708)
 3778937.8 |      0.21762 (15012308)      0.18645 (13102408)      0.18106 (11011708)
```

```
    0.16688 (11011708)      0.14532 (11011708)
 3778887.8 |      0.20822 (15012308)      0.17554 (15012308)      0.15123 (13102408)
    0.14245 (11011708)      0.13844 (11011708)
 3778837.8 |      0.17718 (15012108)      0.16993 (15012308)      0.14591 (15012308)
    0.12297 (13102408)      0.11308 (11011708)
 3778787.8 |      0.13871 (15012108)      0.14874 (15012108)      0.14244 (15012308)
    0.12371 (15012308)      0.10024 (13102408)
 3778737.8 |      0.11175 (13032208)      0.12082 (15012108)      0.12697 (15012108)
    0.12110 (15012308)      0.10656 (15012308)
 3778687.8 |      0.07894 (13032208)      0.09660 (13032208)      0.10597 (15012108)
    0.10967 (15012108)      0.10479 (15012308)
 3778637.8 |      0.07018 (12121908)      0.07447 (13032208)      0.08357 (15012108)
    0.09449 (15012108)      0.09566 (15012108)
 3778587.8 |      0.07357 (12121908)      0.06020 (11122008)      0.06945 (13032208)
    0.07638 (15012108)      0.08391 (15012108)
 3778537.8 |      0.07497 (12121908)      0.05416 (12121908)      0.05428 (11122008)
    0.06383 (13032208)      0.06960 (15012108)
 3778487.8 |      0.07469 (12121908)      0.05718 (12121908)      0.04800 (11122008)
    0.05052 (13032208)      0.05793 (13032208)
 3778437.8 |      0.07307 (12121908)      0.05900 (12121908)      0.04327 (12121908)
    0.04457 (11122008)      0.04860 (13032208)
 3778387.8 |      0.07045 (12121908)      0.05972 (12121908)      0.04607 (12121908)
    0.03949 (11122008)      0.04091 (11122008)
 3778337.8 |      0.06683 (12121908)      0.05922 (12121908)      0.04795 (12121908)
    0.03516 (12121908)      0.03715 (11122008)
 3778287.8 |      0.06279 (12121908)      0.05781 (12121908)      0.04882 (12121908)
    0.03750 (12121908)      0.03304 (11122008)
 3778237.8 |      0.05857 (12121908)      0.05569 (12121908)      0.04873 (12121908)
    0.03923 (12121908)      0.02919 (12121908)
 3778187.8 |      0.05447 (12121908)      0.05344 (12121908)      0.04829 (12121908)
    0.04029 (12121908)      0.03114 (12121908)
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                           ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                           ***        17:52:44

                                      PAGE 281
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                  *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                      INCLUDING SOURCE(S):     L0008113    , L0008114
, L0008115    , L0008116    , L0008117    ,
                  L0008118    , L0008119    , L0008120    , L0008121    , L0008122
, L0008123    , L0008124    , L0008125    ,
                  L0008126    , L0008127    , L0008128    , L0008129    , L0008130
, L0008131    , L0008132    , L0008133    ,
                  L0008134    , L0008135    , L0008136    , L0008137    , L0008138
, L0008139    , L0008140    ,  . . .      ,
```

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 462679.66	462729.66	462779.66	462829.66	462879.66
3779737.8	0.09976 (12021308)	0.09725 (12021308)	0.08896 (12021308)	0.08269 (11111815)	0.06943 (11111815)
3779687.8	0.11004 (12021308)	0.09906 (12021308)	0.09268 (11111815)	0.07363 (11111815)	0.05353 (12021308)
3779637.8	0.11687 (11111815)	0.10352 (11111815)	0.07700 (11111815)	0.05551 (12021308)	0.04801 (13121910)
3779587.8	0.11474 (11111815)	0.07941 (11111815)	0.06087 (13121910)	0.05038 (13121910)	0.04492 (16120615)
3779537.8	0.08205 (12021308)	0.06661 (13121910)	0.05735 (16120615)	0.05023 (16120615)	0.04509 (13012315)
3779487.8	0.07579 (16120615)	0.06546 (16120615)	0.05831 (13012315)	0.05099 (13012315)	0.04502 (11041813)
3779437.8	0.07783 (13012315)	0.06687 (11041813)	0.06291 (13121908)	0.06388 (13121908)	0.06375 (13121908)
3779387.8	0.09560 (13121908)	0.09421 (13121908)	0.09214 (13121908)	0.08922 (13121908)	0.08522 (13121908)
3779337.8	0.13430 (13121908)	0.12487 (13121908)	0.11609 (13121908)	0.10750 (13121908)	0.09916 (13121908)
3779287.8	0.15406 (13121908)	0.13692 (13121908)	0.12272 (13121908)	0.11021 (13121908)	0.09919 (13121908)
3779237.8	0.14822 (12121715)	0.13169 (12121715)	0.11791 (12121715)	0.10627 (12121715)	0.09633 (12121715)
3779187.8	0.18433 (12121715)	0.16274 (12121715)	0.14483 (12121715)	0.12978 (12121715)	0.11704 (12121715)
3779137.8	0.14887 (12121715)	0.13414 (12121715)	0.12158 (12121715)	0.11074 (12121715)	0.10134 (12121715)
3779087.8	0.09582 (15040108)	0.08487 (15040108)	0.07488 (15040108)	0.06604 (15040108)	0.06247 (12121715)
3779037.8	0.09555 (15011308)	0.07775 (15011308)	0.06388 (15011308)	0.05853 (11042110)	0.05444 (11042110)
3778987.8	0.10781 (15011308)	0.09277 (15011308)	0.07918 (15011308)	0.06671 (15011308)	0.05629 (15011308)
3778937.8	0.12173 (11011708)	0.09912 (11011708)	0.08529 (15011308)	0.07562 (15011308)	0.06649 (15011308)
3778887.8	0.12761 (11011708)	0.11254 (11011708)	0.09596 (11011708)	0.07990 (11011708)	0.06947 (15011308)
3778837.8	0.11482 (11011708)	0.11033 (11011708)	0.10151 (11011708)	0.08999 (11011708)	0.07797 (11011708)

```
 3778787.8 |      0.09103 (11011708)      0.09498 (11011708)      0.09449 (11011708)
     0.09007 (11011708)      0.08283 (11011708)
 3778737.8 |      0.08693 (15012308)      0.07904 (13102408)      0.07874 (11011708)
     0.08071 (11011708)      0.07931 (11011708)
 3778687.8 |      0.09221 (15012308)      0.07626 (15012308)      0.06934 (13102408)
     0.06526 (11011708)      0.06846 (11011708)
 3778637.8 |      0.09032 (15012308)      0.08112 (15012308)      0.06841 (15012308)
     0.06111 (13102408)      0.05589 (13102408)
 3778587.8 |      0.08427 (15012108)      0.08082 (15012308)      0.07308 (15012308)
     0.06265 (15012308)      0.05379 (13102408)
 3778537.8 |      0.07527 (15012108)      0.07560 (15012108)      0.07296 (15012308)
     0.06661 (15012308)      0.05757 (15012308)
 3778487.8 |      0.06396 (15012108)      0.06849 (15012108)      0.06879 (15012108)
     0.06631 (15012308)      0.06079 (15012308)
 3778437.8 |      0.05205 (13032208)      0.05892 (15012108)      0.06260 (15012108)
     0.06253 (15012108)      0.06055 (15012308)
 3778387.8 |      0.04598 (13032208)      0.04847 (15012108)      0.05331 (15012108)
     0.05610 (15012108)      0.05582 (15012308)
 3778337.8 |      0.03743 (11122008)      0.04292 (13032208)      0.04521 (15012108)
     0.04991 (15012108)      0.05203 (15012108)
 3778287.8 |      0.03466 (11122008)      0.03618 (13032208)      0.03962 (13032208)
     0.04296 (15012108)      0.04673 (15012108)
 3778237.8 |      0.03148 (11122008)      0.03222 (11122008)      0.03490 (13032208)
     0.03627 (13032208)      0.04056 (15012108)
 3778187.8 |      0.02810 (11122008)      0.02978 (11122008)      0.02983 (11122008)
     0.03323 (13032208)      0.03419 (15012108)
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        17:52:44

                                    PAGE 282
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                    INCLUDING SOURCE(S):     L0008113    , L0008114
, L0008115    , L0008116    , L0008117    ,
                  L0008118    , L0008119    , L0008120    , L0008121    , L0008122
, L0008123    , L0008124    , L0008125    ,
                  L0008126    , L0008127    , L0008128    , L0008129    , L0008130
, L0008131    , L0008132    , L0008133    ,
                  L0008134    , L0008135    , L0008136    , L0008137    , L0008138
, L0008139    , L0008140    ,  . . .      ,

                                    *** NETWORK ID: UCART1   ;  NETWORK TYPE:
GRIDCART ***

                                         ** CONC OF PM_10    IN MICROGRAMS/M**3
                    **
```

Y-COORD (METERS)	X-COORD (METERS)				
	462929.66	462979.66	463029.66	463079.66	463129.66
3779737.8	0.05147 (12021308)	0.04027 (12021308)	0.03659 (13121910)	0.03129 (13121910)	0.02650 (16120615)
3779687.8	0.04418 (13121910)	0.03848 (13121910)	0.03185 (16120615)	0.02954 (16120615)	0.02848 (13112010)
3779637.8	0.03910 (13121910)	0.03605 (16120615)	0.03275 (13112010)	0.03037 (13112010)	0.02859 (13012315)
3779587.8	0.03971 (16120615)	0.03634 (13012315)	0.03383 (13012315)	0.03012 (13012315)	0.02735 (11041813)
3779537.8	0.04077 (13012315)	0.03605 (11041813)	0.03310 (12110815)	0.03367 (12110815)	0.03427 (13121908)
3779487.8	0.04444 (13121908)	0.04560 (13121908)	0.04624 (13121908)	0.04655 (13121908)	0.04649 (13121908)
3779437.8	0.06336 (13121908)	0.06271 (13121908)	0.06135 (13121908)	0.05985 (13121908)	0.05815 (13121908)
3779387.8	0.08122 (13121908)	0.07726 (13121908)	0.07358 (13121908)	0.06995 (13121908)	0.06603 (13121908)
3779337.8	0.09168 (13121908)	0.08475 (13121908)	0.07827 (13121908)	0.07274 (13121908)	0.06770 (13121908)
3779287.8	0.08960 (13121908)	0.08146 (13121908)	0.07423 (13121908)	0.06778 (13121908)	0.06231 (13121908)
3779237.8	0.08776 (12121715)	0.08034 (12121715)	0.07383 (12121715)	0.06808 (12121715)	0.06299 (12121715)
3779187.8	0.10612 (12121715)	0.09674 (12121715)	0.08852 (12121715)	0.08134 (12121715)	0.07495 (12121715)
3779137.8	0.09316 (12121715)	0.08593 (12121715)	0.07949 (12121715)	0.07375 (12121715)	0.06857 (12121715)
3779087.8	0.05930 (12121715)	0.05629 (12121715)	0.05346 (12121715)	0.05081 (12121715)	0.04828 (12121715)
3779037.8	0.05010 (11042110)	0.04572 (11042110)	0.04211 (15040108)	0.03896 (15040108)	0.03598 (15040108)
3778987.8	0.04773 (15011308)	0.04035 (15011308)	0.03844 (11042110)	0.03691 (11042110)	0.03506 (11042110)
3778937.8	0.05790 (15011308)	0.05012 (15011308)	0.04331 (15011308)	0.03684 (15011308)	0.03182 (15011308)
3778887.8	0.06328 (15011308)	0.05682 (15011308)	0.05067 (15011308)	0.04489 (15011308)	0.03940 (15011308)
3778837.8	0.06630 (11011708)	0.05801 (15011308)	0.05376 (15011308)	0.04949 (15011308)	0.04466 (15011308)
3778787.8	0.07422 (11011708)	0.06527 (11011708)	0.05615 (11011708)	0.04936 (15011308)	0.04614 (15011308)
3778737.8	0.07516 (11011708)	0.06945 (11011708)	0.06269 (11011708)	0.05543 (11011708)	0.04813 (11011708)
3778687.8	0.06908 (11011708)	0.06748 (11011708)	0.06411 (11011708)		

```
     0.05930 (11011708)      0.05376 (11011708)
 3778637.8 |      0.05877 (11011708)      0.06059 (11011708)      0.06040 (11011708)
     0.05827 (11011708)      0.05509 (11011708)
 3778587.8 |      0.05149 (13102408)      0.05083 (11011708)      0.05295 (11011708)
     0.05353 (11011708)      0.05282 (11011708)
 3778537.8 |      0.04765 (15012308)      0.04712 (13102408)      0.04348 (11011708)
     0.04614 (11011708)      0.04755 (11011708)
 3778487.8 |      0.05299 (15012308)      0.04380 (15012308)      0.04291 (13102408)
     0.03914 (13102408)      0.04028 (11011708)
 3778437.8 |      0.05572 (15012308)      0.04828 (15012308)      0.04069 (15012308)
     0.03891 (13102408)      0.03686 (13102408)
 3778387.8 |      0.05469 (15012308)      0.05034 (15012308)      0.04434 (15012308)
     0.03790 (15012308)      0.03519 (13102408)
 3778337.8 |      0.05190 (15012308)      0.04998 (15012308)      0.04613 (15012308)
     0.04109 (15012308)      0.03545 (15012308)
 3778287.8 |      0.04826 (15012108)      0.04762 (15012308)      0.04597 (15012308)
     0.04265 (15012308)      0.03820 (15012308)
 3778237.8 |      0.04370 (15012108)      0.04469 (15012108)      0.04405 (15012308)
     0.04252 (15012308)      0.03957 (15012308)
 3778187.8 |      0.03825 (15012108)      0.04077 (15012108)      0.04155 (15012108)
     0.04091 (15012308)      0.03945 (15012308)
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        17:52:44

                                    PAGE 283
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                    INCLUDING SOURCE(S):     L0008113    , L0008114
, L0008115    , L0008116    , L0008117    ,
                  L0008118    , L0008119    , L0008120    , L0008121    , L0008122
, L0008123    , L0008124    , L0008125    ,
                  L0008126    , L0008127    , L0008128    , L0008129    , L0008130
, L0008131    , L0008132    , L0008133    ,
                  L0008134    , L0008135    , L0008136    , L0008137    , L0008138
, L0008139    , L0008140    ,  . . .      ,

                                     *** NETWORK ID: UCART2   ;  NETWORK TYPE:
GRIDCART ***

                                          ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

  Y-COORD  |                                                  X-COORD (METERS)
  (METERS) |       461181.53              461231.53              461281.53
      461331.53              461381.53
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 3780101.9 |      0.06075 (12022708)      0.05560 (12022708)      0.04682 (12022708)
     0.03613 (12022708)      0.05383 (11021108)
 3780051.9 |      0.07404 (16010708)      0.06569 (12022708)      0.06038 (12022708)
     0.05071 (12022708)      0.03864 (12022708)
 3780001.9 |      0.12665 (16010708)      0.08872 (16010708)      0.07102 (12022708)
     0.06534 (12022708)      0.05479 (12022708)
 3779951.9 |      0.18148 (16010708)      0.14686 (16010708)      0.10628 (16010708)
     0.07710 (12022708)      0.07153 (12022708)
 3779901.9 |      0.21620 (16010708)      0.20201 (16010708)      0.16897 (16010708)
     0.12566 (16010708)      0.08389 (12022708)
 3779851.9 |      0.21368 (16010708)      0.22987 (16010708)      0.22138 (16010708)
     0.19208 (16010708)      0.14751 (16010708)
 3779801.9 |      0.22107 (15122208)      0.21554 (16010708)      0.24096 (16010708)
     0.24271 (16010708)      0.21836 (16010708)
 3779751.9 |      0.23158 (16123008)      0.24186 (16123008)      0.23000 (16123008)
     0.24968 (16010708)      0.26156 (16010708)
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                           ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                          ***        17:52:44

                                    PAGE 284
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                    INCLUDING SOURCE(S):     L0008113    , L0008114
, L0008115    , L0008116    , L0008117    ,
                  L0008118    , L0008119    , L0008120    , L0008121    , L0008122
, L0008123    , L0008124    , L0008125    ,
                  L0008126    , L0008127    , L0008128    , L0008129    , L0008130
, L0008131    , L0008132    , L0008133    ,
                  L0008134    , L0008135    , L0008136    , L0008137    , L0008138
, L0008139    , L0008140    ,  . . .      ,

                                    *** NETWORK ID: UCART2   ;  NETWORK TYPE:
GRIDCART ***

                                         ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

  Y-COORD  |                                                  X-COORD (METERS)
  (METERS) |       461431.53              461481.53              461531.53
      461581.53              461631.53
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -

 3780101.9 |      0.09314 (11021108)      0.13388 (11021108)      0.19281 (13020508)
```

```
    0.24104 (13020508)      0.24220 (13020508)
 3780051.9 |      0.06995 (11021108)      0.11433 (11021108)      0.16060 (11021108)
    0.22011 (13020508)      0.25223 (16120708)
 3780001.9 |      0.04791 (11021108)      0.08805 (11021108)      0.13980 (11021108)
    0.18657 (11021108)      0.24555 (16120708)
 3779951.9 |      0.06021 (12022708)      0.06210 (11021108)      0.11088 (11021108)
    0.16886 (11021108)      0.21936 (16120708)
 3779901.9 |      0.07820 (12022708)      0.06586 (12022708)      0.08071 (11021108)
    0.13969 (11021108)      0.20036 (11021108)
 3779851.9 |      0.10038 (16010708)      0.08582 (12022708)      0.07212 (12022708)
    0.10501 (11021108)      0.17295 (11021108)
 3779801.9 |      0.16948 (16010708)      0.12002 (16010708)      0.09485 (12022708)
    0.07987 (12022708)      0.13602 (11021108)
 3779751.9 |      0.23668 (16010708)      0.19793 (16010708)      0.14310 (16010708)
    0.10538 (12022708)      0.09488 (11021108)
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       17:52:44

                                   PAGE 285
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                   INCLUDING SOURCE(S):     L0008113    , L0008114
, L0008115    , L0008116    , L0008117    ,
                  L0008118    , L0008119    , L0008120    , L0008121    , L0008122
, L0008123    , L0008124    , L0008125    ,
                  L0008126    , L0008127    , L0008128    , L0008129    , L0008130
, L0008131    , L0008132    , L0008133    ,
                  L0008134    , L0008135    , L0008136    , L0008137    , L0008138
, L0008139    , L0008140    ,  . . .      ,

                                    *** NETWORK ID: UCART2   ;  NETWORK TYPE:
GRIDCART ***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

  Y-COORD  |                                                  X-COORD (METERS)
  (METERS) |       461681.53              461731.53              461781.53
      461831.53              461881.53
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -

 3780101.9 |      0.23116 (13112108)      0.21537 (13112108)      0.15692 (13112108)
    0.08933 (13112108)      0.04067 (13112108)
 3780051.9 |      0.23305 (16120708)      0.24005 (13112108)      0.19662 (13112108)
    0.12359 (13112108)      0.06102 (13112108)
```

```
 3780001.9 |      0.26024 (16120708)      0.24759 (13112108)      0.23014 (13112108)
     0.16283 (13112108)      0.08923 (13112108)
 3779951.9 |      0.26363 (16120708)      0.24809 (16120708)      0.25111 (13112108)
     0.20205 (13112108)      0.12433 (13112108)
 3779901.9 |      0.25556 (16120708)      0.28184 (16120708)      0.27044 (13112108)
     0.24361 (13112108)      0.16686 (13112108)
 3779851.9 |      0.23386 (11021108)      0.28865 (16120708)      0.27984 (16120708)
     0.27702 (13112108)      0.21343 (13112108)
 3779801.9 |      0.21201 (11021108)      0.26662 (11021108)      0.29778 (16120708)
     0.29181 (13112108)      0.24967 (13112108)
 3779751.9 |      0.17337 (11021108)      0.25531 (11021108)      0.29736 (11021108)
     0.30403 (16120708)      0.29386 (13112108)
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                          ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        17:52:44

                                    PAGE 286
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                    INCLUDING SOURCE(S):     L0008113    , L0008114
, L0008115    , L0008116    , L0008117    ,
                   L0008118    , L0008119    , L0008120    , L0008121    , L0008122
, L0008123    , L0008124    , L0008125    ,
                   L0008126    , L0008127    , L0008128    , L0008129    , L0008130
, L0008131    , L0008132    , L0008133    ,
                   L0008134    , L0008135    , L0008136    , L0008137    , L0008138
, L0008139    , L0008140    ,  . . .      ,

                                    *** NETWORK ID: UCART2   ;  NETWORK TYPE:
GRIDCART ***

                                         ** CONC OF PM_10    IN MICROGRAMS/M**3
                   **

  Y-COORD  |                                                  X-COORD (METERS)
  (METERS) |       461931.53              461981.53              462031.53
      462081.53              462131.53
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

 3780101.9 |      0.04074 (11021608)      0.05106 (11021608)      0.11292 (12011608)
     0.18679 (12011608)      0.22808 (12011608)
 3780051.9 |      0.04106 (11021608)      0.05322 (11021608)      0.11558 (12011608)
     0.19043 (12011608)      0.23708 (12011608)
 3780001.9 |      0.04117 (11021608)      0.05515 (11021608)      0.11622 (12011608)
     0.19426 (12011608)      0.24553 (12011608)
 3779951.9 |      0.05945 (13112108)      0.05719 (11021608)      0.11576 (12011608)
```

```
    0.19529 (12011608)      0.24998 (12011608)
 3779901.9 |      0.08794 (13112108)      0.06077 (16010515)      0.11771 (12011608)
    0.19692 (12011608)      0.25136 (12011608)
 3779851.9 |      0.12522 (13112108)      0.06616 (16010515)      0.11853 (12011608)
    0.19687 (12011608)      0.24998 (12011608)
 3779801.9 |      0.16585 (13112108)      0.08492 (13112108)      0.11607 (12011608)
    0.20037 (12011608)      0.24176 (12011608)
 3779751.9 |      0.21959 (13112108)      0.12305 (13112108)      0.11852 (12011608)
    0.20075 (12011608)      0.24348 (11121408)
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                        ***        17:52:44

                                   PAGE 287
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                               *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                   INCLUDING SOURCE(S):     L0008113    , L0008114
, L0008115    , L0008116    , L0008117    ,
                L0008118    , L0008119    , L0008120    , L0008121    , L0008122
, L0008123    , L0008124    , L0008125    ,
                L0008126    , L0008127    , L0008128    , L0008129    , L0008130
, L0008131    , L0008132    , L0008133    ,
                L0008134    , L0008135    , L0008136    , L0008137    , L0008138
, L0008139    , L0008140    ,  . . .      ,

                                *** NETWORK ID: UCART2   ;  NETWORK TYPE:
GRIDCART ***

                                    ** CONC OF PM_10    IN MICROGRAMS/M**3
                **

  Y-COORD  |                                                 X-COORD (METERS)
  (METERS) |       462181.53
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

 3780101.9 |      0.20848 (12011608)
 3780051.9 |      0.21267 (11121408)
 3780001.9 |      0.22755 (11121408)
 3779951.9 |      0.24126 (11121408)
 3779901.9 |      0.25430 (11121408)
 3779851.9 |      0.26708 (11121408)
 3779801.9 |      0.27747 (11121408)
 3779751.9 |      0.28772 (11121408)
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
```

                            *** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL   ***
                                INCLUDING SOURCE(S):   L0008113   , L0008114
, L0008115   , L0008116   , L0008117   ,
                  L0008118   , L0008119   , L0008120   , L0008121   , L0008122
, L0008123   , L0008124   , L0008125   ,
                  L0008126   , L0008127   , L0008128   , L0008129   , L0008130
, L0008131   , L0008132   , L0008133   ,
                  L0008134   , L0008135   , L0008136   , L0008137   , L0008138
, L0008139   , L0008140   , . . .   ,

                                 *** NETWORK ID: UCART3   ; NETWORK TYPE:
GRIDCART ***

                                      ** CONC OF PM_10   IN MICROGRAMS/M**3
                  **

  Y-COORD | X-COORD (METERS)
  (METERS) | 462239.49   462289.49   462339.49
      462389.49
 -
- -

 3779729.5 | 0.23063 (11121408)   0.14433 (16021808)   0.19955 (16021808)
     0.19961 (16021808)
 3779679.5 | 0.21908 (11121408)   0.18233 (16021808)   0.21993 (16021808)
     0.19173 (16021808)
 3779629.5 | 0.19285 (11121408)   0.21279 (16021808)   0.22360 (16021808)
     0.18978 (13011008)

                            *** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL   ***
                                INCLUDING SOURCE(S):   L0008113   , L0008114
, L0008115   , L0008116   , L0008117   ,
                  L0008118   , L0008119   , L0008120   , L0008121   , L0008122
, L0008123   , L0008124   , L0008125   ,
                  L0008126   , L0008127   , L0008128   , L0008129   , L0008130
, L0008131   , L0008132   , L0008133   ,

```
                 L0008134    , L0008135    , L0008136    , L0008137    , L0008138
, L0008139    , L0008140    ,  . . .      ,

                                  *** NETWORK ID: UCART4   ;  NETWORK TYPE:
GRIDCART ***

                                       ** CONC OF PM_10    IN MICROGRAMS/M**3
                   **

  Y-COORD  |                                                X-COORD (METERS)
  (METERS) |       462322.82              462372.82              462422.82
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

 3778808.1 |      0.14934 (12121908)      0.14292 (13032208)      0.15257 (15012108)
 3778758.1 |      0.14501 (12121908)      0.10038 (12121908)      0.12256 (13032208)
 3778708.1 |      0.13570 (12121908)      0.10331 (12121908)      0.08868 (13032208)
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
                         ***        05/23/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        17:52:44

                                  PAGE 290
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     L0008113    , L0008114
, L0008115    , L0008116    , L0008117    ,
                 L0008118    , L0008119    , L0008120    , L0008121    , L0008122
, L0008123    , L0008124    , L0008125    ,
                 L0008126    , L0008127    , L0008128    , L0008129    , L0008130
, L0008131    , L0008132    , L0008133    ,
                 L0008134    , L0008135    , L0008136    , L0008137    , L0008138
, L0008139    , L0008140    ,  . . .      ,

                                  *** NETWORK ID: UCART5   ;  NETWORK TYPE:
GRIDCART ***

                                       ** CONC OF PM_10    IN MICROGRAMS/M**3
                   **

  Y-COORD  |                                                X-COORD (METERS)
  (METERS) |       462373.12              462423.12
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

 3778876.5 |      0.20286 (15012108)      0.20339 (15012308)
 3778826.5 |      0.16069 (13032208)      0.16776 (15012108)
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Construction
```

                                        *** THE SUMMARY OF MAXIMUM PERIOD (43848
HRS) RESULTS ***

                                      ** CONC OF PM_10   IN MICROGRAMS/M**3
              **

                        NETWORK
GROUP ID   AVERAGE CONC   RECEPTOR (XR, YR, ZELEV,
ZHILL, ZFLAG) OF TYPE GRID-ID
- -
- - - - - - - - - - - - - - - - - -

ALL   1ST HIGHEST VALUE IS   0.00706 AT (462429.66, 3779287.79,   495.80,
  495.80,   0.00) GC UCART1
          2ND HIGHEST VALUE IS   0.00682 AT (462429.66, 3779337.79,   497.70,
  497.70,   0.00) GC UCART1
          3RD HIGHEST VALUE IS   0.00638 AT (462429.66, 3779237.79,   494.70,
  494.70,   0.00) GC UCART1
          4TH HIGHEST VALUE IS   0.00591 AT (462429.66, 3779387.79,   498.00,
  498.00,   0.00) GC UCART1
          5TH HIGHEST VALUE IS   0.00515 AT (462479.66, 3779337.79,   496.20,
  496.20,   0.00) GC UCART1
          6TH HIGHEST VALUE IS   0.00512 AT (462429.66, 3779187.79,   493.90,
  493.90,   0.00) GC UCART1
          7TH HIGHEST VALUE IS   0.00508 AT (462479.66, 3779287.79,   494.50,
  494.50,   0.00) GC UCART1
          8TH HIGHEST VALUE IS   0.00476 AT (462429.66, 3779437.79,   498.80,
  498.80,   0.00) GC UCART1
          9TH HIGHEST VALUE IS   0.00475 AT (462479.66, 3779387.79,   496.50,
  496.50,   0.00) GC UCART1
         10TH HIGHEST VALUE IS   0.00449 AT (462479.66, 3779237.79,   494.00,
  494.00,   0.00) GC UCART1

 *** RECEPTOR TYPES: GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	NETWORK OF TYPE GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	0.41297	ON 12121715: AT (462429.66, 3779187.79, 493.90, 493.90, 0.00)	GC UCART1

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 7 Warning Message(s)
A Total of 838 Informational Message(s)

A Total of 43848 Hours Were Processed

A Total of 40 Calm Hours Identified

A Total of 798 Missing Hours Identified (1.82 Percent)

```
   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
 ME W186    3439       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
     0.50
 ME W187    3439       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

 MX W438    8800        METQA: Convective Velocity Data Out-of-Range.  KURDAT =
 12010216
 MX W438   11536        METQA: Convective Velocity Data Out-of-Range.  KURDAT =
 12042516
 MX W420   16779        METQA: Wind Speed Out-of-Range.   KURDAT =
 12113003
 MX W450   26305       CHKDAT: Record Out of Sequence in Meteorological File at:
 15010101
 MX W450   26305       CHKDAT: Record Out of Sequence in Meteorological File at:
1 year gap

   ************************************
   *** AERMOD Finishes Successfully ***
   ************************************
```

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 10.2.1
** Lakes Environmental Software Inc.
** Date: 5/25/2022
** File: C:\Lakes\AERMOD View\Rialto Locust_Ops\Rialto Locust_Ops.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE Rialto Locust - Operations
   MODELOPT DFAULT CONC
   AVERTIME 1 PERIOD
   URBANOPT 2035210
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL "Rialto Locust_Ops.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Locust
** PREFIX
** Length of Side = 9.20
** Configuration = Adjacent
** Emission Rate = 5.29E-06
** Vertical Dimension = 6.12
** SZINIT = 2.85
** Nodes = 2
** 462226.218, 3778198.588, 476.28, 3.06, 4.28
** 462222.724, 3779236.380, 497.62, 3.06, 4.28
** ------------------------------------------------------------------------
   LOCATION L0000001     VOLUME   462226.203 3778203.188 476.31
```

```
LOCATION L0000002     VOLUME   462226.172 3778212.388 476.47
LOCATION L0000003     VOLUME   462226.141 3778221.588 476.64
LOCATION L0000004     VOLUME   462226.110 3778230.788 476.81
LOCATION L0000005     VOLUME   462226.079 3778239.988 476.97
LOCATION L0000006     VOLUME   462226.048 3778249.187 477.13
LOCATION L0000007     VOLUME   462226.017 3778258.387 477.29
LOCATION L0000008     VOLUME   462225.986 3778267.587 477.45
LOCATION L0000009     VOLUME   462225.955 3778276.787 477.62
LOCATION L0000010     VOLUME   462225.924 3778285.987 477.79
LOCATION L0000011     VOLUME   462225.893 3778295.187 477.97
LOCATION L0000012     VOLUME   462225.862 3778304.387 478.20
LOCATION L0000013     VOLUME   462225.831 3778313.587 478.43
LOCATION L0000014     VOLUME   462225.800 3778322.787 478.66
LOCATION L0000015     VOLUME   462225.769 3778331.987 478.83
LOCATION L0000016     VOLUME   462225.738 3778341.187 478.98
LOCATION L0000017     VOLUME   462225.707 3778350.387 479.13
LOCATION L0000018     VOLUME   462225.676 3778359.587 479.29
LOCATION L0000019     VOLUME   462225.645 3778368.787 479.44
LOCATION L0000020     VOLUME   462225.614 3778377.987 479.59
LOCATION L0000021     VOLUME   462225.583 3778387.187 479.75
LOCATION L0000022     VOLUME   462225.552 3778396.387 479.97
LOCATION L0000023     VOLUME   462225.521 3778405.587 480.18
LOCATION L0000024     VOLUME   462225.490 3778414.787 480.39
LOCATION L0000025     VOLUME   462225.459 3778423.986 480.57
LOCATION L0000026     VOLUME   462225.428 3778433.186 480.73
LOCATION L0000027     VOLUME   462225.398 3778442.386 480.89
LOCATION L0000028     VOLUME   462225.367 3778451.586 481.06
LOCATION L0000029     VOLUME   462225.336 3778460.786 481.23
LOCATION L0000030     VOLUME   462225.305 3778469.986 481.40
LOCATION L0000031     VOLUME   462225.274 3778479.186 481.57
LOCATION L0000032     VOLUME   462225.243 3778488.386 481.72
LOCATION L0000033     VOLUME   462225.212 3778497.586 481.87
LOCATION L0000034     VOLUME   462225.181 3778506.786 482.03
LOCATION L0000035     VOLUME   462225.150 3778515.986 482.17
LOCATION L0000036     VOLUME   462225.119 3778525.186 482.32
LOCATION L0000037     VOLUME   462225.088 3778534.386 482.47
LOCATION L0000038     VOLUME   462225.057 3778543.586 482.61
LOCATION L0000039     VOLUME   462225.026 3778552.786 482.76
LOCATION L0000040     VOLUME   462224.995 3778561.986 482.91
LOCATION L0000041     VOLUME   462224.964 3778571.186 483.05
LOCATION L0000042     VOLUME   462224.933 3778580.386 483.24
LOCATION L0000043     VOLUME   462224.902 3778589.586 483.42
LOCATION L0000044     VOLUME   462224.871 3778598.785 483.60
LOCATION L0000045     VOLUME   462224.840 3778607.985 483.82
LOCATION L0000046     VOLUME   462224.809 3778617.185 484.05
LOCATION L0000047     VOLUME   462224.778 3778626.385 484.27
LOCATION L0000048     VOLUME   462224.747 3778635.585 484.51
LOCATION L0000049     VOLUME   462224.716 3778644.785 484.78
LOCATION L0000050     VOLUME   462224.685 3778653.985 485.05
LOCATION L0000051     VOLUME   462224.654 3778663.185 485.32
```

```
LOCATION L0000052     VOLUME   462224.623 3778672.385 485.57
LOCATION L0000053     VOLUME   462224.592 3778681.585 485.83
LOCATION L0000054     VOLUME   462224.561 3778690.785 486.09
LOCATION L0000055     VOLUME   462224.530 3778699.985 486.32
LOCATION L0000056     VOLUME   462224.499 3778709.185 486.55
LOCATION L0000057     VOLUME   462224.468 3778718.385 486.77
LOCATION L0000058     VOLUME   462224.437 3778727.585 486.99
LOCATION L0000059     VOLUME   462224.406 3778736.785 487.19
LOCATION L0000060     VOLUME   462224.375 3778745.985 487.40
LOCATION L0000061     VOLUME   462224.344 3778755.185 487.60
LOCATION L0000062     VOLUME   462224.313 3778764.385 487.83
LOCATION L0000063     VOLUME   462224.282 3778773.585 488.06
LOCATION L0000064     VOLUME   462224.251 3778782.784 488.28
LOCATION L0000065     VOLUME   462224.220 3778791.984 488.51
LOCATION L0000066     VOLUME   462224.189 3778801.184 488.73
LOCATION L0000067     VOLUME   462224.158 3778810.384 488.95
LOCATION L0000068     VOLUME   462224.127 3778819.584 489.17
LOCATION L0000069     VOLUME   462224.096 3778828.784 489.35
LOCATION L0000070     VOLUME   462224.065 3778837.984 489.54
LOCATION L0000071     VOLUME   462224.035 3778847.184 489.72
LOCATION L0000072     VOLUME   462224.004 3778856.384 489.89
LOCATION L0000073     VOLUME   462223.973 3778865.584 490.06
LOCATION L0000074     VOLUME   462223.942 3778874.784 490.23
LOCATION L0000075     VOLUME   462223.911 3778883.984 490.41
LOCATION L0000076     VOLUME   462223.880 3778893.184 490.60
LOCATION L0000077     VOLUME   462223.849 3778902.384 490.80
LOCATION L0000078     VOLUME   462223.818 3778911.584 490.99
LOCATION L0000079     VOLUME   462223.787 3778920.784 491.18
LOCATION L0000080     VOLUME   462223.756 3778929.984 491.37
LOCATION L0000081     VOLUME   462223.725 3778939.184 491.56
LOCATION L0000082     VOLUME   462223.694 3778948.384 491.75
LOCATION L0000083     VOLUME   462223.663 3778957.583 491.93
LOCATION L0000084     VOLUME   462223.632 3778966.783 492.11
LOCATION L0000085     VOLUME   462223.601 3778975.983 492.30
LOCATION L0000086     VOLUME   462223.570 3778985.183 492.48
LOCATION L0000087     VOLUME   462223.539 3778994.383 492.66
LOCATION L0000088     VOLUME   462223.508 3779003.583 492.85
LOCATION L0000089     VOLUME   462223.477 3779012.783 493.05
LOCATION L0000090     VOLUME   462223.446 3779021.983 493.26
LOCATION L0000091     VOLUME   462223.415 3779031.183 493.47
LOCATION L0000092     VOLUME   462223.384 3779040.383 493.68
LOCATION L0000093     VOLUME   462223.353 3779049.583 493.90
LOCATION L0000094     VOLUME   462223.322 3779058.783 494.12
LOCATION L0000095     VOLUME   462223.291 3779067.983 494.32
LOCATION L0000096     VOLUME   462223.260 3779077.183 494.49
LOCATION L0000097     VOLUME   462223.229 3779086.383 494.67
LOCATION L0000098     VOLUME   462223.198 3779095.583 494.84
LOCATION L0000099     VOLUME   462223.167 3779104.783 494.96
LOCATION L0000100     VOLUME   462223.136 3779113.983 495.09
LOCATION L0000101     VOLUME   462223.105 3779123.183 495.21
```

```
   LOCATION L0000102     VOLUME   462223.074 3779132.382 495.37
   LOCATION L0000103     VOLUME   462223.043 3779141.582 495.55
   LOCATION L0000104     VOLUME   462223.012 3779150.782 495.73
   LOCATION L0000105     VOLUME   462222.981 3779159.982 495.91
   LOCATION L0000106     VOLUME   462222.950 3779169.182 496.09
   LOCATION L0000107     VOLUME   462222.919 3779178.382 496.27
   LOCATION L0000108     VOLUME   462222.888 3779187.582 496.45
   LOCATION L0000109     VOLUME   462222.857 3779196.782 496.64
   LOCATION L0000110     VOLUME   462222.826 3779205.982 496.82
   LOCATION L0000111     VOLUME   462222.795 3779215.182 497.01
   LOCATION L0000112     VOLUME   462222.764 3779224.382 497.20
   LOCATION L0000113     VOLUME   462222.733 3779233.582 497.40
** End of LINE VOLUME Source ID = SLINE1
** ------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC On-Site
** PREFIX
** Length of Side = 8.70
** Configuration = Adjacent
** Emission Rate = 6.55E-07
** Vertical Dimension = 6.12
** SZINIT = 2.85
** Nodes = 2
** 462097.616, 3779243.597, 499.84, 3.06, 4.05
** 462217.369, 3779243.153, 497.74, 3.06, 4.05
** ------------------------------------------------------------------
   LOCATION L0000522     VOLUME   462101.966 3779243.581 499.71
   LOCATION L0000523     VOLUME   462110.666 3779243.549 499.62
   LOCATION L0000524     VOLUME   462119.366 3779243.517 499.52
   LOCATION L0000525     VOLUME   462128.066 3779243.484 499.41
   LOCATION L0000526     VOLUME   462136.766 3779243.452 499.29
   LOCATION L0000527     VOLUME   462145.466 3779243.420 499.16
   LOCATION L0000528     VOLUME   462154.166 3779243.388 499.01
   LOCATION L0000529     VOLUME   462162.866 3779243.355 498.86
   LOCATION L0000530     VOLUME   462171.566 3779243.323 498.68
   LOCATION L0000531     VOLUME   462180.266 3779243.291 498.47
   LOCATION L0000532     VOLUME   462188.966 3779243.258 498.26
   LOCATION L0000533     VOLUME   462197.666 3779243.226 498.06
   LOCATION L0000534     VOLUME   462206.365 3779243.194 497.88
   LOCATION L0000535     VOLUME   462215.065 3779243.162 497.70
** End of LINE VOLUME Source ID = SLINE2
** ------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Idle
** PREFIX
** Length of Side = 8.70
** Configuration = Adjacent
** Emission Rate = 1.92E-07
```

```
** Vertical Dimension = 6.12
** SZINIT = 2.85
** Nodes = 2
** 462116.501, 3779228.712, 499.30, 3.06, 4.05
** 462172.934, 3779228.712, 498.39, 3.06, 4.05
** ----------------------------------------------------------------------
   LOCATION L0000550     VOLUME   462120.851 3779228.712 499.23
   LOCATION L0000551     VOLUME   462129.551 3779228.712 499.09
   LOCATION L0000552     VOLUME   462138.251 3779228.712 498.94
   LOCATION L0000553     VOLUME   462146.951 3779228.712 498.79
   LOCATION L0000554     VOLUME   462155.651 3779228.712 498.62
   LOCATION L0000555     VOLUME   462164.351 3779228.712 498.46
** End of LINE VOLUME Source ID = SLINE3
   LOCATION STCK1        POINT      462086.120  3779171.230      498.180
** DESCRSRC Backup Generator
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0000001     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000002     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000003     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000004     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000005     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000006     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000007     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000008     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000009     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000010     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000011     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000012     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000013     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000014     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000015     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000016     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000017     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000018     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000019     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000020     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000021     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000022     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000023     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000024     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000025     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000026     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000027     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000028     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000029     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000030     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000031     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000032     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000033     0.00000004681      3.06      4.28      2.85
```

```
SRCPARAM L0000034     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000035     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000036     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000037     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000038     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000039     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000040     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000041     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000042     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000043     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000044     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000045     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000046     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000047     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000048     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000049     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000050     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000051     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000052     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000053     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000054     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000055     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000056     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000057     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000058     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000059     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000060     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000061     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000062     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000063     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000064     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000065     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000066     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000067     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000068     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000069     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000070     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000071     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000072     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000073     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000074     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000075     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000076     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000077     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000078     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000079     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000080     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000081     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000082     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000083     0.00000004681      3.06      4.28      2.85
```

```
   SRCPARAM L0000084     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000085     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000086     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000087     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000088     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000089     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000090     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000091     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000092     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000093     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000094     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000095     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000096     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000097     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000098     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000099     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000100     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000101     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000102     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000103     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000104     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000105     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000106     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000107     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000108     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000109     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000110     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000111     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000112     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000113     0.00000004681      3.06      4.28      2.85
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0000522     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000523     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000524     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000525     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000526     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000527     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000528     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000529     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000530     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000531     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000532     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000533     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000534     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000535     0.00000004679      3.06      4.05      2.85
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0000550     0.000000032      3.06      4.05      2.85
   SRCPARAM L0000551     0.000000032      3.06      4.05      2.85
```

```
   SRCPARAM L0000552     0.000000032      3.06      4.05      2.85
   SRCPARAM L0000553     0.000000032      3.06      4.05      2.85
   SRCPARAM L0000554     0.000000032      3.06      4.05      2.85
   SRCPARAM L0000555     0.000000032      3.06      4.05      2.85
** ---------------------------------------------------------------------
   SRCPARAM STCK1             0.03     5.000   763.850 224.39100     0.229
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Seven Days (HRDOW7)"
** Variable Emission Scenario: "Scenario 1"
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED "Rialto Locust_Ops.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE FONT_V9_ADJU\FONT_v9.SFC
```

```
   PROFFILE FONT_V9_ADJU\FONT_v9.PFL
   SURFDATA 3102 2011
   UAIRDATA 3190 2011
   SITEDATA 99999 2011
   PROFBASE 367.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST "Rialto Locust_Ops.AD\01H1GALL.PLT" 31
   PLOTFILE PERIOD ALL "Rialto Locust_Ops.AD\PE00GALL.PLT" 32
   SUMMFILE "Rialto Locust_Ops.sum"
OU FINISHED
**
**************************************
** Project Parameters
**************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    World Geodetic System 1984
** DTMRGN   Global Definition
** UNITS    m
** ZONE     11
** ZONEINX  0
**
```

```
** Lakes Environmental AERMOD MPI
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 10.2.1
** Lakes Environmental Software Inc.
** Date: 5/25/2022
** File: C:\Lakes\AERMOD View\Rialto Locust_Ops\Rialto Locust_Ops.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE Rialto Locust - Operations
   MODELOPT DFAULT CONC
   AVERTIME 1 PERIOD
   URBANOPT 2035210
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL "Rialto Locust_Ops.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Locust
** PREFIX
** Length of Side = 9.20
** Configuration = Adjacent
** Emission Rate = 5.29E-06
** Vertical Dimension = 6.12
** SZINIT = 2.85
** Nodes = 2
** 462226.218, 3778198.588, 476.28, 3.06, 4.28
** 462222.724, 3779236.380, 497.62, 3.06, 4.28
** ----------------------------------------------------------------------
```

```
LOCATION L0000001     VOLUME   462226.203 3778203.188 476.31
LOCATION L0000002     VOLUME   462226.172 3778212.388 476.47
LOCATION L0000003     VOLUME   462226.141 3778221.588 476.64
LOCATION L0000004     VOLUME   462226.110 3778230.788 476.81
LOCATION L0000005     VOLUME   462226.079 3778239.988 476.97
LOCATION L0000006     VOLUME   462226.048 3778249.187 477.13
LOCATION L0000007     VOLUME   462226.017 3778258.387 477.29
LOCATION L0000008     VOLUME   462225.986 3778267.587 477.45
LOCATION L0000009     VOLUME   462225.955 3778276.787 477.62
LOCATION L0000010     VOLUME   462225.924 3778285.987 477.79
LOCATION L0000011     VOLUME   462225.893 3778295.187 477.97
LOCATION L0000012     VOLUME   462225.862 3778304.387 478.20
LOCATION L0000013     VOLUME   462225.831 3778313.587 478.43
LOCATION L0000014     VOLUME   462225.800 3778322.787 478.66
LOCATION L0000015     VOLUME   462225.769 3778331.987 478.83
LOCATION L0000016     VOLUME   462225.738 3778341.187 478.98
LOCATION L0000017     VOLUME   462225.707 3778350.387 479.13
LOCATION L0000018     VOLUME   462225.676 3778359.587 479.29
LOCATION L0000019     VOLUME   462225.645 3778368.787 479.44
LOCATION L0000020     VOLUME   462225.614 3778377.987 479.59
LOCATION L0000021     VOLUME   462225.583 3778387.187 479.75
LOCATION L0000022     VOLUME   462225.552 3778396.387 479.97
LOCATION L0000023     VOLUME   462225.521 3778405.587 480.18
LOCATION L0000024     VOLUME   462225.490 3778414.787 480.39
LOCATION L0000025     VOLUME   462225.459 3778423.986 480.57
LOCATION L0000026     VOLUME   462225.428 3778433.186 480.73
LOCATION L0000027     VOLUME   462225.398 3778442.386 480.89
LOCATION L0000028     VOLUME   462225.367 3778451.586 481.06
LOCATION L0000029     VOLUME   462225.336 3778460.786 481.23
LOCATION L0000030     VOLUME   462225.305 3778469.986 481.40
LOCATION L0000031     VOLUME   462225.274 3778479.186 481.57
LOCATION L0000032     VOLUME   462225.243 3778488.386 481.72
LOCATION L0000033     VOLUME   462225.212 3778497.586 481.87
LOCATION L0000034     VOLUME   462225.181 3778506.786 482.03
LOCATION L0000035     VOLUME   462225.150 3778515.986 482.17
LOCATION L0000036     VOLUME   462225.119 3778525.186 482.32
LOCATION L0000037     VOLUME   462225.088 3778534.386 482.47
LOCATION L0000038     VOLUME   462225.057 3778543.586 482.61
LOCATION L0000039     VOLUME   462225.026 3778552.786 482.76
LOCATION L0000040     VOLUME   462224.995 3778561.986 482.91
LOCATION L0000041     VOLUME   462224.964 3778571.186 483.05
LOCATION L0000042     VOLUME   462224.933 3778580.386 483.24
LOCATION L0000043     VOLUME   462224.902 3778589.586 483.42
LOCATION L0000044     VOLUME   462224.871 3778598.785 483.60
LOCATION L0000045     VOLUME   462224.840 3778607.985 483.82
LOCATION L0000046     VOLUME   462224.809 3778617.185 484.05
LOCATION L0000047     VOLUME   462224.778 3778626.385 484.27
LOCATION L0000048     VOLUME   462224.747 3778635.585 484.51
LOCATION L0000049     VOLUME   462224.716 3778644.785 484.78
LOCATION L0000050     VOLUME   462224.685 3778653.985 485.05
```

```
LOCATION L0000051     VOLUME   462224.654 3778663.185 485.32
LOCATION L0000052     VOLUME   462224.623 3778672.385 485.57
LOCATION L0000053     VOLUME   462224.592 3778681.585 485.83
LOCATION L0000054     VOLUME   462224.561 3778690.785 486.09
LOCATION L0000055     VOLUME   462224.530 3778699.985 486.32
LOCATION L0000056     VOLUME   462224.499 3778709.185 486.55
LOCATION L0000057     VOLUME   462224.468 3778718.385 486.77
LOCATION L0000058     VOLUME   462224.437 3778727.585 486.99
LOCATION L0000059     VOLUME   462224.406 3778736.785 487.19
LOCATION L0000060     VOLUME   462224.375 3778745.985 487.40
LOCATION L0000061     VOLUME   462224.344 3778755.185 487.60
LOCATION L0000062     VOLUME   462224.313 3778764.385 487.83
LOCATION L0000063     VOLUME   462224.282 3778773.585 488.06
LOCATION L0000064     VOLUME   462224.251 3778782.784 488.28
LOCATION L0000065     VOLUME   462224.220 3778791.984 488.51
LOCATION L0000066     VOLUME   462224.189 3778801.184 488.73
LOCATION L0000067     VOLUME   462224.158 3778810.384 488.95
LOCATION L0000068     VOLUME   462224.127 3778819.584 489.17
LOCATION L0000069     VOLUME   462224.096 3778828.784 489.35
LOCATION L0000070     VOLUME   462224.065 3778837.984 489.54
LOCATION L0000071     VOLUME   462224.035 3778847.184 489.72
LOCATION L0000072     VOLUME   462224.004 3778856.384 489.89
LOCATION L0000073     VOLUME   462223.973 3778865.584 490.06
LOCATION L0000074     VOLUME   462223.942 3778874.784 490.23
LOCATION L0000075     VOLUME   462223.911 3778883.984 490.41
LOCATION L0000076     VOLUME   462223.880 3778893.184 490.60
LOCATION L0000077     VOLUME   462223.849 3778902.384 490.80
LOCATION L0000078     VOLUME   462223.818 3778911.584 490.99
LOCATION L0000079     VOLUME   462223.787 3778920.784 491.18
LOCATION L0000080     VOLUME   462223.756 3778929.984 491.37
LOCATION L0000081     VOLUME   462223.725 3778939.184 491.56
LOCATION L0000082     VOLUME   462223.694 3778948.384 491.75
LOCATION L0000083     VOLUME   462223.663 3778957.583 491.93
LOCATION L0000084     VOLUME   462223.632 3778966.783 492.11
LOCATION L0000085     VOLUME   462223.601 3778975.983 492.30
LOCATION L0000086     VOLUME   462223.570 3778985.183 492.48
LOCATION L0000087     VOLUME   462223.539 3778994.383 492.66
LOCATION L0000088     VOLUME   462223.508 3779003.583 492.85
LOCATION L0000089     VOLUME   462223.477 3779012.783 493.05
LOCATION L0000090     VOLUME   462223.446 3779021.983 493.26
LOCATION L0000091     VOLUME   462223.415 3779031.183 493.47
LOCATION L0000092     VOLUME   462223.384 3779040.383 493.68
LOCATION L0000093     VOLUME   462223.353 3779049.583 493.90
LOCATION L0000094     VOLUME   462223.322 3779058.783 494.12
LOCATION L0000095     VOLUME   462223.291 3779067.983 494.32
LOCATION L0000096     VOLUME   462223.260 3779077.183 494.49
LOCATION L0000097     VOLUME   462223.229 3779086.383 494.67
LOCATION L0000098     VOLUME   462223.198 3779095.583 494.84
LOCATION L0000099     VOLUME   462223.167 3779104.783 494.96
LOCATION L0000100     VOLUME   462223.136 3779113.983 495.09
```

```
   LOCATION L0000101     VOLUME   462223.105 3779123.183 495.21
   LOCATION L0000102     VOLUME   462223.074 3779132.382 495.37
   LOCATION L0000103     VOLUME   462223.043 3779141.582 495.55
   LOCATION L0000104     VOLUME   462223.012 3779150.782 495.73
   LOCATION L0000105     VOLUME   462222.981 3779159.982 495.91
   LOCATION L0000106     VOLUME   462222.950 3779169.182 496.09
   LOCATION L0000107     VOLUME   462222.919 3779178.382 496.27
   LOCATION L0000108     VOLUME   462222.888 3779187.582 496.45
   LOCATION L0000109     VOLUME   462222.857 3779196.782 496.64
   LOCATION L0000110     VOLUME   462222.826 3779205.982 496.82
   LOCATION L0000111     VOLUME   462222.795 3779215.182 497.01
   LOCATION L0000112     VOLUME   462222.764 3779224.382 497.20
   LOCATION L0000113     VOLUME   462222.733 3779233.582 497.40
** End of LINE VOLUME Source ID = SLINE1
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC On-Site
** PREFIX
** Length of Side = 8.70
** Configuration = Adjacent
** Emission Rate = 6.55E-07
** Vertical Dimension = 6.12
** SZINIT = 2.85
** Nodes = 2
** 462097.616, 3779243.597, 499.84, 3.06, 4.05
** 462217.369, 3779243.153, 497.74, 3.06, 4.05
** ----------------------------------------------------------------------
   LOCATION L0000522     VOLUME   462101.966 3779243.581 499.71
   LOCATION L0000523     VOLUME   462110.666 3779243.549 499.62
   LOCATION L0000524     VOLUME   462119.366 3779243.517 499.52
   LOCATION L0000525     VOLUME   462128.066 3779243.484 499.41
   LOCATION L0000526     VOLUME   462136.766 3779243.452 499.29
   LOCATION L0000527     VOLUME   462145.466 3779243.420 499.16
   LOCATION L0000528     VOLUME   462154.166 3779243.388 499.01
   LOCATION L0000529     VOLUME   462162.866 3779243.355 498.86
   LOCATION L0000530     VOLUME   462171.566 3779243.323 498.68
   LOCATION L0000531     VOLUME   462180.266 3779243.291 498.47
   LOCATION L0000532     VOLUME   462188.966 3779243.258 498.26
   LOCATION L0000533     VOLUME   462197.666 3779243.226 498.06
   LOCATION L0000534     VOLUME   462206.365 3779243.194 497.88
   LOCATION L0000535     VOLUME   462215.065 3779243.162 497.70
** End of LINE VOLUME Source ID = SLINE2
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Idle
** PREFIX
** Length of Side = 8.70
** Configuration = Adjacent
```

```
** Emission Rate = 1.92E-07
** Vertical Dimension = 6.12
** SZINIT = 2.85
** Nodes = 2
** 462116.501, 3779228.712, 499.30, 3.06, 4.05
** 462172.934, 3779228.712, 498.39, 3.06, 4.05
** ----------------------------------------------------------------------
   LOCATION L0000550     VOLUME   462120.851 3779228.712 499.23
   LOCATION L0000551     VOLUME   462129.551 3779228.712 499.09
   LOCATION L0000552     VOLUME   462138.251 3779228.712 498.94
   LOCATION L0000553     VOLUME   462146.951 3779228.712 498.79
   LOCATION L0000554     VOLUME   462155.651 3779228.712 498.62
   LOCATION L0000555     VOLUME   462164.351 3779228.712 498.46
** End of LINE VOLUME Source ID = SLINE3
   LOCATION STCK1        POINT      462086.120  3779171.230      498.180
** DESCRSRC Backup Generator
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0000001     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000002     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000003     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000004     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000005     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000006     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000007     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000008     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000009     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000010     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000011     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000012     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000013     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000014     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000015     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000016     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000017     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000018     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000019     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000020     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000021     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000022     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000023     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000024     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000025     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000026     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000027     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000028     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000029     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000030     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000031     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000032     0.00000004681      3.06      4.28      2.85
```

```
SRCPARAM L0000033     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000034     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000035     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000036     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000037     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000038     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000039     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000040     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000041     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000042     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000043     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000044     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000045     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000046     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000047     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000048     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000049     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000050     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000051     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000052     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000053     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000054     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000055     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000056     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000057     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000058     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000059     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000060     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000061     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000062     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000063     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000064     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000065     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000066     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000067     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000068     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000069     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000070     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000071     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000072     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000073     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000074     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000075     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000076     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000077     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000078     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000079     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000080     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000081     0.00000004681      3.06      4.28      2.85
SRCPARAM L0000082     0.00000004681      3.06      4.28      2.85
```

```
   SRCPARAM L0000083     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000084     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000085     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000086     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000087     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000088     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000089     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000090     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000091     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000092     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000093     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000094     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000095     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000096     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000097     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000098     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000099     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000100     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000101     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000102     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000103     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000104     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000105     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000106     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000107     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000108     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000109     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000110     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000111     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000112     0.00000004681      3.06      4.28      2.85
   SRCPARAM L0000113     0.00000004681      3.06      4.28      2.85
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0000522     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000523     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000524     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000525     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000526     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000527     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000528     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000529     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000530     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000531     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000532     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000533     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000534     0.00000004679      3.06      4.05      2.85
   SRCPARAM L0000535     0.00000004679      3.06      4.05      2.85
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0000550     0.000000032      3.06      4.05      2.85
```

```
   SRCPARAM L0000551     0.000000032      3.06      4.05      2.85
   SRCPARAM L0000552     0.000000032      3.06      4.05      2.85
   SRCPARAM L0000553     0.000000032      3.06      4.05      2.85
   SRCPARAM L0000554     0.000000032      3.06      4.05      2.85
   SRCPARAM L0000555     0.000000032      3.06      4.05      2.85
** ------------------------------------------------------------------
   SRCPARAM STCK1              0.03     5.000   763.850 224.39100     0.229
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Seven Days (HRDOW7)"
** Variable Emission Scenario: "Scenario 1"
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**********************************
** AERMOD Receptor Pathway
**********************************
**
**
RE STARTING
   INCLUDED "Rialto Locust_Ops.rou"
RE FINISHED
**
**********************************
** AERMOD Meteorology Pathway
**********************************
**
**
ME STARTING
```

```
   SURFFILE FONT_V9_ADJU\FONT_v9.SFC
   PROFFILE FONT_V9_ADJU\FONT_v9.PFL
   SURFDATA 3102 2011
   UAIRDATA 3190 2011
   SITEDATA 99999 2011
   PROFBASE 367.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST "Rialto Locust_Ops.AD\01H1GALL.PLT" 31
   PLOTFILE PERIOD ALL "Rialto Locust_Ops.AD\PE00GALL.PLT" 32
   SUMMFILE "Rialto Locust_Ops.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            3 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


    ********   WARNING MESSAGES   ********
 SO W320     356        PPARM: Input Parameter May Be Out-of-Range for Parameter
       VS
 ME W186     406       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
     0.50
 ME W187     406       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET


 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                           ***        05/25/22
```

```
 *** AERMET - VERSION  16216 ***   ***
                       ***        11:52:32

                                  PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                           ***     MODEL SETUP OPTIONS SUMMARY
 ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for   134 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   2035210.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Other Options Specified:
         ADJ_U*   - Use ADJ_U* option for SBL in AERMET
         TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Assumes No FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  PM_10

 **Model Calculates  1 Short Term Average(s) of:   1-HR
     and Calculates PERIOD Averages

 **This Run Includes:    134 Source(s);       1 Source Group(s); and     673
Receptor(s)

                with:      1 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:    133 VOLUME source(s)
                 and:      0 AREA type source(s)
                 and:      0 LINE source(s)
```

```
                and:      0 RLINE/RLINEXT source(s)
                and:      0 OPENPIT source(s)
                and:      0 BUOYANT LINE source(s) with a total of     0 line(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  16216

 **Output Options Selected:
          Model Outputs Tables of PERIOD Averages by Receptor
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE
Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE
Keyword)
          Model Outputs Separate Summary File of High Ranked Values (SUMMFILE
Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and
Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   367.00 ;  Decay
Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;
Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.8 MB of RAM.

 **Input Runstream File:          aermod.inp

 **Output Print File:             aermod.out


 **Detailed Error/Message File:   Rialto Locust_Ops.err

 **File for Summary of Results:   Rialto Locust_Ops.sum

 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                           ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                           ***        11:52:32

                                      PAGE   2
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                  *** POINT SOURCE DATA ***
```

```
              NUMBER EMISSION RATE                    BASE     STACK   STACK
STACK     STACK    BLDG   URBAN  CAP/  EMIS RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.    HEIGHT  TEMP.   EXIT
VEL. DIAMETER  EXISTS SOURCE HOR   SCALAR
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (DEG.K)
(M/SEC)  (METERS)                    VARY BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

 STCK1            0   0.30000E-01  462086.1 3779171.2   498.2     5.00   763.85
224.39     0.23    NO      YES   NO  HRDOW7
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                        ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        11:52:32

                                  PAGE   3
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

 L0000001         0   0.46810E-07  462226.2 3778203.2   476.3     3.06     4.28
2.85     YES
 L0000002         0   0.46810E-07  462226.2 3778212.4   476.5     3.06     4.28
2.85     YES
 L0000003         0   0.46810E-07  462226.1 3778221.6   476.6     3.06     4.28
2.85     YES
 L0000004         0   0.46810E-07  462226.1 3778230.8   476.8     3.06     4.28
2.85     YES
 L0000005         0   0.46810E-07  462226.1 3778240.0   477.0     3.06     4.28
2.85     YES
 L0000006         0   0.46810E-07  462226.0 3778249.2   477.1     3.06     4.28
2.85     YES
 L0000007         0   0.46810E-07  462226.0 3778258.4   477.3     3.06     4.28
2.85     YES
 L0000008         0   0.46810E-07  462226.0 3778267.6   477.4     3.06     4.28
2.85     YES
 L0000009         0   0.46810E-07  462226.0 3778276.8   477.6     3.06     4.28
2.85     YES
```

```
 L0000010         0   0.46810E-07  462225.9 3778286.0   477.8     3.06     4.28
2.85     YES
 L0000011         0   0.46810E-07  462225.9 3778295.2   478.0     3.06     4.28
2.85     YES
 L0000012         0   0.46810E-07  462225.9 3778304.4   478.2     3.06     4.28
2.85     YES
 L0000013         0   0.46810E-07  462225.8 3778313.6   478.4     3.06     4.28
2.85     YES
 L0000014         0   0.46810E-07  462225.8 3778322.8   478.7     3.06     4.28
2.85     YES
 L0000015         0   0.46810E-07  462225.8 3778332.0   478.8     3.06     4.28
2.85     YES
 L0000016         0   0.46810E-07  462225.7 3778341.2   479.0     3.06     4.28
2.85     YES
 L0000017         0   0.46810E-07  462225.7 3778350.4   479.1     3.06     4.28
2.85     YES
 L0000018         0   0.46810E-07  462225.7 3778359.6   479.3     3.06     4.28
2.85     YES
 L0000019         0   0.46810E-07  462225.6 3778368.8   479.4     3.06     4.28
2.85     YES
 L0000020         0   0.46810E-07  462225.6 3778378.0   479.6     3.06     4.28
2.85     YES
 L0000021         0   0.46810E-07  462225.6 3778387.2   479.8     3.06     4.28
2.85     YES
 L0000022         0   0.46810E-07  462225.6 3778396.4   480.0     3.06     4.28
2.85     YES
 L0000023         0   0.46810E-07  462225.5 3778405.6   480.2     3.06     4.28
2.85     YES
 L0000024         0   0.46810E-07  462225.5 3778414.8   480.4     3.06     4.28
2.85     YES
 L0000025         0   0.46810E-07  462225.5 3778424.0   480.6     3.06     4.28
2.85     YES
 L0000026         0   0.46810E-07  462225.4 3778433.2   480.7     3.06     4.28
2.85     YES
 L0000027         0   0.46810E-07  462225.4 3778442.4   480.9     3.06     4.28
2.85     YES
 L0000028         0   0.46810E-07  462225.4 3778451.6   481.1     3.06     4.28
2.85     YES
 L0000029         0   0.46810E-07  462225.3 3778460.8   481.2     3.06     4.28
2.85     YES
 L0000030         0   0.46810E-07  462225.3 3778470.0   481.4     3.06     4.28
2.85     YES
 L0000031         0   0.46810E-07  462225.3 3778479.2   481.6     3.06     4.28
2.85     YES
 L0000032         0   0.46810E-07  462225.2 3778488.4   481.7     3.06     4.28
2.85     YES
 L0000033         0   0.46810E-07  462225.2 3778497.6   481.9     3.06     4.28
2.85     YES
 L0000034         0   0.46810E-07  462225.2 3778506.8   482.0     3.06     4.28
2.85     YES
```

```
 L0000035         0   0.46810E-07  462225.1 3778516.0   482.2     3.06     4.28
2.85     YES
 L0000036         0   0.46810E-07  462225.1 3778525.2   482.3     3.06     4.28
2.85     YES
 L0000037         0   0.46810E-07  462225.1 3778534.4   482.5     3.06     4.28
2.85     YES
 L0000038         0   0.46810E-07  462225.1 3778543.6   482.6     3.06     4.28
2.85     YES
 L0000039         0   0.46810E-07  462225.0 3778552.8   482.8     3.06     4.28
2.85     YES
 L0000040         0   0.46810E-07  462225.0 3778562.0   482.9     3.06     4.28
2.85     YES
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***       05/25/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       11:52:32

                                  PAGE   4
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0000041         0   0.46810E-07  462225.0 3778571.2   483.1     3.06     4.28
2.85     YES
 L0000042         0   0.46810E-07  462224.9 3778580.4   483.2     3.06     4.28
2.85     YES
 L0000043         0   0.46810E-07  462224.9 3778589.6   483.4     3.06     4.28
2.85     YES
 L0000044         0   0.46810E-07  462224.9 3778598.8   483.6     3.06     4.28
2.85     YES
 L0000045         0   0.46810E-07  462224.8 3778608.0   483.8     3.06     4.28
2.85     YES
 L0000046         0   0.46810E-07  462224.8 3778617.2   484.1     3.06     4.28
2.85     YES
 L0000047         0   0.46810E-07  462224.8 3778626.4   484.3     3.06     4.28
2.85     YES
 L0000048         0   0.46810E-07  462224.7 3778635.6   484.5     3.06     4.28
2.85     YES
 L0000049         0   0.46810E-07  462224.7 3778644.8   484.8     3.06     4.28
2.85     YES
```

```
 L0000050         0   0.46810E-07  462224.7 3778654.0   485.1     3.06     4.28
2.85     YES
 L0000051         0   0.46810E-07  462224.7 3778663.2   485.3     3.06     4.28
2.85     YES
 L0000052         0   0.46810E-07  462224.6 3778672.4   485.6     3.06     4.28
2.85     YES
 L0000053         0   0.46810E-07  462224.6 3778681.6   485.8     3.06     4.28
2.85     YES
 L0000054         0   0.46810E-07  462224.6 3778690.8   486.1     3.06     4.28
2.85     YES
 L0000055         0   0.46810E-07  462224.5 3778700.0   486.3     3.06     4.28
2.85     YES
 L0000056         0   0.46810E-07  462224.5 3778709.2   486.6     3.06     4.28
2.85     YES
 L0000057         0   0.46810E-07  462224.5 3778718.4   486.8     3.06     4.28
2.85     YES
 L0000058         0   0.46810E-07  462224.4 3778727.6   487.0     3.06     4.28
2.85     YES
 L0000059         0   0.46810E-07  462224.4 3778736.8   487.2     3.06     4.28
2.85     YES
 L0000060         0   0.46810E-07  462224.4 3778746.0   487.4     3.06     4.28
2.85     YES
 L0000061         0   0.46810E-07  462224.3 3778755.2   487.6     3.06     4.28
2.85     YES
 L0000062         0   0.46810E-07  462224.3 3778764.4   487.8     3.06     4.28
2.85     YES
 L0000063         0   0.46810E-07  462224.3 3778773.6   488.1     3.06     4.28
2.85     YES
 L0000064         0   0.46810E-07  462224.3 3778782.8   488.3     3.06     4.28
2.85     YES
 L0000065         0   0.46810E-07  462224.2 3778792.0   488.5     3.06     4.28
2.85     YES
 L0000066         0   0.46810E-07  462224.2 3778801.2   488.7     3.06     4.28
2.85     YES
 L0000067         0   0.46810E-07  462224.2 3778810.4   488.9     3.06     4.28
2.85     YES
 L0000068         0   0.46810E-07  462224.1 3778819.6   489.2     3.06     4.28
2.85     YES
 L0000069         0   0.46810E-07  462224.1 3778828.8   489.4     3.06     4.28
2.85     YES
 L0000070         0   0.46810E-07  462224.1 3778838.0   489.5     3.06     4.28
2.85     YES
 L0000071         0   0.46810E-07  462224.0 3778847.2   489.7     3.06     4.28
2.85     YES
 L0000072         0   0.46810E-07  462224.0 3778856.4   489.9     3.06     4.28
2.85     YES
 L0000073         0   0.46810E-07  462224.0 3778865.6   490.1     3.06     4.28
2.85     YES
 L0000074         0   0.46810E-07  462223.9 3778874.8   490.2     3.06     4.28
2.85     YES
```

```
 L0000075         0   0.46810E-07  462223.9 3778884.0   490.4     3.06     4.28
2.85     YES
 L0000076         0   0.46810E-07  462223.9 3778893.2   490.6     3.06     4.28
2.85     YES
 L0000077         0   0.46810E-07  462223.8 3778902.4   490.8     3.06     4.28
2.85     YES
 L0000078         0   0.46810E-07  462223.8 3778911.6   491.0     3.06     4.28
2.85     YES
 L0000079         0   0.46810E-07  462223.8 3778920.8   491.2     3.06     4.28
2.85     YES
 L0000080         0   0.46810E-07  462223.8 3778930.0   491.4     3.06     4.28
2.85     YES
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                         ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                        ***        11:52:32

                                   PAGE   5
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                      *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0000081         0   0.46810E-07  462223.7 3778939.2   491.6     3.06     4.28
2.85     YES
 L0000082         0   0.46810E-07  462223.7 3778948.4   491.8     3.06     4.28
2.85     YES
 L0000083         0   0.46810E-07  462223.7 3778957.6   491.9     3.06     4.28
2.85     YES
 L0000084         0   0.46810E-07  462223.6 3778966.8   492.1     3.06     4.28
2.85     YES
 L0000085         0   0.46810E-07  462223.6 3778976.0   492.3     3.06     4.28
2.85     YES
 L0000086         0   0.46810E-07  462223.6 3778985.2   492.5     3.06     4.28
2.85     YES
 L0000087         0   0.46810E-07  462223.5 3778994.4   492.7     3.06     4.28
2.85     YES
 L0000088         0   0.46810E-07  462223.5 3779003.6   492.9     3.06     4.28
2.85     YES
 L0000089         0   0.46810E-07  462223.5 3779012.8   493.1     3.06     4.28
2.85     YES
```

```
 L0000090         0   0.46810E-07  462223.4 3779022.0   493.3     3.06     4.28
2.85     YES
 L0000091         0   0.46810E-07  462223.4 3779031.2   493.5     3.06     4.28
2.85     YES
 L0000092         0   0.46810E-07  462223.4 3779040.4   493.7     3.06     4.28
2.85     YES
 L0000093         0   0.46810E-07  462223.4 3779049.6   493.9     3.06     4.28
2.85     YES
 L0000094         0   0.46810E-07  462223.3 3779058.8   494.1     3.06     4.28
2.85     YES
 L0000095         0   0.46810E-07  462223.3 3779068.0   494.3     3.06     4.28
2.85     YES
 L0000096         0   0.46810E-07  462223.3 3779077.2   494.5     3.06     4.28
2.85     YES
 L0000097         0   0.46810E-07  462223.2 3779086.4   494.7     3.06     4.28
2.85     YES
 L0000098         0   0.46810E-07  462223.2 3779095.6   494.8     3.06     4.28
2.85     YES
 L0000099         0   0.46810E-07  462223.2 3779104.8   495.0     3.06     4.28
2.85     YES
 L0000100         0   0.46810E-07  462223.1 3779114.0   495.1     3.06     4.28
2.85     YES
 L0000101         0   0.46810E-07  462223.1 3779123.2   495.2     3.06     4.28
2.85     YES
 L0000102         0   0.46810E-07  462223.1 3779132.4   495.4     3.06     4.28
2.85     YES
 L0000103         0   0.46810E-07  462223.0 3779141.6   495.6     3.06     4.28
2.85     YES
 L0000104         0   0.46810E-07  462223.0 3779150.8   495.7     3.06     4.28
2.85     YES
 L0000105         0   0.46810E-07  462223.0 3779160.0   495.9     3.06     4.28
2.85     YES
 L0000106         0   0.46810E-07  462223.0 3779169.2   496.1     3.06     4.28
2.85     YES
 L0000107         0   0.46810E-07  462222.9 3779178.4   496.3     3.06     4.28
2.85     YES
 L0000108         0   0.46810E-07  462222.9 3779187.6   496.4     3.06     4.28
2.85     YES
 L0000109         0   0.46810E-07  462222.9 3779196.8   496.6     3.06     4.28
2.85     YES
 L0000110         0   0.46810E-07  462222.8 3779206.0   496.8     3.06     4.28
2.85     YES
 L0000111         0   0.46810E-07  462222.8 3779215.2   497.0     3.06     4.28
2.85     YES
 L0000112         0   0.46810E-07  462222.8 3779224.4   497.2     3.06     4.28
2.85     YES
 L0000113         0   0.46810E-07  462222.7 3779233.6   497.4     3.06     4.28
2.85     YES
 L0000522         0   0.46790E-07  462102.0 3779243.6   499.7     3.06     4.05
2.85     YES
```

```
 L0000523         0   0.46790E-07  462110.7 3779243.5   499.6     3.06     4.05
2.85     YES
 L0000524         0   0.46790E-07  462119.4 3779243.5   499.5     3.06     4.05
2.85     YES
 L0000525         0   0.46790E-07  462128.1 3779243.5   499.4     3.06     4.05
2.85     YES
 L0000526         0   0.46790E-07  462136.8 3779243.5   499.3     3.06     4.05
2.85     YES
 L0000527         0   0.46790E-07  462145.5 3779243.4   499.2     3.06     4.05
2.85     YES
 L0000528         0   0.46790E-07  462154.2 3779243.4   499.0     3.06     4.05
2.85     YES
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                         ***       05/25/22
 *** AERMET - VERSION  16216 ***   ***
                        ***       11:52:32

                                  PAGE   6
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0000529         0   0.46790E-07  462162.9 3779243.4   498.9     3.06     4.05
2.85     YES
 L0000530         0   0.46790E-07  462171.6 3779243.3   498.7     3.06     4.05
2.85     YES
 L0000531         0   0.46790E-07  462180.3 3779243.3   498.5     3.06     4.05
2.85     YES
 L0000532         0   0.46790E-07  462189.0 3779243.3   498.3     3.06     4.05
2.85     YES
 L0000533         0   0.46790E-07  462197.7 3779243.2   498.1     3.06     4.05
2.85     YES
 L0000534         0   0.46790E-07  462206.4 3779243.2   497.9     3.06     4.05
2.85     YES
 L0000535         0   0.46790E-07  462215.1 3779243.2   497.7     3.06     4.05
2.85     YES
 L0000550         0   0.32000E-07  462120.9 3779228.7   499.2     3.06     4.05
2.85     YES
 L0000551         0   0.32000E-07  462129.6 3779228.7   499.1     3.06     4.05
2.85     YES
```

```
 L0000552         0   0.32000E-07  462138.3 3779228.7   498.9     3.06     4.05
2.85     YES
 L0000553         0   0.32000E-07  462147.0 3779228.7   498.8     3.06     4.05
2.85     YES
 L0000554         0   0.32000E-07  462155.7 3779228.7   498.6     3.06     4.05
2.85     YES
 L0000555         0   0.32000E-07  462164.4 3779228.7   498.5     3.06     4.05
2.85     YES
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***       05/25/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       11:52:32

                                   PAGE   7
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                              *** SOURCE IDs DEFINING SOURCE GROUPS ***

 SRCGROUP ID                                          SOURCE IDs
 -----------                                          ----------


  ALL        L0000001    , L0000002    , L0000003    , L0000004    , L0000005    ,
L0000006    , L0000007    , L0000008    ,

             L0000009    , L0000010    , L0000011    , L0000012    , L0000013    ,
L0000014    , L0000015    , L0000016    ,

             L0000017    , L0000018    , L0000019    , L0000020    , L0000021    ,
L0000022    , L0000023    , L0000024    ,

             L0000025    , L0000026    , L0000027    , L0000028    , L0000029    ,
L0000030    , L0000031    , L0000032    ,

             L0000033    , L0000034    , L0000035    , L0000036    , L0000037    ,
L0000038    , L0000039    , L0000040    ,

             L0000041    , L0000042    , L0000043    , L0000044    , L0000045    ,
L0000046    , L0000047    , L0000048    ,

             L0000049    , L0000050    , L0000051    , L0000052    , L0000053    ,
L0000054    , L0000055    , L0000056    ,

             L0000057    , L0000058    , L0000059    , L0000060    , L0000061    ,
L0000062    , L0000063    , L0000064    ,

             L0000065    , L0000066    , L0000067    , L0000068    , L0000069    ,
L0000070    , L0000071    , L0000072    ,
```

```
             L0000073    , L0000074    , L0000075    , L0000076    , L0000077    ,
L0000078    , L0000079    , L0000080    ,

             L0000081    , L0000082    , L0000083    , L0000084    , L0000085    ,
L0000086    , L0000087    , L0000088    ,

             L0000089    , L0000090    , L0000091    , L0000092    , L0000093    ,
L0000094    , L0000095    , L0000096    ,

             L0000097    , L0000098    , L0000099    , L0000100    , L0000101    ,
L0000102    , L0000103    , L0000104    ,

             L0000105    , L0000106    , L0000107    , L0000108    , L0000109    ,
L0000110    , L0000111    , L0000112    ,

             L0000113    , L0000522    , L0000523    , L0000524    , L0000525    ,
L0000526    , L0000527    , L0000528    ,

             L0000529    , L0000530    , L0000531    , L0000532    , L0000533    ,
L0000534    , L0000535    , L0000550    ,

             L0000551    , L0000552    , L0000553    , L0000554    , L0000555    ,
STCK1       ,
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                           ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                          ***        11:52:32

                                    PAGE   8
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                          *** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP                                    SOURCE IDs
  --------   ---------                                    ----------


              2035210.   L0000001    , L0000002    , L0000003    , L0000004    ,
L0000005    , L0000006    , L0000007    ,
 L0000008    ,

             L0000009    , L0000010    , L0000011    , L0000012    , L0000013    ,
L0000014    , L0000015    , L0000016    ,

             L0000017    , L0000018    , L0000019    , L0000020    , L0000021    ,
L0000022    , L0000023    , L0000024    ,

             L0000025    , L0000026    , L0000027    , L0000028    , L0000029    ,
```

```
L0000030    , L0000031    , L0000032    ,

             L0000033    , L0000034    , L0000035    , L0000036    , L0000037    ,
L0000038    , L0000039    , L0000040    ,

             L0000041    , L0000042    , L0000043    , L0000044    , L0000045    ,
L0000046    , L0000047    , L0000048    ,

             L0000049    , L0000050    , L0000051    , L0000052    , L0000053    ,
L0000054    , L0000055    , L0000056    ,

             L0000057    , L0000058    , L0000059    , L0000060    , L0000061    ,
L0000062    , L0000063    , L0000064    ,

             L0000065    , L0000066    , L0000067    , L0000068    , L0000069    ,
L0000070    , L0000071    , L0000072    ,

             L0000073    , L0000074    , L0000075    , L0000076    , L0000077    ,
L0000078    , L0000079    , L0000080    ,

             L0000081    , L0000082    , L0000083    , L0000084    , L0000085    ,
L0000086    , L0000087    , L0000088    ,

             L0000089    , L0000090    , L0000091    , L0000092    , L0000093    ,
L0000094    , L0000095    , L0000096    ,

             L0000097    , L0000098    , L0000099    , L0000100    , L0000101    ,
L0000102    , L0000103    , L0000104    ,

             L0000105    , L0000106    , L0000107    , L0000108    , L0000109    ,
L0000110    , L0000111    , L0000112    ,

             L0000113    , L0000522    , L0000523    , L0000524    , L0000525    ,
L0000526    , L0000527    , L0000528    ,

             L0000529    , L0000530    , L0000531    , L0000532    , L0000533    ,
L0000534    , L0000535    , L0000550    ,

             L0000551    , L0000552    , L0000553    , L0000554    , L0000555    ,
STCK1       ,
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        11:52:32

                                    PAGE   9
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW7) *
```

```
 SOURCE ID = STCK1         ; SOURCE TYPE = POINT    :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                  DAY OF WEEK = MONDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .1000E+01   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = TUESDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = WEDNESDY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = THURSDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = FRIDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                                         *** GRIDDED RECEPTOR NETWORK SUMMARY ***

                                    *** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART
***

                                           *** X-COORDINATES OF GRID ***
                                                    (METERS)

       462429.7, 462479.7, 462529.7, 462579.7, 462629.7, 462679.7, 462729.7,
462779.7, 462829.7, 462879.7,
       462929.7, 462979.7, 463029.7, 463079.7, 463129.7,

                                           *** Y-COORDINATES OF GRID ***
                                                    (METERS)

      3778187.8, 3778237.8, 3778287.8, 3778337.8, 3778387.8, 3778437.8, 3778487.8,
3778537.8, 3778587.8, 3778637.8,
      3778687.8, 3778737.8, 3778787.8, 3778837.8, 3778887.8, 3778937.8, 3778987.8,
3779037.8, 3779087.8, 3779137.8,
      3779187.8, 3779237.8, 3779287.8, 3779337.8, 3779387.8, 3779437.8, 3779487.8,
3779537.8, 3779587.8, 3779637.8,
      3779687.8, 3779737.8,

                                    *** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART
***

                                                 * ELEVATION HEIGHTS IN METERS *

    Y-COORD | X-COORD (METERS)
    (METERS) | 462429.66   462479.66   462529.66   462579.66   462629.66

```
462679.66    462729.66    462779.66    462829.66
 - - -
```

```
  3778587.79 |        481.00       481.30       480.80       480.80       479.70
  478.20       477.60       477.20       477.20
  3778537.79 |        480.10       479.80       479.20       479.40       478.80
  477.80       477.20       477.20       477.30
  3778487.79 |        479.30       478.80       478.30       478.40       477.90
  477.40       476.90       477.10       476.80
  3778437.79 |        478.60       478.00       478.10       477.50       476.90
  476.20       475.90       475.90       476.10
  3778387.79 |        478.00       477.40       477.60       476.40       475.90
  475.30       474.00       471.50       471.50
  3778337.79 |        476.90       476.40       476.90       475.40       475.00
  474.50       473.50       471.40       471.30
  3778287.79 |        475.80       475.20       475.70       474.70       474.00
  473.40       472.80       472.00       471.30
  3778237.79 |        474.80       473.80       473.90       473.90       473.00
  472.50       472.10       471.50       470.70
  3778187.79 |        474.30       473.30       473.00       472.80       472.00
  471.60       471.10       470.70       470.10
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                          ***       11:52:32

                                   PAGE  12
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                   *** NETWORK ID: UCART1   ;  NETWORK TYPE: GRIDCART
***

                                              * ELEVATION HEIGHTS IN METERS *

    Y-COORD  |                                                 X-COORD (METERS)
    (METERS) |     462879.66    462929.66    462979.66    463029.66    463079.66
463129.66
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

  3779737.79 |        497.80       497.20       496.50       495.40       494.50
  493.70
  3779687.79 |        496.20       496.10       495.50       494.80       493.80
  493.20
  3779637.79 |        495.50       494.80       494.20       493.40       492.90
  492.30
  3779587.79 |        494.20       493.50       492.70       491.50       491.30
  491.20
  3779537.79 |        493.00       492.80       491.50       491.10       490.10
  489.70
  3779487.79 |        492.10       491.20       490.90       490.10       489.50
  488.70
  3779437.79 |        491.00       490.20       490.20       489.10       488.60
```

488.20
3779387.79 | 491.00 489.70 488.80 488.70 488.70
487.50
3779337.79 | 490.30 489.50 488.60 487.40 487.20
487.10
3779287.79 | 489.30 488.40 488.00 487.40 486.60
486.50
3779237.79 | 488.30 487.60 487.30 486.70 485.90
485.20
3779187.79 | 487.50 486.80 486.70 486.00 485.70
484.20
3779137.79 | 486.50 486.30 486.00 485.30 484.60
483.10
3779087.79 | 485.50 485.50 485.10 484.50 484.00
482.60
3779037.79 | 484.20 484.50 484.10 483.60 482.90
482.10
3778987.79 | 483.20 483.50 483.30 482.30 479.90
479.70
3778937.79 | 482.50 481.90 481.30 481.00 478.50
478.40
3778887.79 | 481.60 481.20 480.50 480.20 480.00
479.10
3778837.79 | 480.80 480.30 479.60 479.20 479.70
478.50
3778787.79 | 480.00 479.30 479.10 478.30 477.80
476.60
3778737.79 | 479.40 478.50 478.00 477.50 476.80
475.70
3778687.79 | 477.60 477.20 476.90 476.70 476.10
475.50
3778637.79 | 476.90 476.60 476.30 475.80 474.60
473.90
3778587.79 | 477.10 476.70 476.40 475.10 473.90
473.10
3778537.79 | 477.00 476.70 475.30 474.30 473.50
472.70
3778487.79 | 476.80 476.40 474.10 473.50 472.60
472.00
3778437.79 | 476.20 476.10 473.60 472.50 471.80
471.00
3778387.79 | 471.60 473.20 472.50 471.30 470.80
470.30
3778337.79 | 471.20 472.00 471.10 470.20 469.70
469.30
3778287.79 | 470.80 470.40 469.80 469.20 468.60
468.00
3778237.79 | 470.20 469.80 468.80 468.20 467.50
466.90
3778187.79 | 469.30 468.70 468.00 467.30 466.60

```
  465.70
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                         ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        11:52:32

                                  PAGE  13
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                  *** NETWORK ID: UCART1   ;  NETWORK TYPE: GRIDCART
***

                                                * HILL HEIGHT SCALES IN METERS *

    Y-COORD  |                                                X-COORD (METERS)
    (METERS) |     462429.66    462479.66    462529.66    462579.66    462629.66
462679.66    462729.66    462779.66    462829.66
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

  3779737.79 |        504.40       503.50       502.70       502.40       501.90
  501.00       500.10       499.50       498.70
  3779687.79 |        503.70       502.60       501.60       500.60       500.80
  500.10       498.80       497.70       497.00
  3779637.79 |        503.10       501.90       500.70       499.70       499.30
  498.90       497.90       496.80       496.50
  3779587.79 |        502.10       501.20       500.00       498.80       498.50
  498.20       498.00       496.20       494.90
  3779537.79 |        501.20       499.70       499.40       498.00       497.20
  497.40       496.90       495.30       494.10
  3779487.79 |        499.80       498.40       498.30       497.20       496.50
  495.40       495.00       494.20       492.70
  3779437.79 |        498.80       497.90       497.30       496.80       496.00
  494.70       493.80       493.90       493.10
  3779387.79 |        498.00       496.50       496.00       495.70       495.10
  494.40       493.50       493.40       493.00
  3779337.79 |        497.70       496.20       495.60       495.30       494.40
  493.50       492.60       492.30       491.60
  3779287.79 |        495.80       494.50       494.10       493.70       493.10
  492.10       491.10       490.80       490.20
  3779237.79 |        494.70       494.00       493.40       493.00       492.00
  490.90       490.10       489.50       488.90
  3779187.79 |        493.90       492.90       492.30       491.80       490.90
  490.30       489.60       488.90       488.10
  3779137.79 |        492.90       491.80       491.10       490.50       489.80
  489.50       488.80       488.10       487.30
  3779087.79 |        492.00       491.40       490.80       490.10       488.90
  488.10       487.30       487.00       486.00
  3779037.79 |        490.80       489.90       489.50       488.90       488.10
  487.40       486.30       486.40       484.60
```

```
  3778987.79 |        489.90       489.20       488.70       488.20       487.20
  486.50       485.60       485.10       483.80
  3778937.79 |        489.10       488.20       487.80       487.10       486.20
  485.40       484.60       484.00       483.00
  3778887.79 |        487.80       487.40       486.70       486.00       485.30
  484.80       484.10       483.20       482.30
  3778837.79 |        486.70       486.30       485.90       485.00       484.30
  483.90       483.30       482.60       481.50
  3778787.79 |        485.90       485.40       485.00       484.30       483.40
  483.10       482.20       481.60       480.90
  3778737.79 |        485.00       484.50       484.00       483.20       482.60
  482.10       481.20       480.40       480.00
  3778687.79 |        483.10       483.10       482.80       482.30       481.60
  479.90       478.90       478.40       478.00
  3778637.79 |        481.90       482.30       482.10       481.90       480.30
  478.10       477.70       477.20       477.20
  3778587.79 |        481.00       481.30       480.80       480.80       479.70
  478.20       477.60       477.20       477.20
  3778537.79 |        480.10       479.80       479.20       479.40       478.80
  477.80       477.20       477.20       477.30
  3778487.79 |        479.30       478.80       478.30       478.40       477.90
  477.40       476.90       477.10       476.80
  3778437.79 |        478.60       478.00       478.10       477.50       476.90
  476.20       475.90       475.90       476.10
  3778387.79 |        478.00       477.40       477.60       476.40       475.90
  475.30       474.00       471.50       471.50
  3778337.79 |        476.90       476.40       476.90       475.40       475.00
  474.50       473.50       471.40       471.30
  3778287.79 |        475.80       475.20       475.70       474.70       474.00
  473.40       472.80       472.00       471.30
  3778237.79 |        474.80       473.80       473.90       473.90       473.00
  472.50       472.10       471.50       470.70
  3778187.79 |        474.30       473.30       473.00       472.80       472.00
  471.60       471.10       470.70       470.10
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       11:52:32

                                   PAGE  14
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                   *** NETWORK ID: UCART1   ;  NETWORK TYPE: GRIDCART
***

                                              * HILL HEIGHT SCALES IN METERS *

    Y-COORD  |                                                  X-COORD (METERS)
    (METERS) |     462879.66    462929.66    462979.66    463029.66    463079.66
463129.66
```

- - - -

```
 473.10
 3778537.79 |       477.00       476.70       475.30       474.30       473.50
 472.70
 3778487.79 |       476.80       476.40       474.10       473.50       472.60
 472.00
 3778437.79 |       476.20       476.10       473.60       472.50       471.80
 471.00
 3778387.79 |       474.40       473.20       472.50       471.30       470.80
 470.30
 3778337.79 |       471.20       472.00       471.10       470.20       469.70
 469.30
 3778287.79 |       470.80       470.40       469.80       469.20       468.60
 468.00
 3778237.79 |       470.20       469.80       468.80       468.20       467.50
 466.90
 3778187.79 |       469.30       468.70       468.00       467.30       466.60
 465.70
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***       05/25/22
 *** AERMET - VERSION  16216 ***   ***
                          ***      11:52:32

                                   PAGE  15
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                        *** GRIDDED RECEPTOR NETWORK SUMMARY ***

                                   *** NETWORK ID: UCART2   ;  NETWORK TYPE: GRIDCART
***

                                          *** X-COORDINATES OF GRID ***
                                                    (METERS)

       461181.5,  461231.5,  461281.5,  461331.5,  461381.5,  461431.5,  461481.5,
461531.5,  461581.5,  461631.5,
       461681.5,  461731.5,  461781.5,  461831.5,  461881.5,  461931.5,  461981.5,
462031.5,  462081.5,  462131.5,
       462181.5,

                                          *** Y-COORDINATES OF GRID ***
                                                    (METERS)

      3779751.9, 3779801.9, 3779851.9, 3779901.9, 3779951.9, 3780001.9, 3780051.9,
3780101.9,
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***       05/25/22
 *** AERMET - VERSION  16216 ***   ***
                          ***      11:52:32

                                   PAGE  16
```

```
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** NETWORK ID: UCART2   ;  NETWORK TYPE: GRIDCART
***

                                            * ELEVATION HEIGHTS IN METERS *

    Y-COORD  |                                                 X-COORD (METERS)
    (METERS) |     461181.53    461231.53    461281.53    461331.53    461381.53
461431.53    461481.53    461531.53    461581.53
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

  3780101.90 |        532.10       531.30       530.70       529.90       529.40
  528.20       529.70       527.80       525.50
  3780051.90 |        530.40       529.60       528.80       528.70       528.60
  526.70       526.60       525.80       524.80
  3780001.90 |        529.60       528.80       527.80       527.70       527.50
  525.60       525.40       524.50       523.20
  3779951.90 |        527.90       527.20       526.40       525.50       524.70
  524.40       524.10       523.80       522.30
  3779901.90 |        526.80       526.40       525.90       524.80       523.60
  523.00       522.50       522.40       521.50
  3779851.90 |        525.80       525.40       524.40       523.90       523.00
  521.90       521.90       521.30       520.40
  3779801.90 |        524.80       524.60       523.90       523.30       522.80
  520.30       520.20       519.60       518.70
  3779751.90 |        523.10       523.40       523.20       522.60       521.80
  519.70       519.60       519.00       518.10
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                        ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        11:52:32

                                PAGE  17
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** NETWORK ID: UCART2   ;  NETWORK TYPE: GRIDCART
***

                                            * ELEVATION HEIGHTS IN METERS *

    Y-COORD  |                                                 X-COORD (METERS)
    (METERS) |     461631.53    461681.53    461731.53    461781.53    461831.53
461881.53    461931.53    461981.53    462031.53
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

  3780101.90 |        524.80       524.20       523.90       523.30       522.40
  521.60       520.80       520.00       519.00
```

```
  3780051.90 |        523.50       523.30       522.80       522.70       521.60
  520.60       520.10       518.80       518.30
  3780001.90 |        522.00       521.70       520.50       520.60       519.80
  519.00       518.60       517.00       516.60
  3779951.90 |        520.50       519.60       518.70       518.40       518.00
  517.40       517.40       515.80       515.00
  3779901.90 |        520.60       519.20       518.80       518.10       517.40
  516.60       516.30       515.20       514.30
  3779851.90 |        519.90       518.60       518.10       517.10       516.60
  515.70       515.10       514.20       513.40
  3779801.90 |        518.10       517.10       516.40       515.80       515.40
  514.00       513.30       512.70       512.10
  3779751.90 |        517.40       516.60       515.90       514.90       514.60
  513.80       513.00       512.30       511.60
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        11:52:32

                                    PAGE  18
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                    *** NETWORK ID: UCART2   ;  NETWORK TYPE: GRIDCART
***

                                                * ELEVATION HEIGHTS IN METERS *

    Y-COORD  |                                                  X-COORD (METERS)
    (METERS) |     462081.53    462131.53    462181.53
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -

  3780101.90 |        517.80       516.90       516.00
  3780051.90 |        516.70       516.30       515.10
  3780001.90 |        515.70       515.60       514.50
  3779951.90 |        514.50       514.60       513.60
  3779901.90 |        513.50       513.50       512.60
  3779851.90 |        512.50       512.40       511.60
  3779801.90 |        511.80       511.20       510.50
  3779751.90 |        511.00       510.40       509.50
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        11:52:32

                                    PAGE  19
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                    *** NETWORK ID: UCART2   ;  NETWORK TYPE: GRIDCART
***
```

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS) | X-COORD (METERS)
(METERS) | 461181.53 461231.53 461281.53 461331.53 461381.53
461431.53 461481.53 461531.53 461581.53
- - - -

```
  3779951.90 |        520.50       519.60       518.70       518.40       518.00
  517.40       517.40       515.80       515.00
  3779901.90 |        520.60       519.20       518.80       518.10       517.40
  516.60       516.30       515.20       514.30
  3779851.90 |        519.90       518.60       518.10       517.10       516.60
  515.70       515.10       514.20       513.40
  3779801.90 |        518.10       517.10       516.40       515.80       515.40
  514.00       513.30       512.70       512.10
  3779751.90 |        517.40       516.60       515.90       514.90       514.60
  513.80       513.00       512.30       511.60
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                          ***       11:52:32

                                    PAGE  21
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                    *** NETWORK ID: UCART2   ;  NETWORK TYPE: GRIDCART
***

                                                * HILL HEIGHT SCALES IN METERS *

    Y-COORD  |                                                 X-COORD (METERS)
    (METERS) |     462081.53    462131.53    462181.53
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - -

  3780101.90 |        517.80       516.90       516.00
  3780051.90 |        516.70       516.30       515.10
  3780001.90 |        515.70       515.60       514.50
  3779951.90 |        514.50       514.60       513.60
  3779901.90 |        513.50       513.50       512.60
  3779851.90 |        512.50       512.40       511.60
  3779801.90 |        511.80       511.20       510.50
  3779751.90 |        511.00       510.40       509.50
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                          ***       11:52:32

                                    PAGE  22
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                         *** GRIDDED RECEPTOR NETWORK SUMMARY ***

                                    *** NETWORK ID: UCART3   ;  NETWORK TYPE: GRIDCART
***

                                           *** X-COORDINATES OF GRID ***
```

(METERS)

462239.5, 462289.5, 462339.5, 462389.5,

*** Y-COORDINATES OF GRID ***
(METERS)

3779629.5, 3779679.5, 3779729.5,

*** NETWORK ID: UCART3 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)			
	462239.49	462289.49	462339.49	462389.49
3779729.52	508.20	507.50	506.50	505.30
3779679.52	507.10	506.40	505.50	504.40
3779629.52	505.80	505.30	504.50	503.80

*** NETWORK ID: UCART3 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)			
	462239.49	462289.49	462339.49	462389.49
3779729.52	508.20	507.50	506.50	505.30
3779679.52	507.10	506.40	505.50	504.40
3779629.52	505.80	505.30	504.50	503.80

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART4 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

462322.8, 462372.8, 462422.8,

*** Y-COORDINATES OF GRID ***
(METERS)

3778708.1, 3778758.1, 3778808.1,

*** NETWORK ID: UCART4 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)		
	462322.82	462372.82	462422.82
3778808.07	487.60	487.00	486.30
3778758.07	486.70	486.00	485.60
3778708.07	485.00	484.40	484.00

```
                                *** NETWORK ID: UCART4   ;  NETWORK TYPE: GRIDCART
***

                                                  * HILL HEIGHT SCALES IN METERS *

    Y-COORD  |                                                  X-COORD (METERS)
    (METERS) |     462322.82    462372.82    462422.82
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - -

  3778808.07 |        487.60       487.00       486.30
  3778758.07 |        486.70       486.00       485.60
  3778708.07 |        485.00       484.40       484.00
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***       05/25/22
 *** AERMET - VERSION  16216 ***   ***
                       ***       11:52:32

                                PAGE  28
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                     *** GRIDDED RECEPTOR NETWORK SUMMARY ***

                                *** NETWORK ID: UCART5   ;  NETWORK TYPE: GRIDCART
***

                                       *** X-COORDINATES OF GRID ***
                                                 (METERS)

       462373.1,  462423.1,

                                       *** Y-COORDINATES OF GRID ***
                                                 (METERS)

      3778826.5, 3778876.5,
*** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***       05/25/22
 *** AERMET - VERSION  16216 ***   ***
                       ***       11:52:32

                                PAGE  29
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** NETWORK ID: UCART5   ;  NETWORK TYPE: GRIDCART
***

                                                  * ELEVATION HEIGHTS IN METERS *

    Y-COORD  |                                                  X-COORD (METERS)
```

```
    (METERS) |     462373.12    462423.12
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -

  3778876.53 |        488.40       487.50
  3778826.53 |        487.30       486.60
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***       05/25/22
 *** AERMET - VERSION  16216 ***   ***
                          ***      11:52:32

                                   PAGE  30
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                   *** NETWORK ID: UCART5   ;  NETWORK TYPE: GRIDCART
***

                                                * HILL HEIGHT SCALES IN METERS *

    Y-COORD  |                                                 X-COORD (METERS)
    (METERS) |     462373.12    462423.12
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -

  3778876.53 |        488.40       487.50
  3778826.53 |        487.30       486.60
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***       05/25/22
 *** AERMET - VERSION  16216 ***   ***
                          ***      11:52:32

                                   PAGE  31
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                          *** METEOROLOGICAL DAYS SELECTED FOR
PROCESSING ***
                                                            (1=YES; 0=NO)

            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
```

```
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1

                NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON
WHAT IS INCLUDED IN THE DATA FILE.



                                    *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
CATEGORIES ***
                                                              (METERS/SEC)

                                                    1.54,   3.09,   5.14,   8.23,
10.80,
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                             ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                            ***        11:52:32

                                    PAGE  32
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                      *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL
DATA ***

   Surface file:   FONT_V9_ADJU\FONT_v9.SFC
                Met Version:  16216
   Profile file:   FONT_V9_ADJU\FONT_v9.PFL

   Surface format: FREE

   Profile format: FREE

   Surface station no.:     3102                 Upper air station no.:     3190
                  Name: UNKNOWN                                   Name: UNKNOWN

                  Year:   2011                                    Year:   2011

 First 24 hours of scalar data
 YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN
ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -
 11 01 01   1 01  -18.5  0.194 -9.000 -9.000 -999.  204.     41.2  0.25   2.82
1.00    1.80   69.    9.1  276.4    5.5
 11 01 01   1 02  -23.8  0.239 -9.000 -9.000 -999.  281.     63.0  0.25   2.82
1.00    2.20   52.    9.1  275.4    5.5
 11 01 01   1 03  -18.5  0.194 -9.000 -9.000 -999.  205.     41.2  0.25   2.82
1.00    1.80   32.    9.1  275.4    5.5
```

```
 11 01 01   1 04   -1.4  0.067 -9.000 -9.000 -999.   57.     18.3  0.25   2.82
1.00    0.40   27.    9.1  274.2    5.5
 11 01 01   1 05  -18.6  0.194 -9.000 -9.000 -999.  204.     41.2  0.25   2.82
1.00    1.80   51.    9.1  274.2    5.5
 11 01 01   1 06  -29.7  0.296 -9.000 -9.000 -999.  387.     96.6  0.25   2.82
1.00    2.70   53.    9.1  274.2    5.5
 11 01 01   1 07  -24.0  0.239 -9.000 -9.000 -999.  282.     63.0  0.25   2.82
1.00    2.20   70.    9.1  274.2    5.5
 11 01 01   1 08   -8.4  0.138 -9.000 -9.000 -999.  127.     27.3  0.25   2.82
0.54    1.30   72.    9.1  275.4    5.5
 11 01 01   1 09   44.3  0.280  0.571  0.005  147.  356.    -43.5  0.25   2.82
0.32    2.20   67.    9.1  277.5    5.5
 11 01 01   1 10  122.7  0.264  0.952  0.005  247.  326.    -13.2  0.25   2.82
0.25    1.80   83.    9.1  279.9    5.5
 11 01 01   1 11  179.8  0.316  1.733  0.005 1017.  426.    -15.4  0.25   2.82
0.22    2.20   58.    9.1  282.0    5.5
 11 01 01   1 12  206.0  0.320  1.940  0.008 1244.  435.    -14.0  0.25   2.82
0.21    2.20  115.    9.1  283.1    5.5
 11 01 01   1 13  132.6  0.214  1.733  0.009 1377.  243.     -6.5  0.25   2.82
0.21    1.30  147.    9.1  284.2    5.5
 11 01 01   1 14  147.0  0.216  1.818  0.009 1431.  242.     -6.0  0.25   2.82
0.23    1.30  219.    9.1  284.9    5.5
 11 01 01   1 15  104.0  0.208  1.633  0.009 1468.  228.     -7.6  0.25   2.82
0.26    1.30  126.    9.1  285.4    5.5
 11 01 01   1 16   26.4  0.140  1.037  0.009 1477.  127.     -9.1  0.25   2.82
0.35    0.90  151.    9.1  284.9    5.5
 11 01 01   1 17   -9.0  0.137 -9.000 -9.000 -999.  121.     24.9  0.25   2.82
0.63    1.30   69.    9.1  283.1    5.5
 11 01 01   1 18  -33.4  0.342 -9.000 -9.000 -999.  481.    129.0  0.25   2.82
1.00    3.10   81.    9.1  281.4    5.5
 11 01 01   1 19  -33.6  0.342 -9.000 -9.000 -999.  481.    128.9  0.25   2.82
1.00    3.10   51.    9.1  279.9    5.5
 11 01 01   1 20  -23.6  0.239 -9.000 -9.000 -999.  287.     63.1  0.25   2.82
1.00    2.20   77.    9.1  278.8    5.5
 11 01 01   1 21  -18.5  0.194 -9.000 -9.000 -999.  205.     41.2  0.25   2.82
1.00    1.80   53.    9.1  277.5    5.5
 11 01 01   1 22  -23.7  0.239 -9.000 -9.000 -999.  281.     63.0  0.25   2.82
1.00    2.20   58.    9.1  277.5    5.5
 11 01 01   1 23  -18.5  0.194 -9.000 -9.000 -999.  205.     41.2  0.25   2.82
1.00    1.80   64.    9.1  277.5    5.5
 11 01 01   1 24   -4.5  0.094 -9.000 -9.000 -999.   74.     16.3  0.25   2.82
1.00    0.90   52.    9.1  277.0    5.5


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 11 01 01 01    5.5 0 -999.  -99.00   276.5   99.0  -99.00  -99.00
 11 01 01 01    9.1 1   69.    1.80  -999.0   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
```

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                *** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL   ***
                                    INCLUDING SOURCE(S):   L0000001   , L0000002
, L0000003   , L0000004   , L0000005   ,
                  L0000006   , L0000007   , L0000008   , L0000009   , L0000010
, L0000011   , L0000012   , L0000013   ,
                  L0000014   , L0000015   , L0000016   , L0000017   , L0000018
, L0000019   , L0000020   , L0000021   ,
                  L0000022   , L0000023   , L0000024   , L0000025   , L0000026
, L0000027   , L0000028   , . . .   ,

                                   *** NETWORK ID: UCART1   ; NETWORK TYPE:
GRIDCART ***

                                        ** CONC OF PM_10   IN MICROGRAMS/M**3
                  **

    Y-COORD | X-COORD (METERS)
    (METERS) | 462429.66   462479.66   462529.66   462579.66   462629.66
462679.66   462729.66   462779.66   462829.66
 -
- -

  3779737.79 | 0.00007   0.00008   0.00008   0.00009   0.00009
 0.00009   0.00009   0.00009   0.00009
  3779687.79 | 0.00009   0.00010   0.00010   0.00011   0.00011
 0.00011   0.00011   0.00011   0.00010
  3779637.79 | 0.00012   0.00012   0.00013   0.00013   0.00013
 0.00013   0.00013   0.00012   0.00012
  3779587.79 | 0.00015   0.00016   0.00016   0.00016   0.00016
 0.00015   0.00014   0.00014   0.00013
  3779537.79 | 0.00019   0.00020   0.00020   0.00019   0.00018
 0.00017   0.00016   0.00015   0.00014
  3779487.79 | 0.00025   0.00025   0.00024   0.00023   0.00021
 0.00019   0.00018   0.00016   0.00015
  3779437.79 | 0.00032   0.00031   0.00029   0.00026   0.00023
 0.00021   0.00019   0.00017   0.00015
  3779387.79 | 0.00040   0.00036   0.00032   0.00028   0.00025
 0.00022   0.00019   0.00017   0.00015
  3779337.79 | 0.00047   0.00040   0.00034   0.00030   0.00025
 0.00022   0.00019   0.00017   0.00015
  3779287.79 | 0.00049   0.00041   0.00034   0.00029   0.00024

```
0.00021      0.00018      0.00016      0.00014
 3779237.79 |       0.00046      0.00038      0.00031      0.00026      0.00022
0.00019      0.00016      0.00014      0.00012
 3779187.79 |       0.00038      0.00031      0.00026      0.00022      0.00019
0.00016      0.00014      0.00012      0.00011
 3779137.79 |       0.00028      0.00024      0.00020      0.00018      0.00015
0.00013      0.00012      0.00010      0.00009
 3779087.79 |       0.00021      0.00018      0.00016      0.00014      0.00012
0.00011      0.00010      0.00009      0.00008
 3779037.79 |       0.00016      0.00014      0.00012      0.00011      0.00010
0.00009      0.00008      0.00007      0.00006
 3778987.79 |       0.00013      0.00011      0.00010      0.00009      0.00008
0.00007      0.00007      0.00006      0.00006
 3778937.79 |       0.00011      0.00010      0.00009      0.00008      0.00007
0.00006      0.00006      0.00005      0.00005
 3778887.79 |       0.00011      0.00009      0.00008      0.00007      0.00006
0.00006      0.00005      0.00005      0.00004
 3778837.79 |       0.00010      0.00008      0.00007      0.00006      0.00006
0.00005      0.00005      0.00004      0.00004
 3778787.79 |       0.00009      0.00008      0.00007      0.00006      0.00005
0.00005      0.00004      0.00004      0.00004
 3778737.79 |       0.00009      0.00007      0.00006      0.00006      0.00005
0.00004      0.00004      0.00004      0.00003
 3778687.79 |       0.00008      0.00007      0.00006      0.00005      0.00005
0.00004      0.00004      0.00003      0.00003
 3778637.79 |       0.00008      0.00007      0.00006      0.00005      0.00004
0.00004      0.00004      0.00003      0.00003
 3778587.79 |       0.00008      0.00006      0.00006      0.00005      0.00004
0.00004      0.00003      0.00003      0.00003
 3778537.79 |       0.00008      0.00006      0.00005      0.00005      0.00004
0.00004      0.00003      0.00003      0.00003
 3778487.79 |       0.00007      0.00006      0.00005      0.00004      0.00004
0.00003      0.00003      0.00003      0.00002
 3778437.79 |       0.00007      0.00006      0.00005      0.00004      0.00004
0.00003      0.00003      0.00003      0.00002
 3778387.79 |       0.00006      0.00005      0.00004      0.00004      0.00003
0.00003      0.00003      0.00002      0.00002
 3778337.79 |       0.00006      0.00005      0.00004      0.00003      0.00003
0.00003      0.00002      0.00002      0.00002
 3778287.79 |       0.00005      0.00004      0.00004      0.00003      0.00003
0.00002      0.00002      0.00002      0.00002
 3778237.79 |       0.00005      0.00004      0.00003      0.00003      0.00003
0.00002      0.00002      0.00002      0.00002
 3778187.79 |       0.00004      0.00003      0.00003      0.00003      0.00002
0.00002      0.00002      0.00002      0.00002
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                          ***        11:52:32
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 462879.66	462929.66	462979.66	463029.66	463079.66	463129.66
3779737.79	0.00009	0.00009	0.00008	0.00008	0.00007	0.00007
3779687.79	0.00010	0.00009	0.00009	0.00008	0.00008	0.00008
3779637.79	0.00011	0.00010	0.00010	0.00009	0.00008	0.00008
3779587.79	0.00012	0.00011	0.00010	0.00010	0.00009	0.00008
3779537.79	0.00013	0.00012	0.00011	0.00010	0.00009	0.00008
3779487.79	0.00013	0.00012	0.00011	0.00010	0.00009	0.00008
3779437.79	0.00014	0.00012	0.00011	0.00010	0.00009	0.00008
3779387.79	0.00013	0.00012	0.00011	0.00010	0.00009	0.00008
3779337.79	0.00013	0.00012	0.00010	0.00009	0.00008	0.00007
3779287.79	0.00012	0.00011	0.00010	0.00009	0.00008	0.00007
3779237.79	0.00011	0.00010	0.00009	0.00008	0.00007	0.00006
3779187.79	0.00010	0.00008	0.00008	0.00007	0.00006	0.00006

```
 3779137.79 |       0.00008      0.00007      0.00007      0.00006      0.00005
0.00005
 3779087.79 |       0.00007      0.00006      0.00006      0.00005      0.00005
0.00004
 3779037.79 |       0.00006      0.00005      0.00005      0.00005      0.00004
0.00004
 3778987.79 |       0.00005      0.00005      0.00004      0.00004      0.00004
0.00003
 3778937.79 |       0.00004      0.00004      0.00004      0.00003      0.00003
0.00003
 3778887.79 |       0.00004      0.00004      0.00003      0.00003      0.00003
0.00003
 3778837.79 |       0.00004      0.00003      0.00003      0.00003      0.00003
0.00002
 3778787.79 |       0.00003      0.00003      0.00003      0.00003      0.00002
0.00002
 3778737.79 |       0.00003      0.00003      0.00003      0.00002      0.00002
0.00002
 3778687.79 |       0.00003      0.00003      0.00002      0.00002      0.00002
0.00002
 3778637.79 |       0.00003      0.00002      0.00002      0.00002      0.00002
0.00002
 3778587.79 |       0.00003      0.00002      0.00002      0.00002      0.00002
0.00002
 3778537.79 |       0.00002      0.00002      0.00002      0.00002      0.00002
0.00002
 3778487.79 |       0.00002      0.00002      0.00002      0.00002      0.00002
0.00002
 3778437.79 |       0.00002      0.00002      0.00002      0.00002      0.00002
0.00001
 3778387.79 |       0.00002      0.00002      0.00002      0.00002      0.00001
0.00001
 3778337.79 |       0.00002      0.00002      0.00002      0.00002      0.00001
0.00001
 3778287.79 |       0.00002      0.00002      0.00002      0.00001      0.00001
0.00001
 3778237.79 |       0.00002      0.00002      0.00001      0.00001      0.00001
0.00001
 3778187.79 |       0.00002      0.00001      0.00001      0.00001      0.00001
0.00001
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***       05/25/22
 *** AERMET - VERSION  16216 ***   ***
                          ***       11:52:32

                                    PAGE  35
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL        ***
```

```
                                    INCLUDING SOURCE(S):     L0000001    , L0000002
, L0000003    , L0000004    , L0000005    ,
                  L0000006    , L0000007    , L0000008    , L0000009    , L0000010
, L0000011    , L0000012    , L0000013    ,
                  L0000014    , L0000015    , L0000016    , L0000017    , L0000018
, L0000019    , L0000020    , L0000021    ,
                  L0000022    , L0000023    , L0000024    , L0000025    , L0000026
, L0000027    , L0000028    ,  . . .      ,

                                    *** NETWORK ID: UCART2   ;  NETWORK TYPE:
GRIDCART ***

                                         ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

    Y-COORD  |                                                 X-COORD (METERS)
    (METERS) |     461181.53    461231.53    461281.53    461331.53    461381.53
461431.53    461481.53    461531.53    461581.53
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -

  3780101.90 |       0.00001      0.00001      0.00001      0.00001      0.00001
 0.00001      0.00001      0.00001      0.00001
  3780051.90 |       0.00001      0.00001      0.00001      0.00001      0.00001
 0.00001      0.00001      0.00001      0.00001
  3780001.90 |       0.00001      0.00001      0.00001      0.00001      0.00001
 0.00001      0.00001      0.00001      0.00001
  3779951.90 |       0.00001      0.00001      0.00001      0.00001      0.00001
 0.00001      0.00001      0.00001      0.00001
  3779901.90 |       0.00001      0.00001      0.00001      0.00001      0.00001
 0.00001      0.00001      0.00001      0.00001
  3779851.90 |       0.00001      0.00001      0.00001      0.00001      0.00001
 0.00001      0.00001      0.00001      0.00001
  3779801.90 |       0.00001      0.00001      0.00001      0.00001      0.00001
 0.00001      0.00001      0.00001      0.00002
  3779751.90 |       0.00001      0.00001      0.00001      0.00001      0.00001
 0.00001      0.00002      0.00002      0.00002
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        11:52:32

                                    PAGE  36
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                 *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL     ***
                                    INCLUDING SOURCE(S):     L0000001    , L0000002
, L0000003    , L0000004    , L0000005    ,
                  L0000006    , L0000007    , L0000008    , L0000009    , L0000010
```

```
, L0000011    , L0000012    , L0000013    ,
                L0000014    , L0000015    , L0000016    , L0000017    , L0000018
, L0000019    , L0000020    , L0000021    ,
                L0000022    , L0000023    , L0000024    , L0000025    , L0000026
, L0000027    , L0000028    ,  . . .      ,

                                *** NETWORK ID: UCART2   ;  NETWORK TYPE:
GRIDCART ***

                                     ** CONC OF PM_10    IN MICROGRAMS/M**3
                 **

    Y-COORD  |                                              X-COORD (METERS)
    (METERS) |     461631.53    461681.53    461731.53    461781.53    461831.53
461881.53    461931.53    461981.53    462031.53
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -

  3780101.90 |       0.00001      0.00001      0.00001      0.00001      0.00001
 0.00001      0.00001      0.00001      0.00001
  3780051.90 |       0.00001      0.00001      0.00001      0.00001      0.00001
 0.00001      0.00001      0.00001      0.00001
  3780001.90 |       0.00001      0.00001      0.00001      0.00001      0.00001
 0.00001      0.00001      0.00001      0.00001
  3779951.90 |       0.00001      0.00001      0.00001      0.00001      0.00001
 0.00001      0.00002      0.00002      0.00002
  3779901.90 |       0.00001      0.00001      0.00001      0.00001      0.00002
 0.00002      0.00002      0.00002      0.00002
  3779851.90 |       0.00001      0.00002      0.00002      0.00002      0.00002
 0.00002      0.00002      0.00002      0.00002
  3779801.90 |       0.00002      0.00002      0.00002      0.00002      0.00002
 0.00002      0.00002      0.00002      0.00002
  3779751.90 |       0.00002      0.00002      0.00002      0.00002      0.00002
 0.00002      0.00003      0.00003      0.00003
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***       05/25/22
 *** AERMET - VERSION  16216 ***   ***
                        ***       11:52:32

                                  PAGE  37
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     L0000001    , L0000002
, L0000003    , L0000004    , L0000005    ,
                L0000006    , L0000007    , L0000008    , L0000009    , L0000010
, L0000011    , L0000012    , L0000013    ,
                L0000014    , L0000015    , L0000016    , L0000017    , L0000018
, L0000019    , L0000020    , L0000021    ,
```

```
                 L0000022    , L0000023    , L0000024    , L0000025    , L0000026
, L0000027    , L0000028    ,  . . .      ,

                                  *** NETWORK ID: UCART2   ;  NETWORK TYPE:
GRIDCART ***

                                       ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

    Y-COORD  |                                                X-COORD (METERS)
    (METERS) |     462081.53    462131.53    462181.53
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

  3780101.90 |       0.00001      0.00001      0.00001
  3780051.90 |       0.00001      0.00001      0.00002
  3780001.90 |       0.00002      0.00002      0.00002
  3779951.90 |       0.00002      0.00002      0.00002
  3779901.90 |       0.00002      0.00002      0.00002
  3779851.90 |       0.00002      0.00002      0.00003
  3779801.90 |       0.00003      0.00003      0.00003
  3779751.90 |       0.00003      0.00003      0.00004
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                         ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                        ***        11:52:32

                                   PAGE  38
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL       ***
                                   INCLUDING SOURCE(S):     L0000001    , L0000002
, L0000003    , L0000004    , L0000005    ,
                  L0000006    , L0000007    , L0000008    , L0000009    , L0000010
, L0000011    , L0000012    , L0000013    ,
                  L0000014    , L0000015    , L0000016    , L0000017    , L0000018
, L0000019    , L0000020    , L0000021    ,
                  L0000022    , L0000023    , L0000024    , L0000025    , L0000026
, L0000027    , L0000028    ,  . . .      ,

                                  *** NETWORK ID: UCART3   ;  NETWORK TYPE:
GRIDCART ***

                                       ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

    Y-COORD  |                                                X-COORD (METERS)
    (METERS) |     462239.49    462289.49    462339.49    462389.49
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

  3779729.52 |       0.00005      0.00005      0.00006      0.00007
  3779679.52 |       0.00006      0.00007      0.00008      0.00009
  3779629.52 |       0.00007      0.00009      0.00010      0.00011
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***       05/25/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       11:52:32

                                   PAGE  39
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL       ***
                                   INCLUDING SOURCE(S):     L0000001    , L0000002
, L0000003    , L0000004    , L0000005    ,
                  L0000006    , L0000007    , L0000008    , L0000009    , L0000010
, L0000011    , L0000012    , L0000013    ,
                  L0000014    , L0000015    , L0000016    , L0000017    , L0000018
, L0000019    , L0000020    , L0000021    ,
                  L0000022    , L0000023    , L0000024    , L0000025    , L0000026
, L0000027    , L0000028    ,  . . .      ,

                                    *** NETWORK ID: UCART4   ;  NETWORK TYPE:
GRIDCART ***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

    Y-COORD  |                                                 X-COORD (METERS)
    (METERS) |     462322.82    462372.82    462422.82
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

  3778808.07 |       0.00016      0.00012      0.00010
  3778758.07 |       0.00016      0.00012      0.00009
  3778708.07 |       0.00015      0.00011      0.00009
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***       05/25/22
 *** AERMET - VERSION  16216 ***   ***
                         ***       11:52:32

                                   PAGE  40
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL       ***
                                   INCLUDING SOURCE(S):     L0000001    , L0000002
, L0000003    , L0000004    , L0000005    ,
```

```
                 L0000006    , L0000007    , L0000008    , L0000009    , L0000010
, L0000011    , L0000012    , L0000013    ,
                 L0000014    , L0000015    , L0000016    , L0000017    , L0000018
, L0000019    , L0000020    , L0000021    ,
                 L0000022    , L0000023    , L0000024    , L0000025    , L0000026
, L0000027    , L0000028    ,  . . .      ,

                                  *** NETWORK ID: UCART5   ;  NETWORK TYPE:
GRIDCART ***

                                       ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

    Y-COORD  |                                                 X-COORD (METERS)
    (METERS) |     462373.12    462423.12
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

  3778876.53 |       0.00013      0.00011
  3778826.53 |       0.00012      0.00010
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                        ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        11:52:32

                                  PAGE  41
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                               *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     L0000001    , L0000002
, L0000003    , L0000004    , L0000005    ,
                 L0000006    , L0000007    , L0000008    , L0000009    , L0000010
, L0000011    , L0000012    , L0000013    ,
                 L0000014    , L0000015    , L0000016    , L0000017    , L0000018
, L0000019    , L0000020    , L0000021    ,
                 L0000022    , L0000023    , L0000024    , L0000025    , L0000026
, L0000027    , L0000028    ,  . . .      ,

                                  *** NETWORK ID: UCART1   ;  NETWORK TYPE:
GRIDCART ***

                                       ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

  Y-COORD  |                                                   X-COORD (METERS)
  (METERS) |       462429.66              462479.66              462529.66
      462579.66              462629.66
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
```

```
3779737.8 |      0.06910 (13040814)      0.07117 (12112614)      0.07088 (12112614)
    0.06554 (12112614)      0.05708 (12112614)
3779687.8 |      0.08136 (13040814)      0.08221 (12112614)      0.07664 (12112614)
    0.06660 (12112614)      0.05462 (12112614)
3779637.8 |      0.09606 (12112614)      0.09067 (12112614)      0.07858 (12112614)
    0.06482 (12021314)      0.06558 (12021314)
3779587.8 |      0.10874 (12112614)      0.09407 (12112614)      0.07805 (12021314)
    0.07818 (12021314)      0.07367 (12021314)
3779537.8 |      0.11462 (12112614)      0.09557 (12021314)      0.09469 (12021314)
    0.08715 (12021314)      0.07919 (12011614)
3779487.8 |      0.11926 (12021314)      0.11613 (12021314)      0.10411 (12021314)
    0.09132 (12011614)      0.08386 (15110214)
3779437.8 |      0.14499 (12021314)      0.12567 (16032814)      0.11005 (15110214)
    0.10424 (15110214)      0.09457 (15110214)
3779387.8 |      0.15503 (16032814)      0.14115 (15110214)      0.12685 (15110214)
    0.10982 (15110214)      0.10176 (12042314)
3779337.8 |      0.18085 (15110214)      0.14977 (15110214)      0.13606 (15060114)
    0.12465 (15060114)      0.11224 (15092114)
3779287.8 |      0.19246 (15060114)      0.16911 (15092114)      0.14949 (15092114)
    0.13020 (15092114)      0.11251 (15092114)
3779237.8 |      0.19044 (15092114)      0.15743 (11041814)      0.14177 (11041814)
    0.12728 (11041814)      0.11358 (11041814)
3779187.8 |      0.17402 (13041514)      0.15231 (13041514)      0.13441 (13041514)
    0.11923 (13041514)      0.10593 (13041514)
3779137.8 |      0.14717 (16091914)      0.12692 (16091914)      0.11149 (13041514)
    0.10054 (13041514)      0.09072 (13041514)
3779087.8 |      0.11437 (16051614)      0.10207 (16091914)      0.09247 (16091914)
    0.08324 (16091914)      0.07462 (16091914)
3779037.8 |      0.12371 (16051614)      0.10388 (16051614)      0.08703 (16051614)
    0.07277 (16051614)      0.06094 (16051614)
3778987.8 |      0.11393 (16051614)      0.10182 (16051614)      0.08918 (16051614)
    0.07721 (16051614)      0.06634 (16051614)
3778937.8 |      0.09255 (16051614)      0.08879 (16051614)      0.08227 (16051614)
    0.07435 (16051614)      0.06619 (16051614)
3778887.8 |      0.08386 (12123114)      0.07237 (12123114)      0.06960 (16051614)
    0.06611 (16051614)      0.06135 (16051614)
3778837.8 |      0.07843 (12123114)      0.07155 (12123114)      0.06289 (12123114)
    0.05501 (16051614)      0.05334 (16051614)
3778787.8 |      0.06962 (12123114)      0.06681 (12123114)      0.06146 (12123114)
    0.05472 (12123114)      0.04760 (12123114)
3778737.8 |      0.05945 (12123114)      0.05977 (12123114)      0.05734 (12123114)
    0.05303 (12123114)      0.04780 (12123114)
3778687.8 |      0.04919 (12123114)      0.05170 (12123114)      0.05161 (12123114)
    0.04954 (12123114)      0.04613 (12123114)
3778637.8 |      0.04012 (12123114)      0.04383 (12123114)      0.04534 (12123114)
    0.04503 (12123114)      0.04310 (12123114)
3778587.8 |      0.03566 (15100514)      0.03650 (12123114)      0.03893 (12123114)
    0.03989 (12123114)      0.03937 (12123114)
3778537.8 |      0.03305 (15100514)      0.03063 (15100514)      0.03289 (12123114)
```

```
    0.03468 (12123114)      0.03520 (12123114)
 3778487.8 |      0.03047 (15100514)      0.02869 (15100514)      0.02754 (12123114)
    0.02976 (12123114)      0.03096 (12123114)
 3778437.8 |      0.02798 (15100514)      0.02671 (15100514)      0.02499 (15100514)
    0.02526 (12123114)      0.02687 (12123114)
 3778387.8 |      0.02562 (15100514)      0.02476 (15100514)      0.02347 (15100514)
    0.02177 (15100514)      0.02308 (12123114)
 3778337.8 |      0.02338 (15100514)      0.02284 (15100514)      0.02191 (15100514)
    0.02055 (15100514)      0.01965 (12123114)
 3778287.8 |      0.02130 (15100514)      0.02100 (15100514)      0.02033 (15100514)
    0.01929 (15100514)      0.01803 (15100514)
 3778237.8 |      0.01938 (15100514)      0.01924 (15100514)      0.01879 (15100514)
    0.01804 (15100514)      0.01704 (15100514)
 3778187.8 |      0.01763 (15100514)      0.01764 (15100514)      0.01737 (15100514)
    0.01682 (15100514)      0.01604 (15100514)
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        11:52:32

                                    PAGE  42
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                    INCLUDING SOURCE(S):     L0000001    , L0000002
, L0000003    , L0000004    , L0000005    ,
                   L0000006    , L0000007    , L0000008    , L0000009    , L0000010
, L0000011    , L0000012    , L0000013    ,
                   L0000014    , L0000015    , L0000016    , L0000017    , L0000018
, L0000019    , L0000020    , L0000021    ,
                   L0000022    , L0000023    , L0000024    , L0000025    , L0000026
, L0000027    , L0000028    ,  . . .      ,

                                    *** NETWORK ID: UCART1   ;  NETWORK TYPE:
GRIDCART ***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                    **

  Y-COORD  |                                                 X-COORD (METERS)
  (METERS) |       462679.66              462729.66              462779.66
      462829.66              462879.66
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

 3779737.8 |      0.04737 (12112614)      0.04770 (12021314)      0.04683 (12021314)
    0.04575 (12011614)      0.04355 (12011614)
 3779687.8 |      0.05567 (12021314)      0.05399 (12011614)      0.05209 (12011614)
    0.04888 (12011614)      0.04488 (12011614)
```

```
3779637.8 |      0.06282 (12021314)      0.05973 (12011614)      0.05508 (12011614)
    0.04976 (12011614)      0.04568 (12120314)
3779587.8 |      0.06885 (12011614)      0.06242 (12011614)      0.05499 (12011614)
    0.05284 (15110214)      0.05019 (15110214)
3779537.8 |      0.07028 (12011614)      0.06606 (15110214)      0.06236 (15110214)
    0.05765 (15110214)      0.05243 (15110214)
3779487.8 |      0.07914 (15110214)      0.07273 (15110214)      0.06534 (15110214)
    0.06142 (12042314)      0.05878 (12042314)
3779437.8 |      0.08330 (15110214)      0.07812 (12042314)      0.07381 (12042314)
    0.06840 (12042314)      0.06245 (12042314)
3779387.8 |      0.09387 (12042314)      0.08543 (15060114)      0.07871 (15092114)
    0.07299 (15092114)      0.06674 (15092114)
3779337.8 |      0.10173 (15092114)      0.09132 (15092114)      0.08174 (15092114)
    0.07279 (15092114)      0.06487 (11041814)
3779287.8 |      0.09698 (11041814)      0.09025 (11041814)      0.08400 (11041814)
    0.07785 (11041814)      0.07196 (11041814)
3779237.8 |      0.10149 (11041814)      0.09118 (11041814)      0.08228 (11041814)
    0.07449 (11041814)      0.06767 (11041814)
3779187.8 |      0.09482 (13041514)      0.08522 (13041514)      0.07695 (13041514)
    0.06974 (13041514)      0.06352 (13041514)
3779137.8 |      0.08226 (13041514)      0.07460 (13041514)      0.06787 (13041514)
    0.06191 (13041514)      0.05665 (13041514)
3779087.8 |      0.06715 (16091914)      0.06056 (16091914)      0.05488 (16091914)
    0.04973 (16091914)      0.04530 (16091914)
3779037.8 |      0.05411 (16091914)      0.05004 (16091914)      0.04643 (16091914)
    0.04271 (16091914)      0.03951 (16091914)
3778987.8 |      0.05698 (16051614)      0.04891 (16051614)      0.04208 (16051614)
    0.03620 (16051614)      0.03223 (16091914)
3778937.8 |      0.05846 (16051614)      0.05136 (16051614)      0.04502 (16051614)
    0.03937 (16051614)      0.03453 (13040114)
3778887.8 |      0.05607 (16051614)      0.05065 (16051614)      0.04539 (16051614)
    0.04066 (13040114)      0.03678 (13040114)
3778837.8 |      0.05060 (16051614)      0.04716 (16051614)      0.04386 (13040114)
    0.04060 (13040114)      0.03740 (13040114)
3778787.8 |      0.04365 (13040114)      0.04259 (13040114)      0.04092 (13040114)
    0.03882 (13040114)      0.03648 (13040114)
3778737.8 |      0.04226 (12123114)      0.03707 (13040114)      0.03663 (13040114)
    0.03567 (13040114)      0.03429 (13040114)
3778687.8 |      0.04183 (12123114)      0.03736 (12123114)      0.03295 (12123114)
    0.03157 (13040114)      0.03108 (13040114)
3778637.8 |      0.04015 (12123114)      0.03688 (12123114)      0.03331 (12123114)
    0.02973 (12123114)      0.02741 (13040114)
3778587.8 |      0.03776 (12123114)      0.03552 (12123114)      0.03283 (12123114)
    0.02992 (12123114)      0.02692 (12123114)
3778537.8 |      0.03467 (12123114)      0.03339 (12123114)      0.03157 (12123114)
    0.02936 (12123114)      0.02690 (12123114)
3778487.8 |      0.03126 (12123114)      0.03078 (12123114)      0.02972 (12123114)
    0.02816 (12123114)      0.02630 (12123114)
3778437.8 |      0.02771 (12123114)      0.02787 (12123114)      0.02744 (12123114)
    0.02652 (12123114)      0.02522 (12123114)
```

```
 3778387.8 |      0.02429 (12123114)      0.02485 (12123114)      0.02480 (12123114)
     0.02440 (12123114)      0.02362 (12123114)
 3778337.8 |      0.02107 (12123114)      0.02198 (12123114)      0.02235 (12123114)
     0.02236 (12123114)      0.02200 (12123114)
 3778287.8 |      0.01813 (12123114)      0.01925 (12123114)      0.01995 (12123114)
     0.02027 (12123114)      0.02024 (12123114)
 3778237.8 |      0.01588 (15100514)      0.01673 (12123114)      0.01763 (12123114)
     0.01818 (12123114)      0.01843 (12123114)
 3778187.8 |      0.01510 (15100514)      0.01444 (12123114)      0.01545 (12123114)
     0.01618 (12123114)      0.01663 (12123114)
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                           ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                           ***        11:52:32

                                      PAGE  43
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                   *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                      INCLUDING SOURCE(S):     L0000001    , L0000002
, L0000003    , L0000004    , L0000005    ,
                  L0000006    , L0000007    , L0000008    , L0000009    , L0000010
, L0000011    , L0000012    , L0000013    ,
                  L0000014    , L0000015    , L0000016    , L0000017    , L0000018
, L0000019    , L0000020    , L0000021    ,
                  L0000022    , L0000023    , L0000024    , L0000025    , L0000026
, L0000027    , L0000028    ,  . . .      ,

                                      *** NETWORK ID: UCART1   ;  NETWORK TYPE:
GRIDCART ***

                                           ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

  Y-COORD  |                                                  X-COORD (METERS)
  (METERS) |       462929.66              462979.66              463029.66
      463079.66              463129.66
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -

 3779737.8 |      0.04059 (12011614)      0.03719 (12011614)      0.03548 (12120314)
     0.03394 (12120314)      0.03283 (13032514)
 3779687.8 |      0.04095 (12120314)      0.03923 (12120314)      0.03750 (13032514)
     0.03582 (13032514)      0.03392 (13032514)
 3779637.8 |      0.04340 (13032514)      0.04135 (15110214)      0.03887 (13032514)
     0.03628 (13032514)      0.03402 (12042314)
 3779587.8 |      0.04683 (15110214)      0.04305 (15110214)      0.04063 (12042314)
     0.03979 (12042314)      0.03856 (12042314)
 3779537.8 |      0.04958 (12042314)      0.04794 (12042314)      0.04593 (12042314)
```

```
    0.04352 (12042314)      0.04100 (12042314)
3779487.8 |      0.05546 (12042314)      0.05192 (12042314)      0.04816 (12042314)
    0.04498 (15060114)      0.04225 (15092114)
3779437.8 |      0.05783 (15060114)      0.05431 (15092114)      0.05067 (15092114)
    0.04719 (15092114)      0.04382 (15092114)
3779387.8 |      0.06091 (15092114)      0.05547 (15092114)      0.05053 (15092114)
    0.04636 (11041814)      0.04473 (11041814)
3779337.8 |      0.06180 (11041814)      0.05863 (11041814)      0.05540 (11041814)
    0.05248 (11041814)      0.04967 (11041814)
3779287.8 |      0.06653 (11041814)      0.06170 (11041814)      0.05721 (11041814)
    0.05307 (11041814)      0.04943 (11041814)
3779237.8 |      0.06164 (11041814)      0.05644 (11041814)      0.05176 (11041814)
    0.04756 (11041814)      0.04385 (11041814)
3779187.8 |      0.05804 (13041514)      0.05333 (13041514)      0.04904 (13041514)
    0.04531 (13041514)      0.04185 (13041514)
3779137.8 |      0.05212 (13041514)      0.04805 (13041514)      0.04436 (13041514)
    0.04106 (13041514)      0.03804 (13041514)
3779087.8 |      0.04206 (13041514)      0.03927 (13041514)      0.03668 (13041514)
    0.03431 (13041514)      0.03208 (13041514)
3779037.8 |      0.03665 (16091914)      0.03395 (16091914)      0.03147 (16091914)
    0.02921 (16091914)      0.02714 (16091914)
3778987.8 |      0.03046 (16091914)      0.02869 (16091914)      0.02694 (16091914)
    0.02520 (16091914)      0.02371 (16091914)
3778937.8 |      0.03078 (13040114)      0.02746 (13040114)      0.02455 (13040114)
    0.02188 (13040114)      0.01984 (16091914)
3778887.8 |      0.03323 (13040114)      0.02998 (13040114)      0.02707 (13040114)
    0.02445 (13040114)      0.02207 (13040114)
3778837.8 |      0.03433 (13040114)      0.03140 (13040114)      0.02868 (13040114)
    0.02622 (13040114)      0.02387 (13040114)
3778787.8 |      0.03407 (13040114)      0.03169 (13040114)      0.02933 (13040114)
    0.02708 (13040114)      0.02493 (13040114)
3778737.8 |      0.03264 (13040114)      0.03086 (13040114)      0.02902 (13040114)
    0.02715 (13040114)      0.02531 (13040114)
3778687.8 |      0.03023 (13040114)      0.02913 (13040114)      0.02786 (13040114)
    0.02646 (13040114)      0.02501 (13040114)
3778637.8 |      0.02724 (13040114)      0.02675 (13040114)      0.02602 (13040114)
    0.02507 (13040114)      0.02403 (13040114)
3778587.8 |      0.02396 (12123114)      0.02398 (13040114)      0.02370 (13040114)
    0.02321 (13040114)      0.02258 (13040114)
3778537.8 |      0.02438 (12123114)      0.02184 (12123114)      0.02110 (13040114)
    0.02103 (13040114)      0.02076 (13040114)
3778487.8 |      0.02425 (12123114)      0.02205 (12123114)      0.01994 (12123114)
    0.01864 (13040114)      0.01870 (13040114)
3778437.8 |      0.02366 (12123114)      0.02185 (12123114)      0.02005 (12123114)
    0.01826 (12123114)      0.01653 (13040114)
3778387.8 |      0.02260 (12123114)      0.02128 (12123114)      0.01981 (12123114)
    0.01830 (12123114)      0.01677 (12123114)
3778337.8 |      0.02135 (12123114)      0.02040 (12123114)      0.01928 (12123114)
    0.01805 (12123114)      0.01677 (12123114)
3778287.8 |      0.01991 (12123114)      0.01931 (12123114)      0.01851 (12123114)
```

```
    0.01756 (12123114)      0.01652 (12123114)
 3778237.8 |      0.01839 (12123114)      0.01808 (12123114)      0.01756 (12123114)
    0.01688 (12123114)      0.01607 (12123114)
 3778187.8 |      0.01681 (12123114)      0.01676 (12123114)      0.01649 (12123114)
    0.01605 (12123114)      0.01546 (12123114)
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        11:52:32

                                    PAGE  44
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                    INCLUDING SOURCE(S):     L0000001    , L0000002
, L0000003    , L0000004    , L0000005    ,
                 L0000006    , L0000007    , L0000008    , L0000009    , L0000010
, L0000011    , L0000012    , L0000013    ,
                 L0000014    , L0000015    , L0000016    , L0000017    , L0000018
, L0000019    , L0000020    , L0000021    ,
                 L0000022    , L0000023    , L0000024    , L0000025    , L0000026
, L0000027    , L0000028    ,  . . .      ,

                                 *** NETWORK ID: UCART2   ;  NETWORK TYPE:
GRIDCART ***

                                      ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

  Y-COORD  |                                                  X-COORD (METERS)
  (METERS) |       461181.53              461231.53              461281.53
      461331.53              461381.53
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

 3780101.9 |      0.02855 (15012614)      0.02649 (15012614)      0.02359 (15012614)
    0.02007 (15012614)      0.01619 (15012614)
 3780051.9 |      0.03242 (15012614)      0.03117 (15012614)      0.02884 (15012614)
    0.02549 (15012614)      0.02139 (15012614)
 3780001.9 |      0.03560 (15012614)      0.03552 (15012614)      0.03416 (15012614)
    0.03145 (15012614)      0.02756 (15012614)
 3779951.9 |      0.03769 (15012614)      0.03907 (15012614)      0.03912 (15012614)
    0.03762 (15012614)      0.03452 (15012614)
 3779901.9 |      0.03888 (11121914)      0.04126 (15012614)      0.04306 (15012614)
    0.04328 (15012614)      0.04162 (15012614)
 3779851.9 |      0.03857 (11121914)      0.04235 (11121914)      0.04535 (15012614)
    0.04770 (15012614)      0.04816 (15012614)
 3779801.9 |      0.03637 (11121914)      0.04155 (11121914)      0.04625 (11121914)
    0.05002 (15012614)      0.05311 (15012614)
```

```
 3779751.9 |      0.03241 (11121914)      0.03853 (11121914)      0.04478 (11121914)
     0.05064 (11121914)      0.05540 (15012614)
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        11:52:32

                                    PAGE  45
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                    INCLUDING SOURCE(S):     L0000001    , L0000002
, L0000003    , L0000004    , L0000005    ,
                   L0000006    , L0000007    , L0000008    , L0000009    , L0000010
, L0000011    , L0000012    , L0000013    ,
                   L0000014    , L0000015    , L0000016    , L0000017    , L0000018
, L0000019    , L0000020    , L0000021    ,
                   L0000022    , L0000023    , L0000024    , L0000025    , L0000026
, L0000027    , L0000028    ,  . . .      ,

                                    *** NETWORK ID: UCART2   ;  NETWORK TYPE:
GRIDCART ***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                   **

  Y-COORD  |                                                 X-COORD (METERS)
  (METERS) |       461431.53              461481.53              461531.53
      461581.53              461631.53
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -

 3780101.9 |      0.01233 (15012614)      0.01226 (15031614)      0.01316 (15031614)
     0.01398 (15031614)      0.01466 (15031614)
 3780051.9 |      0.01701 (15012614)      0.01290 (15031614)      0.01394 (15031614)
     0.01491 (15031614)      0.01577 (15031614)
 3780001.9 |      0.02289 (15012614)      0.01773 (15012614)      0.01470 (15031614)
     0.01588 (15031614)      0.01694 (15031614)
 3779951.9 |      0.02997 (15012614)      0.02439 (15012614)      0.01841 (15012614)
     0.01684 (15031614)      0.01816 (15031614)
 3779901.9 |      0.03798 (15012614)      0.03258 (15012614)      0.02596 (15012614)
     0.01901 (15012614)      0.01939 (15031614)
 3779851.9 |      0.04630 (15012614)      0.04193 (15012614)      0.03543 (15012614)
     0.02753 (15012614)      0.02064 (15031614)
 3779801.9 |      0.05394 (15012614)      0.05180 (15012614)      0.04654 (15012614)
     0.03857 (15012614)      0.02896 (15012614)
 3779751.9 |      0.05952 (15012614)      0.06073 (15012614)      0.05820 (15012614)
     0.05169 (15012614)      0.04176 (15012614)
1 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
```

                                *** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL   ***
                                    INCLUDING SOURCE(S):   L0000001   , L0000002
, L0000003   , L0000004   , L0000005   ,
                   L0000006   , L0000007   , L0000008   , L0000009   , L0000010
, L0000011   , L0000012   , L0000013   ,
                   L0000014   , L0000015   , L0000016   , L0000017   , L0000018
, L0000019   , L0000020   , L0000021   ,
                   L0000022   , L0000023   , L0000024   , L0000025   , L0000026
, L0000027   , L0000028   , . . .   ,

                                     *** NETWORK ID: UCART2   ; NETWORK TYPE:
GRIDCART ***

                                          ** CONC OF PM_10   IN MICROGRAMS/M**3
                  **

  Y-COORD | X-COORD (METERS)
  (METERS) | 461681.53   461731.53   461781.53
      461831.53   461881.53
 -
- -

 3780101.9 | 0.01517 (15031614)   0.01549 (15031614)   0.01558 (15031614)
     0.01543 (15031614)   0.01500 (15031614)
 3780051.9 | 0.01644 (15031614)   0.01690 (15031614)   0.01711 (15031614)
     0.01704 (15031614)   0.01665 (15031614)
 3780001.9 | 0.01781 (15031614)   0.01848 (15031614)   0.01884 (15031614)
     0.01888 (15031614)   0.01855 (15031614)
 3779951.9 | 0.01930 (15031614)   0.02020 (15031614)   0.02078 (15031614)
     0.02097 (15031614)   0.02073 (15031614)
 3779901.9 | 0.02084 (15031614)   0.02204 (15031614)   0.02290 (15031614)
     0.02333 (15031614)   0.02323 (15031614)
 3779851.9 | 0.02247 (15031614)   0.02405 (15031614)   0.02528 (15031614)
     0.02601 (15031614)   0.02613 (15031614)
 3779801.9 | 0.02415 (15031614)   0.02622 (15031614)   0.02792 (15031614)
     0.02907 (15031614)   0.02950 (15031614)
 3779751.9 | 0.03002 (15012614)   0.02848 (15031614)   0.03080 (15031614)
     0.03252 (15031614)   0.03341 (15031614)

*** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0000001   , L0000002 , L0000003   , L0000004   , L0000005   ,
L0000006   , L0000007   , L0000008   , L0000009   , L0000010 , L0000011   , L0000012   , L0000013   ,
L0000014   , L0000015   , L0000016   , L0000017   , L0000018 , L0000019   , L0000020   , L0000021   ,
L0000022   , L0000023   , L0000024   , L0000025   , L0000026 , L0000027   , L0000028   , . . .   ,

*** NETWORK ID: UCART2   ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10   IN MICROGRAMS/M**3
**

Y-COORD (METERS)	X-COORD (METERS) 461931.53	461981.53	462031.53	462081.53	462131.53
3780101.9	0.01431 (15031614)	0.01337 (15031614)	0.01222 (15031614)	0.01093 (11091214)	0.01639 (11091214)
3780051.9	0.01593 (15031614)	0.01492 (15031614)	0.01362 (15031614)	0.01249 (11091214)	0.01886 (11091214)
3780001.9	0.01781 (15031614)	0.01673 (15031614)	0.01527 (15031614)	0.01434 (11091214)	0.02183 (11091214)
3779951.9	0.02000 (15031614)	0.01882 (15031614)	0.01721 (15031614)	0.01657 (11091214)	0.02546 (11091214)
3779901.9	0.02254 (15031614)	0.02128 (15031614)	0.01947 (15031614)	0.01923 (11091214)	0.02989 (11091214)
3779851.9	0.02554 (15031614)	0.02420 (15031614)	0.02215 (15031614)	0.02245 (11091214)	0.03535 (11091214)
3779801.9	0.02907 (15031614)	0.02768 (15031614)	0.02537 (15031614)	0.02634 (11091214)	0.04216 (11091214)
3779751.9	0.03323 (15031614)	0.03185 (15031614)	0.02924 (15031614)	0.03115 (11091214)	0.05066 (11091214)

```
                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     L0000001    , L0000002
, L0000003    , L0000004    , L0000005    ,
                  L0000006    , L0000007    , L0000008    , L0000009    , L0000010
, L0000011    , L0000012    , L0000013    ,
                  L0000014    , L0000015    , L0000016    , L0000017    , L0000018
, L0000019    , L0000020    , L0000021    ,
                  L0000022    , L0000023    , L0000024    , L0000025    , L0000026
, L0000027    , L0000028    ,  . . .      ,

                                   *** NETWORK ID: UCART2   ;  NETWORK TYPE:
GRIDCART ***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

  Y-COORD  |                                                  X-COORD (METERS)
  (METERS) |       462181.53
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -

 3780101.9 |      0.02250 (11091214)
 3780051.9 |      0.02596 (11091214)
 3780001.9 |      0.03007 (11091214)
 3779951.9 |      0.03506 (11091214)
 3779901.9 |      0.04112 (11091214)
 3779851.9 |      0.04854 (11091214)
 3779801.9 |      0.05769 (11091214)
 3779751.9 |      0.06901 (11091214)
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                         ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        11:52:32

                                  PAGE  49
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     L0000001    , L0000002
, L0000003    , L0000004    , L0000005    ,
                  L0000006    , L0000007    , L0000008    , L0000009    , L0000010
, L0000011    , L0000012    , L0000013    ,
                  L0000014    , L0000015    , L0000016    , L0000017    , L0000018
, L0000019    , L0000020    , L0000021    ,
                  L0000022    , L0000023    , L0000024    , L0000025    , L0000026
, L0000027    , L0000028    ,  . . .      ,
```

```
                                  *** NETWORK ID: UCART3   ;  NETWORK TYPE:
GRIDCART ***

                                       ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

  Y-COORD  |                                                  X-COORD (METERS)
  (METERS) |       462239.49              462289.49              462339.49
      462389.49
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

 3779729.5 |      0.08663 (11091214)      0.08391 (11091214)      0.07172 (11091214)
     0.06532 (13040814)
 3779679.5 |      0.10074 (11091214)      0.09276 (11091214)      0.07452 (11091214)
     0.08043 (13040814)
 3779629.5 |      0.11650 (11091214)      0.10058 (11091214)      0.08856 (13040814)
     0.09637 (12112614)
 *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        11:52:32

                                   PAGE  50
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                   INCLUDING SOURCE(S):     L0000001    , L0000002
, L0000003    , L0000004    , L0000005    ,
                  L0000006    , L0000007    , L0000008    , L0000009    , L0000010
, L0000011    , L0000012    , L0000013    ,
                  L0000014    , L0000015    , L0000016    , L0000017    , L0000018
, L0000019    , L0000020    , L0000021    ,
                  L0000022    , L0000023    , L0000024    , L0000025    , L0000026
, L0000027    , L0000028    ,  . . .      ,

                                  *** NETWORK ID: UCART4   ;  NETWORK TYPE:
GRIDCART ***

                                       ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

  Y-COORD  |                                                  X-COORD (METERS)
  (METERS) |       462322.82              462372.82              462422.82
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

 3778808.1 |      0.06708 (12123114)      0.07346 (12123114)      0.07378 (12123114)
 3778758.1 |      0.05704 (15100514)      0.05985 (12123114)      0.06352 (12123114)
```

```
 3778708.1 |      0.05159 (15100514)      0.04750 (12123114)      0.05280 (12123114)
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        11:52:32

                                    PAGE  51
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                    INCLUDING SOURCE(S):     L0000001    , L0000002
, L0000003    , L0000004    , L0000005    ,
                   L0000006    , L0000007    , L0000008    , L0000009    , L0000010
, L0000011    , L0000012    , L0000013    ,
                   L0000014    , L0000015    , L0000016    , L0000017    , L0000018
, L0000019    , L0000020    , L0000021    ,
                   L0000022    , L0000023    , L0000024    , L0000025    , L0000026
, L0000027    , L0000028    ,  . . .      ,

                                     *** NETWORK ID: UCART5   ;  NETWORK TYPE:
GRIDCART ***

                                          ** CONC OF PM_10    IN MICROGRAMS/M**3
                    **

  Y-COORD  |                                                  X-COORD (METERS)
  (METERS) |       462373.12               462423.12
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

 3778876.5 |      0.09149 (12123114)      0.08423 (12123114)
 3778826.5 |      0.07856 (12123114)      0.07720 (12123114)
↟ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                          ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                         ***        11:52:32

                                    PAGE  52
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                          *** THE SUMMARY OF MAXIMUM PERIOD ( 43848
HRS) RESULTS ***


                                      ** CONC OF PM_10    IN MICROGRAMS/M**3
                 **

                           NETWORK
```

```
GROUP ID                        AVERAGE CONC                RECEPTOR  (XR, YR, ZELEV,
ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -

ALL       1ST HIGHEST VALUE IS       0.00049 AT (  462429.66,  3779287.79,   495.80,
  495.80,    0.00)  GC  UCART1
          2ND HIGHEST VALUE IS       0.00047 AT (  462429.66,  3779337.79,   497.70,
  497.70,    0.00)  GC  UCART1
          3RD HIGHEST VALUE IS       0.00046 AT (  462429.66,  3779237.79,   494.70,
  494.70,    0.00)  GC  UCART1
          4TH HIGHEST VALUE IS       0.00041 AT (  462479.66,  3779287.79,   494.50,
  494.50,    0.00)  GC  UCART1
          5TH HIGHEST VALUE IS       0.00040 AT (  462429.66,  3779387.79,   498.00,
  498.00,    0.00)  GC  UCART1
          6TH HIGHEST VALUE IS       0.00040 AT (  462479.66,  3779337.79,   496.20,
  496.20,    0.00)  GC  UCART1
          7TH HIGHEST VALUE IS       0.00038 AT (  462429.66,  3779187.79,   493.90,
  493.90,    0.00)  GC  UCART1
          8TH HIGHEST VALUE IS       0.00038 AT (  462479.66,  3779237.79,   494.00,
  494.00,    0.00)  GC  UCART1
          9TH HIGHEST VALUE IS       0.00036 AT (  462479.66,  3779387.79,   496.50,
  496.50,    0.00)  GC  UCART1
         10TH HIGHEST VALUE IS       0.00034 AT (  462529.66,  3779337.79,   495.60,
  495.60,    0.00)  GC  UCART1


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
↑ *** AERMOD - VERSION 21112  ***   *** Rialto Locust - Operations
                        ***        05/25/22
 *** AERMET - VERSION  16216 ***   ***
                       ***        11:52:32

                                  PAGE  53
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                                *** THE SUMMARY OF HIGHEST  1-HR
RESULTS ***


                                   ** CONC OF PM_10    IN MICROGRAMS/M**3
              **

                                                      DATE
                                          NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)            RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
```

```
- - - -
```

```
 12113003
 MX W450   26305       CHKDAT: Record Out of Sequence in Meteorological File at:
 15010101
 MX W450   26305       CHKDAT: Record Out of Sequence in Meteorological File at:
1 year gap

    ***********************************
    *** AERMOD Finishes Successfully ***
    ***********************************
```

*HARP - HRACalc v22094 5/25/2022 9:37:41 PM - Chronic Risk - Input File: K:\ORA_AQN\095931005 - Thrifty Locust Warehouse\5 HRA\5.2 Models\RAST\Ops_HRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DE	RESP	SKIN	EYE	BONE/TEE	ENDO
1			9901	DieselExhPM	0.00049	NonCancerChronicDerived_Inh	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.80E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2			107028	Acrolein	0	NonCancerChronicDerived_Inh	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

*HARP - HRACalc v22094 5/25/2022 9:37:41 PM - Acute Risk - Input File: K:\ORA_AQN\095931005 - Thrifty Locust Warehouse\5 HRA\5.2 Models\RAST\Ops_HRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DE'	RESP	SKIN	EYE	BONE/TEE	ENDO
1			9901	DieselExhPM	0	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2			107028	Acrolein	0.19246	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00	7.70E-02	0.00E+00	0.00E+00

*HARP - HRACalc v22094 5/25/2022 9:37:41 PM - Cancer Risk - Input File: K:\ORA_AQN\095931005 - Thrifty Locust Warehouse\5 HRA\5.2 Models\RAST\Ops_HRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	RISK_SUM	SCENARIO	DETAILS	INH_RISK	SOIL_RISK	DERMAL_F	MMILK_RI	WATER_RI	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RISI
1			9901	DieselExhPM	0.00049	4.24E-07	30YrCancerDerived_Inh_FAH16to70	*	4.24E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2			107028	Acrolein	0	0.00E+00	30YrCancerDerived_Inh_FAH16to70	*	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

*HARP - HRACalc v22094 5/25/2022 8:30:31 AM - Chronic Risk - Input File: K:\ORA_AQN\095931005 - Thrifty Locust Warehouse\5 HRA\5.2 Models\RAST\Const_HRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DE'	RESP	SKIN	EYE	BONE/TEE¨	ENDO
1			9901	DieselExhPM	0.0071	NonCancerChronicDerived_Inh	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2			107028	Acrolein	0	NonCancerChronicDerived_Inh	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

*HARP - HRACalc v22094 5/25/2022 8:30:31 AM - Acute Risk - Input File: K:\ORA_AQN\095931005 - Thrifty Locust Warehouse\5 HRA\5.2 Models\RAST\Const_HRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DE'	RESP	SKIN	EYE	BONE/TEE	ENDO
1			9901	DieselExhPM	0	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2			107028	Acrolein	0.413	NonCancerAcute	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-01	0.00E+00	1.65E-01	0.00E+00	0.00E+00

*HARP - HRACalc v22094 5/25/2022 8:30:31 AM - Cancer Risk - Input File: K:\ORA_AQN\095931005 - Thrifty Locust Warehouse\5 HRA\5.2 Models\RAST\Const_HRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	RISK_SUM	SCENARIO	DETAILS	INH_RISK	SOIL_RISK	DERMAL_R	MMILK_RI	WATER_RI	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RISI
1			9901	DieselExhPM	0.0071	1.03E-06	0.8YrCancerDerived_Inh_FAH16to70	*	1.03E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2			107028	Acrolein	0	0.00E+00	0.8YrCancerDerived_Inh_FAH16to70	*	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

APPENDIX B

ENERGY ASSESSMENT

MEMORANDUM

To: Dana Privitt, Kimley-Horn and Associates

From: Olivia Chan, Kimley-Horn and Associates

Date: May 27, 2022

Subject: Thrifty Locust Warehouse – Energy Assessment

1.0 Purpose

The purpose of this technical memorandum is to evaluate potential short- and long-term energy consumption impacts of the Thrifty Locust Warehouse Project (Project). The purpose of this Energy Technical Memorandum is to evaluate the potential construction and operational energy consumption associated with the Project and determine the level of impact the Project would have on the environment.

2.0 Project Location and Setting

The Project site is in the northern area of the City of Rialto in San Bernardino County, approximately one mile north of State Route (SR) 210. The Project site is approximately 4.78 acres and regional access to the Project site is provided via SR-210. Local access to the Project site is provided via Lowell Street which is a two-lane undivided roadway, trending in an east-west direction and Locust Avenue which is a two-lane undivided roadway, trending in a north-south direction. The site is bordered by a recycling center to the north; Lowell Street and vacant land designated for General Industrial uses to the south; Locust Avenue, a truck trailer storage yard, and an industrial warehouse to the east; and a manufacturing facility to the west.

3.0 Project Description

The Project proposes to develop a warehouse building with approximately 91,880 square feet (sf) of warehouse space and 9,000 sf of two-story office area for a total building area of 100,880 sf. The Project includes minimal production, use, storage, transport or disposal of hazardous materials for construction and operational activities. The Project is speculative in nature; the end user(s) and their hours of operation are unknown at this time. However, to be conservative, it has been assumed that the building would operate 24 hours per day/7 days per week for the Addendum's analyses referenced herein. The Project will not include refrigerated uses on-site.

The Project proposes two office spaces (each would include two-story areas consisting of 4,500 sf), one on the southwest corner of the warehouse building and one on the southeast corner of the

warehouse building. The warehouse building would be designed to have a maximum building height of approximately 34.5'. The warehouse building would provide ingress and egress via 40' wide driveway and one 32' wide driveway on Lowell Street and one 50' wide driveway on Locust Avenue. Drive aisles along the northern, southern and western frontages would range from 26 to 40 feet in width to allow for onsite movement for workers and emergency vehicles alike. The building will be provided with 87 vehicle parking stalls, 12 dock doors, and one drive thru door on the north side of the building. Vehicle parking will be provided on the north, west, and south sides of the site, while all truck doors will be located on the north side of the building.

The Project site's ingress and egress would be provided via three driveways with two located on Lowell Street and one located on Locust Avenue. The 32-foot wide driveway located on the south side of the Project site would allow for right-in-right-out access onto Lowell Street for passenger vehicles and emergency vehicles. The 40-foot wide driveway located at the southwest corner of the Project site would allow for right-in and left-out secondary truck access onto Lowell Street. The 50-foot wide driveway located at the northeast corner of the Project site would allow for left-in-right-out primary truck access onto Locust Avenue.

Project Phasing and Construction

Construction is anticipated to occur over a duration of approximately nine months, commencing in the fourth quarter of 2022.

4.0 Energy Conservation

In 1975, largely in response to the oil crisis of the 1970s, the California State Legislature adopted Assembly Bill 1575 (AB 1575), which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct state responses to energy emergencies, and, perhaps most importantly, promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require Environmental Impact Reports (EIRs) to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F, *Energy Conservation*, in the California Environmental Quality Act Guidelines (CEQA Guidelines). CEQA Guidelines Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy.

In addition, the California Natural Resources Agency finalized updates to the CEQA Guidelines in December 2018. CEQA Guidelines Section 15126.2(b) treats "wasteful, inefficient, or unnecessary" energy consumption as a significant environmental impact. As a result, energy thresholds have been incorporated into Appendix G of the CEQA Guidelines. This technical memorandum has been prepared to assess energy impacts in accordance with Appendix G of the CEQA Guidelines.

Environmental Setting

Energy consumption is analyzed in this technical memorandum due to the potential direct and indirect environmental impacts associated with the Project. Such impacts include the depletion of nonrenewable resources and emissions of pollutants during both construction and long-term operational phases.

Electricity Service

Southern California Edison (SCE) provides electrical services to the City of Rialto (City) through State-regulated public utility contracts. Over the past 15 years, electricity generation in California has undergone a transition. Historically, California has relied heavily on oil- and gas-fired plants to generate electricity. Spurred by regulatory measures and tax incentives, California's electrical system has become more reliant on renewable energy sources; including cogeneration, wind energy, solar energy, geothermal energy, biomass conversion, transformation plants, and small hydroelectric plants. Unlike petroleum production, electricity generation is not usually tied to the location of the fuel source and can be delivered great distances via the electrical grid. The generating capacity of a unit of electricity is expressed in megawatts (MW). Net generation refers to the gross amount of energy produced by a unit, minus the amount of energy the unit consumes. Generation is typically measured in megawatt-hours (MWh), kilowatt-hours (kWh), or gigawatt-hours (GWh).

Natural Gas Services

Southern California Gas Company (SoCalGas) provides natural gas services to the City of Rialto and San Bernardino County (County). Natural gas is a hydrocarbon fuel found in reservoirs beneath the Earth's surface and is composed primarily of methane (CH_4). It is used for space and water heating, process heating and electricity generation, and as transportation fuel. Use of natural gas to generate electricity is expected to increase in coming years because it is a relatively clean alternative to other fossil fuels (e.g., oil and coal). In California and throughout the western United States, many new electrical generation plants fired by natural gas are being brought online. Thus, there is great interest in importing liquefied natural gas from other parts of the world. California's natural gas-fired electric generation increased by 7 percent in 2020, accounting for 48 percent of in-state generation.[1]

The City's ongoing development review process includes a review and comment opportunity for privately owned utility companies and to provide input on all development proposals. The input facilitates a detailed review of projects by service purveyors to assess the potential demands for utility services on a project-by-project basis. The ability of utility providers to provide services concurrently with each project is evaluated during the development review process. Utility companies are bound by contract to update energy systems to meet any additional demand.

[1] California Energy Commission, *2020 Total System Electric Generation*, https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation, accessed May 17, 2022.

Energy Usage

Energy usage is typically quantified using the British Thermal Unit (BTU). Total energy usage in California was 7,802.3 trillion BTUs in 2019 (the most recent year for which this specific data is available).[2] Of California's total energy usage, the breakdown by sector is 39.3 percent transportation, 23.2 percent industrial, 18.8 percent commercial, and 18.7 percent residential.[3] Electricity and natural gas in California are generally consumed by stationary users such as residences, commercial, and industrial facilities, whereas petroleum consumption is generally accounted for by transportation-related energy use. In 2021, taxable gasoline sales (including aviation gasoline) in California accounted for 13,060,407,775 gallons of gasoline.[4]

The electricity consumption attributable to the County from 2010 to 2020 is shown in Table 1: Electricity Consumption in San Bernardino County 2010-2020. As indicated in Table 1, energy consumption in the County increased steadily between 2010 and 2020 with a slight decrease in 2019.

Table 1: Electricity Consumption in San Bernardino County 2010-2020

Year	Electricity Consumption (in millions of kilowatt hours)
2010	13,481
2011	13,730
2012	14,348
2013	14,374
2014	14,731
2015	14,731
2016	14,946
2017	15,282
2018	15,376
2019	15,316
2020	15,969

Source: California Energy Commission, *Electricity Consumption by County*, http://www.ecdms.energy.ca.gov/, accessed May 26, 2022.

The natural gas consumption attributable to the County from 2010 to 2020 is shown in Table 2: Natural Gas Consumption in San Bernardino County 2010-2020. Natural gas consumption in the County fluctuated with increases and decreases occurring annually.

---

2 U.S. Energy Information Administration, *Table F33: Total energy consumption, price, and expenditure estimates, 2019,* https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_te.html&sid=CA, accessed May 17, 2022.

3 U.S. Energy Information Administration, *California State Profile and Energy Estimates*, *California Energy Consumption by End-Use Sector, 2019*, https://www.eia.gov/state/?sid=CA#tabs-2, accessed May 17, 2022.

4 California Department of Tax and Fee Administration, *January 2022 – Motor Vehicle Fuel 10 Year Reports*, https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm, accessed May 17, 2022.

Table 2: Natural Gas Consumption in San Bernardino County 2010-2020	
Year	**Natural Gas Consumption (in millions of therms)**
2010	492
2011	504
2012	486
2013	503
2014	453
2015	470
2016	494
2017	493
2018	500
2019	547
2020	527
Source: California Energy Commission, *Natural Gas Consumption by County*, http://www.ecdms.energy.ca.gov/, accessed May 26, 2022.	

Automotive fuel consumption in the County from 2011 to 2021 is shown in Table 3: Automotive Fuel Consumption in San Bernardino County 2011-2021. As shown in Table 3, on-road automotive fuel consumption in the County relatively decreased from 2011 to 2013 and increased from 2013 to 2019. Gasoline fuel consumption decreased in 2020 and increased in 2021. Heavy-duty vehicle fuel consumption decreased from 2011 to 2012 and increased from 2013 to 2021 with a light decrease in 2018.

Table 3: Automotive Fuel Consumption in San Bernardino County 2011-2021		
Year	**On-Road Automotive Fuel Consumption (gallons)**	**Heavy-Duty Vehicle/Diesel Fuel Consumption (Construction Equipment) (gallons)**
2011	829,043,622	223,450,227
2012	823,824,155	221,468,396
2013	823,575,913	231,100,540
2014	833,908,390	233,757,358
2015	862,282,542	236,687,334
2016	886,951,688	251,535,041
2017	894,270,493	263,723,118
2018	894,127,745	259,783,109
2019	894,821,914	261,139,639
2020	763,765,305	265,477,739
2021	869,262,611	272,787,528
Source: California Air Resources Board, EMFAC2021.		

5.0 Regulatory Setting

The following is a description of Federal, State, and local environmental laws and policies related to energy consumption that are relevant to the proposed Project.

5.1 State of California

California's Energy Efficiency Standards for Residential and Non-Residential Buildings (Title 24)
Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the California Energy Commission) in June 1977 and are updated every three years (Title 24, Part 6, of the California Code of Regulations). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On June 10, 2015, the CEC adopted the 2016 Building Energy Efficiency Standards, which went into effect on January 1, 2017. On May 9, 2018, the CEC adopted the 2019 Building Energy Efficiency Standards, which took effect on January 1, 2020.

The 2016 Standards improved upon the previous 2013 Standards for new construction of and additions and alterations to residential and nonresidential buildings. Under the 2016 Standards, residential buildings are 28 percent more energy efficient and nonresidential buildings are 5 percent more energy efficient than under the 2013 Standards. Buildings that are constructed in accordance with the 2013 Building Energy Efficiency Standards are 25 percent (residential) to 30 percent (nonresidential) more energy efficient than the prior 2008 standards as a result of better windows, insulation, lighting, ventilation systems, and other features.

The 2019 Standards improve upon the 2016 Standards. Under the 2019 Title 24 standards, residential buildings are about 7 percent more energy efficient, and when the required rooftop solar is factored in for low-rise residential construction, residential buildings that meet 2019 Title 24 standards use about 53 percent less energy than those built to meet the 2016 standards.

On August 11, 2021, the CEC adopted the 2022 Energy Code. In December, it was approved by the California Building Standards Commission for inclusion into the California Building Standards Code. Among other updates like strengthened ventilation standards for gas cooking appliances, the 2022 Energy Code includes updated standards in three major areas:

- New electric heat pump requirements for residential uses, schools, offices, banks, libraries, retail, and grocery stores.
- The promotion of electric-ready requirements for new homes including the addition of circuitry for electric appliances, battery storage panels, and dedicated infrastructure to allow for the conversion from natural gas to electricity.
- The expansion of solar photovoltaic and battery storage standards to additional land uses including high-rise multifamily residences, hotels and motels, tenant spaces, offices,

(including medical offices and clinics), retail and grocery stores, restaurants, schools, and civic uses (including theaters auditoriums, and convention centers).

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. CALGreen standards require new residential and commercial buildings to comply with mandatory measures under five topical areas: planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality. CALGreen also provides voluntary measures (CALGreen Tier 1 and Tier 2) that local governments may adopt which encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code was adopted in 2019 and went into effect January 1, 2020. The CEC has approved the 2022 California Green Building Standards Code it will take effect January 1, 2023. Projects whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 Energy Code.[5]

California Public Utilities Commission Energy Efficiency Strategic Plan

The California Public Utilities Commission (CPUC) prepared an Energy Efficiency Strategic Plan in 2011 with the goal of promoting energy efficiency and a reduction in greenhouse gases. Assembly Bill 1109, adopted in 2007, also serves as a framework for lighting efficiency. This bill requires the State Energy Resources Conservation and Development Commission to adopt minimum energy efficiency standards as a means to reduce average Statewide electrical energy consumption by not less than 50 percent from the 2007 levels for indoor residential lighting and not less than 25 percent from the 2007 levels for indoor commercial and outdoor lighting by 2018. According to the Energy Efficiency Strategic Plan, lighting comprises approximately one-fourth of California's electricity use while non-residential sector exterior lighting (parking lot, area, walkway, and security lighting) usage comprises 1.4 percent of California's total electricity use, much of which occurs during limited occupancy periods.

Renewable Portfolio Standard

In 2002, California established its Renewable Portfolio Standard program with the goal of increasing the annual percentage of renewable energy in the state's electricity mix by the equivalent of at least 1 percent of sales, with an aggregate total of 20 percent by 2017. The California Public Utilities Commission subsequently accelerated that goal to 2010 for retail sellers of electricity (Public Utilities Code Section 399.15(b)(1)). Then-Governor Schwarzenegger signed Executive Order S-14-08 in 2008, increasing the target to 33 percent renewable energy by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the California Air Resources Board under its AB 32 authority to enact regulations to help the State meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020. In September 2010, the California Air Resources Board adopted its

[5] California Energy Commission. 2022. *2022 Building Energy Efficiency Standards*, https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency (accessed April 2022).

Renewable Electricity Standard regulations, which require all of the State's load-serving entities to meet this target. In October 2015, then-Governor Brown signed into legislation Senate Bill 350, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030. Signed in 2018, SB 100 revised the goal of the program to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

5.2 City of Rialto

City of Rialto Climate Adaptation Plan

The City of Rialto Climate Adaptation Plan (Rialto CAP) [6]outlines goals to reduce energy consumption and GHG emissions to become a more sustainable community. Goals include:

- Prevent truck routes from disproportionately impacting disadvantaged communities;
- Create a clean air checklist for new development of sensitive land uses;
- Increase use of low-emission and electric vehicles where feasible;
- Adopt building and maintenance standards that reflect the regional best practices in reducing urban heat island effect.

6.0 CEQA Thresholds and Methodology

In accordance with CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. This memorandum will focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact related to energy, if it would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation; and/or

- Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

The impact analysis focuses on the three sources of energy that are relevant to the proposed Project: electricity, natural gas, and transportation fuel for vehicle trips associated with the Project as well as the fuel necessary for Project construction. The analysis of the Project's electricity and natural gas use

[6] Rialto Climate Adaption Plan. https://www.yourrialto.com/DocumentCenter/View/1761/Rialto-Climate-Adaptation-Draft-Plan-July-2021.

is based on the California Emissions Estimator Model (CalEEMod), which quantifies energy use for occupancy. The results of CalEEMod are included in the Project's Air Quality Assessment, prepared by Kimley-Horn (2022). Modeling related to Project energy use was based primarily on the default settings in CalEEMod. The amount of operational fuel use was estimated using CalEEMod outputs for the Project and CARB Emissions Factor (EMFAC) 2021 computer program for typical daily fuel use in San Bernardino County. Construction fuel was calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry.

7.0 Impacts and Mitigation Measures

Threshold 7.1 Would the project result in wasteful, inefficient, or unnecessary consumption of energy resources?

Energy consumption associated with the proposed Project is summarized in Table 4: Project and Countywide Energy Consumption. As shown in Table 4, the Project's increase in electricity usage would constitute an approximate 0.0019 percent increase in typical annual electricity usage and an approximate 0.0004 percent increase in typical annual natural gas consumption in the County. Construction-related off-road automotive fuel consumption (i.e., fuel consumed during construction) would result in a 0.0121 percent increase in diesel and 0.0003 percent increase in gasoline consumption. During operations, on-road automotive fuel consumption (i.e., fuel consumed from operational vehicle trips to and from the Project site) would result in a 0.0611 percent increase in diesel and 0.0062 percent increase in gasoline over Countywide automotive fuel consumption.

Construction-Related Energy

During construction, the Project would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Fossil fuels used for construction vehicles and other energy-consuming equipment would be used during grading, paving, and building construction. Fuel energy consumed during construction would be temporary in nature and would not represent a significant demand on energy resources. Some incidental energy conservation would occur during construction through compliance with State requirements that equipment not in use for more than five minutes be turned off. Project construction equipment would also be required to comply with the latest EPA and California Air Resources Board engine emissions standards. These emissions standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption. Due to increasing transportation costs and fuel prices, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction.

Table 4: Project and Countywide Energy Consumption			
Energy Type	**Project Annual Energy Consumption**	**San Bernardino County Annual Energy Consumption[1,2]**	**Percentage Increase Countywide**
Operational Electricity and Natural Gas			
Electricity Consumption	295,572 kWh	15,968,515,536 kWh	0.0019%
Natural Gas Consumption	2,155 therms	527,236,428 therms	0.0004%
Automotive Fuel Consumption[3]			
Project Construction[4,5]			
Diesel	33,524 gallons	276,240,500 gallons	0.0121%
Gasoline	2,626 gallons	867,249,800 gallons	0.0003%
Project Operations			
Diesel	1,231,457 gallons	276,240,500 gallons	0.0611%
Gasoline	53,783 gallons	867,249,800 gallons	0.0062%
Notes: 1. The Project increases in electricity and natural gas consumption are compared with the total consumption in San Bernardino County in 2020. 2. The Project increases in automotive fuel consumption are compared with the countywide fuel consumption (projected) in 2022. 3. Countywide fuel consumption is from the California Air Resources Board EMFAC2021 model. 4. Construction fuel consumption is based equipment and load factors from California Emissions Estimator Model (CalEEMod version 2020.4.0). 5. The estimated construction fuel consumption is based on the Project's construction equipment list timing/phasing, and hours of duration for construction equipment, as well as vendor, hauling, and construction worker trips.			
Refer to Appendix A: Energy Data for assumptions used in this analysis.			

Substantial reductions in energy inputs for construction materials can be achieved by selecting building materials composed of recycled materials that require substantially less energy to produce than non-recycled materials. The incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes and manufactured or processed materials (e.g., lumber and gas) would not substantially increase demand for energy compared to overall local and regional demand for construction materials. It is reasonable to assume that production of building materials such as concrete, steel, etc., would employ all reasonable energy conservation practices in the interest in minimizing the cost of doing business.

As indicated in Table 4, the overall diesel fuel consumption during construction of the Project would be 33,524 gallons and gasoline consumption would be 2,626 gallons, which would result in a nominal increase (0.0121 percent and 0.0003 percent, respectively) in fuel use in the County. As such, Project construction would have a minimal effect on the local and regional energy supplies. It is noted that construction fuel use is temporary and would cease upon completion of construction activities. There are no unusual Project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or State. Therefore, construction fuel consumption would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature. A less than significant impact would occur in this regard.

Operational Energy

Energy Demand

Transportation Energy Demand. Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic and Safety Administration (NTSA) is responsible for establishing additional vehicle standards and for revising existing standards. Compliance with Federal fuel economy standards is not determined for each individual vehicle model. Rather, compliance is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. Table 4 provides an estimate of the daily fuel consumed by vehicles traveling to and from the Project site. As indicated in Table 4, Project operations are estimated to consume approximately 1,231,457 gallons of diesel fuel and 53,783 gallons of gasoline fuel per year, which would increase Countywide automotive fuel consumption by 0.0611 percent and 0.0062 percent, respectively. The Project would not result in any unusual characteristics that would result in excessive long-term operational fuel consumption. Fuel consumption associated with vehicle trips generated by the Project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

Building Energy Demand. Operations of the proposed Project would require approximately 295,872 kWh of electricity per year and approximately 2,155 therms of natural gas per year. The proposed Project would be required to comply with Title 24 Building Energy Efficiency Standards, which provide minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Implementation of the Title 24 standards significantly reduces energy usage. Furthermore, the electricity provider, SCE, is subject to California's Renewables Portfolio Standard (RPS). The RPS requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020 and to 50 percent of total procurement by 2030. Renewable energy is generally defined as energy that comes from resources which are naturally replenished within a human timescale such as sunlight, wind, tides, waves, and geothermal heat. The increase in reliance of such energy resources further ensures projects will not result in the waste of the finite energy resources.

As indicated in Table 4, operational energy consumption would represent an approximate 0.0019-percent increase in electricity consumption over the current Countywide usage. The Project would adhere to all Federal, State, and local requirements for energy efficiency, including the Title 24 standards. As such, the Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

Conclusion. As shown in Table 4, the increase in electricity and automotive fuel consumption over existing conditions is minimal (less than one percent). For the reasons described above, the Project would not place a substantial demand on regional energy supply or require significant additional capacity, or significantly increase peak and base period electricity demand. Thus, the Project would

not cause a wasteful, inefficient, and unnecessary consumption of energy during Project construction, operation, and/or maintenance, or preempt future energy development or future energy conservation.

Threshold 7.2 Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Title 24 of the California Code of Regulations contains energy efficiency standards for residential and non-residential buildings based on a state mandate to reduce California's energy demand. Specifically, Title 24 addresses a number of energy efficiency measures that impact energy used for lighting, water heating, heating, and air conditioning, including the energy impact of the building envelope such as windows, doors, skylights, wall/floor/ceiling assemblies, attics, and roofs.

Part 6 of Title 24 specifically establishes energy efficiency standards for residential and nonresidential buildings constructed in the State of California in order to reduce energy demand and consumption. The Project would comply with Title 24, Part 6 per state regulations. In accordance with Title 24 Part 6, the Project would have: (a) sensor based lighting controls— for fixtures located near windows, the lighting would be adjusted by taking advantage of available natural light; and, (b) efficient process equipment—improved technology offers significant savings through more efficient processing equipment.

Title 24, Part 11, contains voluntary and mandatory energy measures that are applicable to the Project under the California Green Building Standards Code. As discussed above, the Project would result in an increased demand for electricity, natural gas, and petroleum. In accordance with Title 24 Part 11 mandatory compliance, the Applicant would have (a) 50 percent of its construction and demolition waste diverted from landfills; (b) mandatory inspections of energy systems to ensure optimal working efficiency; (c) low pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring and particle boards; and (d) a 20% reduction in indoor water use. Compliance with all of these mandatory measures would decrease the consumption of electricity, natural gas, and petroleum.

The City of Rialto CAP establishes a series of energy efficiency related goals intended to reduce greenhouse gas (GHG) emissions based on the AB 32 Scoping Plan. Those applicable to the Project are Renewables Portfolio Standard for Building Energy Use, Assembly Bill 1109 Energy Efficiency Standards for Lighting, Electricity Energy Efficiency, and Commercial Energy Efficiency Requirements.

The Project would not conflict with any of the federal, state, or local plans for renewable energy and energy efficiency. Because the Project would comply with Parts 6 and 11 of Title 24 and with City of Rialto CAP measures, no conflict with existing energy standards and regulations would occur. Therefore, impacts associated with renewable energy or energy efficiency plans would be considered less than significant.

8.0 References

California Air Resources Board, EMFAC2021.

California Energy Commission, *2019 Building Energy Efficiency Standards*, https://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf, accessed May 17, 2022.

California Energy Commission, *Electricity Consumption by County*, http://www.ecdms.energy.ca.gov/, accessed May 17, 2022.

California Energy Commission, *Natural Gas Consumption by County*, http://www.ecdms.energy.ca.gov/, accessed May 17, 2022.

California Energy Commission, *2018 Total System Electric Generation*, https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2018-total-system-electric-generation, accessed May 17, 2022.

California Department of Tax and Fee Administration, *April 2020 – Motor Vehicle Fuel 10 Year Reports*, https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm, accessed May 17, 2022.

California Public Utilities Commission, Energy Efficiency Strategic Plan, 2011.

City of Rialto, *Rialto Climate Adaptation Plan*, 2021.

Southern California Edison, *The Clean Power and Electrification Pathway*, https://newsroom.edison.com/internal_redirect/cms.ipressroom.com.s3.amazonaws.com/166/files/20187/g17-pathway-to-2030-white-paper.pdf, accessed May 17, 2022.

U.S. Energy Information Administration, *Table F32: Total energy consumption, price, and expenditure estimates, 2019,* https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_te.html&sid=CA, accessed May 17, 2022.

U.S. Energy Information Administration, *California State Profile and Energy Estimates*, https://www.eia.gov/state/?sid=CA, accessed May 17, 2022.

Appendix A

Energy Data

Construction Fuel Consumption

On-Site Diesel[1] (off-road construction Equipment)	$MTCO_2e$	Gallons of Fuel[4]	Current County Fuel	Percent
Demolition	34	3,372		
Site Preparation/Grading	25	2,512		
Building Construction	159	15,622		
Paving	15	1,464		
Architectural Coating	2	227		
Total	235	23,197	276,240,500	0.0084%

Off-Site Diesel[1] (on-road construction trips)				
Demolition	15	1,461		
Site Preparation/Grading	46	4,487		
Building Construction	44	4,379		
Paving	0	0		
Architectural Coating	0	0		
Total	105	10,327	276,240,500	0.0037%

Off-Site Gasoline[2]				
Demolition	2	256		
Site Preparation/Grading	2	230		
Building Construction	15	1,693		
Paving	2	224		
Architectural Coating	2	224		
Total	23	2,626	867,249,800	0.0003%

Total Diesel Fuel		33,524	276,240,500	0.0121%
Total Gasoline Fuel		2,626	867,249,800	0.0003%
Total Construction Fuel	**363**	**36,150**		

Construction Phase[3]	Demolition			Site Preparation			Grading		
	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)
2022	34	15	2	8	0	1	17	46	1
Total	**34**	**15**	**2**	**8**	**0**	**1**	**17**	**46**	**1**

Construction Phase[3]	Infrastructure + Building Construction			Paving			Architectural Coating		
	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)
2022	7	2	1						
2023	152	42	14	15	0	2	2	0	2
Total	**159**	**44**	**15**	**15**	**0**	**2**	**2**	**0**	**2**

Notes:

[1] Fuel used for off-road, hauling, and vendor trips assumed to be diesel.

[2] Fuel used for worker trips assumed to be gasoline.

[3] $MTCO_2e$ rates from CalEEMod (3.0 Construction Details).

[4] For CO2e emissions, see Chapter 13 (page 94); Conversion Ratios: Climate Registry, General Reporting Protocol, 2016.

Construction Water Energy

Daily Soil Disturbance[1]	4	acres
Days of Soil Disturbance[2]	18	days
Water Concentration[3]	3,020	gallons/acre
Water Energy Intensity[4]	11,110	kWh/MG
Total Construction Water	0.19	million gallons
Construction Water Energy	2,114	kWh
	0.0021	GWh

Notes:

[1] Total daily acres disturbed from offroad equipment per CalEEMod (3.0 Construction Detail) and maximum SCAQMD LST values for soil-disturbing equipment.

[2] Number of days of construction with soil-disturbing equipment per CalEEMod (3.0 Construction Detail).

[3] Water application rate per Air and Waste Management Association's Air Pollution Engineering Manual.

[4] Water energy intensity factor for county subarea per CalEEMod User Guide, Appendix D, page D-343.

Site Prep Acreage Estimate

Equipment	Acres/8hr Day	Equipment Modeled	Disturbed Acres
Tractors	0.5	4	2
Graders	0.5	0	0
Dozers	0.5	3	1.5
Scrapers	1	0	0
		Total Acres	**3.5**

Operational Fuel

Vehicle Type	Percent[1]	Annual VMT[2]	MPG[3]	Annual Fuel (Gallons)	Fuel Type	SB County Gallons[4]	RS Percent
Passenger Cars (Gasoline)	0.94	1,161,705	21.6	53,783	Gas	867,249,800	0.0062%
Light/Medium Trucks	0.34	421,290	17.2	24,494	Diesel	276,240,500	0.0089%
Heavy Trucks/Other	0.71	879,918	6.1	144,249	Diesel	276,240,500	0.0522%
Total Diesel	1.06	1,231,457		168,742			0.0611%
		Total					

Land Use[5]	LDA	LDT1	LDT2	MCY	MDV	LHD1	LHD2	MHD	OBUS	UBUS	SBUS	MH	HHD
General Office	0.5434	0.0615	0.1850	0.0245	0.1289	0.0238	0.0064	0.0120	0.0008	0.0005	0.0007	0.0037	0.0087
Unrefrigerated Warehouose	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0147	0.2794	0.0000	0.0000	0.0000	0.0000	0.7059

Notes:

[1] Percent of vehicle trip distribution based on fleet mix from CalEEMod (4.4 Fleet Mix).

[2] Total annual operational VMT based on mitigated annual VMT from CalEEMod (4.2 Trip Summary Information).

[3] Average fuel economy derived from Department of Transportation.

[4] Total annual county fuel per EMFAC 2017 model of projected operational fuel usage.

Elecricity/Natural Gas Energy

	Mitigated Project Annual Energy	San Bernardino County Annual Energy[3]	Percentage Increase
Electricity (kWh/yr)	295,872	15,968,515,536	0.0019%
Natural Gas (kBTU/yr)	215,549	52,723,642,800	0.0004%
Natural Gas (therms/yr)	2,155	527,236,428	0.00040883%

Land Use	Electricity[1] (kWh/yr)		Natural Gas[2] (kBTU/yr)	
	Unmitigated	Mitigated	Unmitigated	Mitigated
General Office Building	82,710	82,710	30,870	30,870
Unrefrigerated Warehouse	213,162	213,162	184,679	184,679
Total Energy	**295,872**	**295,872**	**215,549**	**215,549**

Notes:

[1] Electricity use per CalEEMod (5.3 Energy by Land Use).

[2] Natural Gas use per CalEEMod (5.2 Natural Gas by Land Use).

[3] County total energy values from California Energy Commission energy reports available through ecdms.energy.ca.gov. (year 2020)

Operational Water Energy

Mitigated Indoor	22.8	million gallons
Indoor Energy Intensity Factor[1]	13,021	kWh/MG
Mitigated Outdoor	1	million gallons
Outdoor Energy Intensity Factor[2]	11,110	kWh/MG
Operational Water Energy	308,382	kWh

Land Use[3]	Unmitigated (MG)		Mitigated (MG)	
	Indoor	Outdoor	Indoor	Outdoor
General Office Building	2	1	2	1
Unrefrigerated Warehouse	21	0	21	0
Total Operational Water	**23**	**1**	**23**	**1**

Notes:

[1] Indoor water energy intensity factor for county subarea per CalEEMod User Guide, Appendix D, page D-343. Factor includes supply, treatment, distribution, and wastewater.

[2] Outdoor water energy intensity factor for county subarea per CalEEMod User Guide, Appendix D, page D-343. Factor includes supply, treatment, and distribution.

[3] Operational water use values per CalEEMod (7.2 Water by Land Use).

APPENDIX C

GEOTECHNICAL REPORT

GEOTECHNICAL INVESTIGATION

PROPOSED INDUSTRIAL DEVELOPMENT
NWC OF LOCUST AVENUE AND LOWELL STREET
RIALTO, CALIFORNIA

GEOCON
WEST, INC.

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

BEST CALIFORNIA GAS, LTD
SANTA FE SPRINGS, CALIFORNIA

PROJECT NO. W1393-99-01

AUGUST 31, 2021

Project No. W1393-99-01
August 31, 2021

Best California Gas, Ltd
13116 Imperial Highway
Santa Fe Springs, California 90670

Attention: Ms. Jaime Jones

Subject: GEOTECHNICAL INVESTIGATION
PROPOSED INDUSTRIAL DEVELOPMENT
NWC OF LOCUST AVENUE AND LOWELL STREET
RIALTO, CALIFORNIA

Dear Ms. Jones:

In accordance with your authorization of our proposal dated May 3, 2021, we have prepared this geotechnical investigation report for the proposed industrial development located at the northwest corner of Locust Avenue and Lowell Street in the City of Rialto, California. The accompanying report presents the findings of our study and our conclusions and recommendations pertaining to the geotechnical aspects of proposed design and construction. Based on the results of our investigation, it is our opinion that the site can be developed as proposed, provided the recommendations of this report are followed and implemented during design and construction.

If you have any questions regarding this report, or if we may be of further service, please contact the undersigned.

Very truly yours,

GEOCON WEST, INC.

REGISTERED PROFESSIONAL ENGINEER
PETRINA ZEN
C87489
CIVIL
STATE OF CALIFORNIA

PROFESSIONAL GEOLOGIST
GERALD KASMAN
NO. 2251
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
JELISA THOMAS ADAMS
GE3092
GEOTECHNICAL
STATE OF CALIFORNIA

Petrina Zen	Gerald A. Kasman	Jelisa Thomas Adams
PE 89489	CEG 2251	GE 3092

(EMAIL) Addressee

TABLE OF CONTENTS

1. PURPOSE AND SCOPE 1
2. SITE CONDITIONS & PROJECT DESCRIPTION 1
3. GEOLOGIC SETTING 2
4. GEOLOGIC MATERIALS 2
   - 4.1 Artificial Fill 2
   - 4.2 Alluvium 3
5. GROUNDWATER 3
6. GEOLOGIC HAZARDS 4
   - 6.1 Surface Fault Rupture 4
   - 6.2 Seismicity 5
   - 6.3 Seismic Design Criteria 5
   - 6.4 Liquefaction Potential 7
   - 6.5 Slope Stability 8
   - 6.6 Earthquake-Induced Flooding 8
   - 6.7 Tsunamis, Seiches and Flooding 8
   - 6.8 Oil Fields & Methane 8
   - 6.9 Subsidence 9
7. CONCLUSIONS AND RECOMMENDATIONS 10
   - 7.1 General 10
   - 7.2 Soil and Excavation Characteristics 12
   - 7.3 Minimum Resistivity, pH and Water-Soluble Sulfate 12
   - 7.4 Grading 13
   - 7.5 Shrinkage 16
   - 7.6 Foundation Design 16
   - 7.7 Foundation Settlement 17
   - 7.8 Miscellaneous Foundations 18
   - 7.9 Lateral Design 18
   - 7.10 Concrete Slabs-on-Grade 18
   - 7.11 Preliminary Pavement Recommendations 20
   - 7.12 Retaining Wall Design 22
   - 7.13 Retaining Wall Drainage 23
   - 7.14 Temporary Excavations 24
   - 7.15 Stormwater Infiltration 25
   - 7.16 Surface Drainage 26
   - 7.17 Plan Review 27

LIMITATIONS AND UNIFORMITY OF CONDITIONS

LIST OF REFERENCES

TABLE OF CONTENTS (Continued)

MAPS, TABLES, AND ILLUSTRATIONS
- Figure 1, Vicinity Map
- Figure 2, Site Plan
- Figure 3, Regional Fault Map
- Figure 4, Regional Seismicity Map
- Figures 5 and 6, Retaining Wall Drain Detail
- Figure 7, Percolation Test Results

APPENDIX A
- FIELD INVESTIGATION
- Figures A1 through A10, Boring Logs

APPENDIX B
- LABORATORY TESTING
- Figures B1 and B2, Direct Shear Test Results
- Figures B3 through B8, Consolidation Test Results
- Figure B9, Modified Compaction Test Results
- Figure B10, Corrosivity Test Results

GEOTECHNICAL INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of a geotechnical investigation for a proposed industrial development located at the northwest corner of Locust Avenue and Lowell Street in the City of Rialto, California (see Vicinity Map, Figure 1). The purpose of this investigation was to evaluate subsurface soil and geologic conditions underlying the property, and based on conditions encountered, to provide conclusions and recommendations pertaining to the geotechnical aspects of proposed design and construction.

The scope of this investigation included a site reconnaissance, field exploration, laboratory testing, engineering analysis, and the preparation of this report. The site was explored on July 22, 2021 by excavating six 8-inch diameter borings using a truck-mounted hollow stem auger drilling machine. Borings B1 and B2 had several attempts but the planned depths were not reached due to refusal on cobbles. The borings were excavated to depths between 9 and 20½ feet below existing ground surface. The approximate locations of the exploratory borings are depicted on the Site Plan (Figure 2). A detailed discussion of the field investigation, including boring logs, is presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to determine pertinent physical and chemical soil properties. Appendix B presents a summary of the laboratory test results.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions. References reviewed to prepare this report are provided in the *List of References* section.

If project details vary significantly from those described herein, Geocon should be contacted to determine the necessity for review and possible revision of this report.

2. SITE CONDITIONS & PROJECT DESCRIPTION

The subject site is located on the northwest corner of Locust Avenue and Lowell Street in the City of Rialto, California. The site consists of an approximately 4.4-acre square shaped parcel currently occupied by an unpaved lot used for equipment storage. The site is bounded by a single-story high-ceiling warehouse structure to the north, by W. Lowell Street to the south, by N. Locust Avenue to the east, and by a 2-story office building, a 1-story warehouse, and a parking lot to the west. The site is relatively level, with no pronounced highs or lows. Surface water drainage at the site appears to be by sheet flow along the existing contours with no discernable pattern. Vegetation is nonexistent.

Based on the preliminary information provided to us by the client, it is our understanding that the proposed project will consist of an approximately 95,850 square foot industrial building. The structure will be constructed at or near present site grade. Other site improvements will consist of paving and driveways.

Based on the preliminary nature of the design at this time, wall and column loads were not available. It is anticipated that column loads for the proposed structure will be up to 300 kips, and wall loads are estimated to be up to 3 kips per linear foot.

Once the design phase and foundation loading configuration proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Any changes in the design, location or elevation of any structure, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

3. GEOLOGIC SETTING

The site is located in the Rialto-Colton basin, which underlies a portion of the upper Santa Ana Valley in southwestern San Bernardino County and northwestern Riverside County. The Rialto-Colton basin is bounded by the San Gabriel Mountains to the north, the San Jacinto Fault to the east, the Box Spring Mountains on the south, and the Rialto-Colton Fault to the west. Lytle Creek drains this part of the valley southeastward to its confluence with the Santa Ana River in the southern part of the basin. The alluvial deposits within the Rialto-Colton Basin are primarily composed of cobbles, gravel, sand, and silt derived from the nearby San Gabriel Mountains and range from Holocene age (last 11,700 years) and Pleistocene age (11,700 to 2 million years). Holocene age deposits are found beneath the current courses of the Lytle and Cajon Creeks and the Santa Ana River.

4. GEOLOGIC MATERIALS

Based on our field investigation and published geologic maps, the soils underlying the site consist of undocumented artificial fill material over Holocene age alluvial fan deposits consisting of cobbles, gravel, and sand. Detailed stratigraphic profiles are provided in the boring logs in Appendix A.

4.1 Artificial Fill

The site is partially mantled by artificial fill to a maximum depth of 4 feet below existing ground surface. The artificial fill generally consists of brown to dark brown sand to gravelly sand and is characterized as fine- to medium grained, slightly moist to moist, and medium dense. The fill is likely the result of past grading and construction activities at the site. Deeper fill may exist between excavations and in other portions of the site that were not directly explored.

4.2 Alluvium

The fill materials are underlain by unconsolidated Holocene age alluvial fan deposits. The alluvium generally consists of yellowish brown to brown well-graded gravelly sand and sandy gravel with locally abundant cobbles. The alluvium is characterized as slightly moist to moist and medium dense to dense. Although not directly observed in our borings, boulders are common in this geologic environment.

5. GROUNDWATER

A review of data provided by the U.S. Geologic Survey Current Water Data for California (USGS, 2021) indicates that several wells have historically been drilled in the site vicinity. The closest wells to the site are Well No. 001N005W27D002S and Well No. 001N005W28J002S, located approximately 0.8 miles southeast and 1 mile southeast of the site, respectively. The State well numbering system is based on the township, range, section, and tract in which the well is located. Based on a review of available monitoring data from these two wells, the depth to groundwater in July 2021 was recorded at 439.06 and 423.34 feet below the existing ground surface, respectively.

Groundwater was not encountered in our field explorations, drilled to a maximum depth of 20½ feet below the ground surface. Based on the recent groundwater levels from wells located in the site vicinity, the lack of groundwater encountered in our borings, and the depth of proposed construction, static groundwater is neither expected to be encountered during construction, nor have a detrimental effect on the project. However, groundwater seepage may be encountered during construction. It is not uncommon for groundwater levels to vary seasonally or for groundwater seepage conditions to develop where none previously existed, especially in impermeable fine-grained soils which are heavily irrigated or after seasonal rainfall. In addition, recent requirements for stormwater infiltration could result in shallower seepage conditions in the immediate site vicinity. Proper surface drainage of irrigation and precipitation will be critical for future performance of the project. Recommendations for drainage are provided in the S*urface Drainage* section of this report (see Section 7.16).

6. GEOLOGIC HAZARDS

6.1 Surface Fault Rupture

The numerous faults in Southern California include Holocene-active, pre-Holocene, and inactive faults. The criteria for these major groups are based on criteria developed by the California Geological Survey (CGS, formerly known as CDMG) for the Alquist-Priolo Earthquake Fault Zone Program (CGS, 2018a). By definition, a Holocene-active fault is one that has had surface displacement within Holocene time (about the last 11,700 years). A pre-Holocene fault has demonstrated surface displacement during Quaternary time (approximately the last 1.6 million years) but has had no known Holocene movement. Faults that have not moved in the last 1.6 million years are considered inactive.

The site is not within a state-designated Alquist-Priolo Earthquake Fault Zone (CGS, 2021a; 2021b) for surface fault rupture hazards. No Holocene-active or pre-Holocene faults with the potential for surface fault rupture are known to pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low. However, the site is located in the seismically active Southern California region and could be subjected to moderate to strong ground shaking in the event of an earthquake on one of the many active Southern California faults. The faults in the vicinity of the site are shown in Figure 3, Regional Fault Map.

The closest active fault to the site is the San Jacinto Fault Zone located approximately 1.6 miles to the east-northeast (Ziony and Jones, 1989). Other nearby active faults are the Cucamonga Fault, the San Andreas Fault Zone, and the Red Hill Fault located 2.6 miles northwest, 4.9 miles northeast, and 5.9 miles west of the site, respectively (Ziony and Jones, 1989).

Several buried thrust faults, commonly referred to as “blind" thrusts, underlie the Los Angeles Basin and the Orange County Coastal Plain, at depth. These faults are not exposed at the ground surface and are typically identified at depths greater than three kilometers. The October 1, 1987 M_w 5.9 Whittier Narrows Earthquake and the January 17, 1994 M_w 6.7 Northridge Earthquake were a result of movement on the Puente Hills Blind Thrust and the Northridge Thrust, respectively. These blind thrusts and others in the Southern California area are not exposed at the surface and do not present a potential surface fault rupture hazard. However, these buried faults are considered active features and are capable of generating future earthquakes.

6.2 Seismicity

As with all of Southern California, the site has experienced historic earthquakes from various regional faults. The seismicity of the region surrounding the site was formulated based on research of an electronic database of earthquake data. The epicenters of recorded earthquakes with magnitudes equal to or greater than 5.0 in the site vicinity are depicted on Figure 4, Regional Seismicity Map. A partial list of moderate to major magnitude earthquakes that have occurred in the Southern California area within the last 100 years is included in the following table.

LIST OF HISTORIC EARTHQUAKES

Earthquake (Oldest to Youngest)	Date of Earthquake	Magnitude	Distance to Epicenter (Miles)	Direction to Epicenter
Near Redlands	July 23, 1923	6.3	14	SE
Long Beach	March 10, 1933	6.4	49	SW
Tehachapi	July 21, 1952	7.5	108	WNW
San Fernando	February 9, 1971	6.6	59	WNW
Whittier Narrows	October 1, 1987	5.9	39	W
Sierra Madre	June 28, 1991	5.8	35	WNW
Landers	June 28, 1992	7.3	56	E
Big Bear	June 28, 1992	6.4	33	E
Northridge	January 17, 1994	6.7	64	W
Hector Mine	October 16, 1999	7.1	72	ENE
Ridgecrest	July 5, 2019	7.1	112	N

The site could be subjected to strong ground shaking in the event of an earthquake. However, this hazard is common in Southern California and the effects of ground shaking can be mitigated if the proposed structures are designed and constructed in conformance with current building codes and engineering practices.

6.3 Seismic Design Criteria

The following table summarizes the site-specific design criteria obtained from the 2019 California Building Code (CBC; Based on the 2018 International Building Code [IBC] and ASCE 7-16), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The data was calculated using the online application *Seismic Design Maps*, provided by OSHPD. The short spectral response uses a period of 0.2 second. We evaluated the Site Class based on the discussion in Section 1613.2.2 of the 2019 CBC and Table 20.3-1 of ASCE 7-16. The values presented on the following page are for the risk-targeted maximum considered earthquake (MCE_R).

2019 CBC SEISMIC DESIGN PARAMETERS

Parameter	Value	2019 CBC Reference
Site Class	D	Section 1613.2.2
MCE_R Ground Motion Spectral Response Acceleration – Class B (short), S_S	2.241g	Figure 1613.2.1(1)
MCE_R Ground Motion Spectral Response Acceleration – Class B (1 sec), S_1	0.806g	Figure 1613.2.1(2)
Site Coefficient, F_A	1	Table 1613.2.3(1)
Site Coefficient, F_V	1.7*	Table 1613.2.3(2)
Site Class Modified MCE_R Spectral Response Acceleration (short), S_{MS}	2.241g	Section 1613.2.3 (Eqn 16-36)
Site Class Modified MCE_R Spectral Response Acceleration – (1 sec), S_{M1}	1.37g*	Section 1613.2.3 (Eqn 16-37)
5% Damped Design Spectral Response Acceleration (short), S_{DS}	1.494g	Section 1613.2.4 (Eqn 16-38)
5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	0.914g*	Section 1613.2.4 (Eqn 16-39)

Note:

*Per Section 11.4.8 of ASCE/SEI 7-16, a ground motion hazard analysis shall be performed for projects for Site Class "E" sites with Ss greater than or equal to 1.0g and for Site Class "D" and "E" sites with S1 greater than 0.2g. Section 11.4.8 also provides exceptions which indicates that the ground motion hazard analysis may be waived provided the exceptions are followed. Using the code-based values presented in the table above, in lieu of a performing a ground motion hazard analysis, requires the exceptions outlined in ASCE 7-16 Section 11.4.8 be followed.

The table below presents the mapped maximum considered geometric mean (MCE_G) seismic design parameters for projects located in Seismic Design Categories of D through F in accordance with ASCE 7-16.

ASCE 7-16 PEAK GROUND ACCELERATION

Parameter	Value	ASCE 7-16 Reference
Mapped MCE_G Peak Ground Acceleration, PGA	0.919g	Figure 22-7
Site Coefficient, F_{PGA}	1.1	Table 11.8-1
Site Class Modified MCE_G Peak Ground Acceleration, PGA_M	1.011g	Section 11.8.3 (Eqn 11.8-1)

The Maximum Considered Earthquake Ground Motion (MCE) is the level of ground motion that has a 2 percent chance of exceedance in 50 years, with a statistical return period of 2,475 years. According to the 2019 California Building Code and ASCE 7-16, the MCE is to be utilized for the evaluation of liquefaction, lateral spreading, seismic settlements, and it is our understanding that the intent of the Building code is to maintain "Life Safety" during a MCE event. The Design Earthquake Ground Motion (DE) is the level of ground motion that has a 10 percent chance of exceedance in 50 years, with a statistical return period of 475 years.

Deaggregation of the MCE peak ground acceleration was performed using the USGS online Unified Hazard Tool, 2014 Conterminous U.S. Dynamic edition (v4.2.0). The result of the deaggregation analysis indicates that the predominant earthquake contributing to the MCE peak ground acceleration is characterized as a 7.44 magnitude event occurring at a hypocentral distance of 6.17 kilometers from the site.

Deaggregation was also performed for the Design Earthquake (DE) peak ground acceleration, and the result of the analysis indicates that the predominant earthquake contributing to the DE peak ground acceleration is characterized as a 7.16 magnitude occurring at a hypocentral distance of 7.95 kilometers from the site.

Conformance to the criteria in the above tables for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

6.4 Liquefaction Potential

Liquefaction is a phenomenon in which loose, saturated, relatively cohesionless soil deposits lose shear strength during strong ground motions. Primary factors controlling liquefaction include intensity and duration of ground motion, gradation characteristics of the subsurface soils, in-situ stress conditions, and the depth to groundwater. Liquefaction is typified by a loss of shear strength in the liquefied layers due to rapid increases in pore water pressure generated by earthquake accelerations.

The current standard of practice, as outlined in the "Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California" and "Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California" requires liquefaction analysis to a depth of 50 feet below the lowest portion of the proposed structure. Liquefaction typically occurs in areas where the soils below the water table are composed of poorly consolidated, fine to medium-grained, primarily sandy soil. In addition to the requisite soil conditions, the ground acceleration and duration of the earthquake must also be of a sufficient level to induce liquefaction.

According to the County of San Bernardino General Plan (2005) and the City of Rialto General Plan (2010) the site is not located in an area designated as "liquefiable". Based on the historic high groundwater levels in the site vicinity, the lack of groundwater encountered in our borings, and water depth recorded in nearby water wells in the vicinity, it is our opinion that the potential for liquefaction of the soils underlying the site is very low.

6.5 Slope Stability

The topography of the site is generally level and the topography of the vicinity gently slopes to the south. According to the County of San Bernardino General Plan (2005), the site is not located within an area identified as having a potential for slope instability. The site and surrounding vicinity is relatively level to gently sloping to the south with no pronounced slopes. There are no known landslides near the site, nor is the site in the path of any known or potential landslides. The potential for slope instability or landslides adversely affecting the proposed project is considered low.

6.6 Earthquake-Induced Flooding

Earthquake-induced flooding is inundation caused by failure of dams or other water-retaining structures due to earthquakes. A review of the County of San Bernardino General Plan (2005) indicates that the site is not located within a potential inundation area for an earthquake-induced dam failure. Therefore, the probability of earthquake-induced flooding is considered very low.

6.7 Tsunamis, Seiches and Flooding

The site is not located within a coastal area. Therefore, tsunamis, seismic sea waves, are not considered a significant hazard at the site.

Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Flooding from a seismically induced seiche is considered unlikely.

The site is not within a 100-year flood zone or a 500-year flood zone. The potential for flooding to adversely impact the site is low (City of Rialto General Plan, 2010; FEMA, 2008).

6.8 Oil Fields & Methane

Based on a review of the California Geologic Energy Management Division (CalGEM) Well Finder website, the site is not located within the boundary of a known oil field and no oil wells are located in the immediate site vicinity. However, due to the voluntary nature of record reporting by the oil well drilling companies, wells may be improperly located or not shown on the location map and undocumented wells could be encountered during construction. Any wells encountered during construction will need to be properly abandoned in accordance with the current requirements of the CalGEM.

The site is not located within the boundaries of a known oil field; therefore, the potential for the presence of methane is considered low. However, should it be determined that a methane study is required for the proposed development it is recommended that a qualified methane consultant be retained to perform the study and provide mitigation measures as necessary.

6.9 Subsidence

Subsidence occurs when a large portion of land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. Soils that are particularly subject to subsidence include those with high silt or clay content. The site is not located within an area of known ground subsidence. No large-scale extraction of groundwater, gas, oil, or geothermal energy is occurring or planned at the site. There appears to be little or no potential for ground subsidence due to withdrawal of fluid or gas at the site.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 General

7.1.1 It is our opinion that neither soil nor geologic conditions were encountered during the investigation that would preclude the construction of the proposed project provided the recommendations presented herein are followed and implemented during design and construction.

7.1.2 Up to 4 feet of existing artificial fill was encountered during site exploration. Deeper fill may exist in other areas of the site that were not directly explored. It is our opinion that the existing fill, in its present condition, is not suitable for direct support of proposed foundations or slabs. The existing fill and site soils are suitable for re-use as engineered fill provided the recommendations in the Grading section of this report are followed (see Section 7.4).

7.1.3 Based on our observations onsite and our knowledge of the geologic setting, cobbles should be anticipated during earthwork at the subject site. Additionally, boulders may be encountered in the existing fill or alluvial soils. The contractor should be prepared for difficult excavation conditions. The presence of these materials and their impact on construction methods and equipment selection should be considered by both the developer and contractor prior to construction.

7.1.4 Screening of the earth materials will likely be required to remove oversize (greater than 6 inches) rock, prior to placement and compaction. Generation of oversized material (greater than 6 inches) should be anticipated.

7.1.5 Based on these considerations, it is recommended that the upper 5 feet of existing earth materials within the building footprint area be excavated and properly compacted for foundation and slab support. Deeper excavations should be conducted as needed to remove any encountered fill or soft soils as necessary at the direction of the Geotechnical Engineer (a representative of Geocon). Proposed foundations should be underlain by a minimum of 3 feet of newly placed engineered fill. The limits of existing fill and/or soft soil removal will be verified by the Geocon representative during site grading activities. The excavation should extend laterally a minimum distance of three feet beyond the building footprint areas, including building appurtenances, or a distance equal to the depth of fill below the foundation, whichever is greater. Recommendations for earthwork are provided in the *Grading* section of this report (see Section 7.4).

7.1.6 Subsequent to the recommended grading, the proposed structure may be supported on a conventional shallow spread foundation system deriving support in newly placed engineered fill. Recommendations for the design of a conventional foundation system are provided in Section 7.6.

7.1.7 All excavations must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).

7.1.8 It is anticipated that stable excavations for the recommended grading associated with the proposed structure can be achieved with sloping measures. However, if excavations in close proximity to an adjacent property line and/or structure are required, special excavation measures may be necessary in order to maintain lateral support of offsite improvements. Excavation recommendations are provided in the *Temporary Excavations* section of this report (Section 7.14).

7.1.9 Foundations for small outlying structures, such as block walls up to 6 feet high, planter walls or trash enclosures, which will not be tied to the proposed structure, may be supported on conventional foundations bearing on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and proper compaction cannot be performed or is undesirable, foundations may derive support directly in the undisturbed alluvial soils at and below a depth of 24 inches and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative.

7.1.10 Where new paving is to be placed, it is recommended that all existing fill and soft alluvial soils be excavated and properly compacted for paving support. The client should be aware that excavation and compaction of all existing fill and soft alluvial soils in the area of new paving is not required; however, paving constructed over existing uncertified fill or unsuitable alluvial soil may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper twelve inches of subgrade soil should be scarified and properly compacted for paving support. Paving recommendations are provided in *Preliminary Pavement Recommendations* section of this report (see Section 7.11).

7.1.11 Based on the results of percolation testing performed at the site, a stormwater infiltration system is considered feasible for this project. Recommendations for infiltration are provided in the *Stormwater Infiltration* section of this report (see Section 7.15).

7.1.12 Once the design and foundation loading configuration proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. If the proposed building loads will exceed those presented herein, the potential for settlement should be reevaluated by this office.

7.1.13 Any changes in the design, location or elevation of improvements, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

7.2 Soil and Excavation Characteristics

7.2.1 The in-situ soils can be excavated with moderate effort using conventional excavation equipment. Due to the granular nature of the soils, moderate to excessive caving should be anticipated in vertical excavations, especially where granular soils are encountered. Formwork may be required to prevent caving of foundation excavations. In addition, due to the presence of cobbles and possible boulders, the contractor should be prepared for difficult excavation conditions during drilling and earthwork activities.

7.2.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable OSHA rules and regulations to maintain safety and maintain the stability of adjacent existing improvements.

7.2.3 All onsite excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load. Penetrations below this 1:1 projection will require special excavation measures such as sloping and shoring. Excavation recommendations are provided in the *Temporary Excavations* section of this report (see Section 7.14).

7.2.4 The upper 5 feet of existing site soils encountered during this investigation are primarily granular in nature and are considered to be "non-expansive". Recommendations presented herein assume that proposed foundations and slabs will derive support in these materials.

7.3 Minimum Resistivity, pH and Water-Soluble Sulfate

7.3.1 Potential of Hydrogen (pH) and resistivity testing as well as chloride content testing were performed on representative samples of soil to generally evaluate the corrosion potential to surface utilities. The tests were performed in accordance with California Test Method Nos. 643 and 422 and indicate that the soils are considered "moderately corrosive" with respect to corrosion of buried ferrous metals on site. The results are presented in Appendix B (Figure B10) and should be considered for design of underground structures.

7.3.2 Laboratory tests were performed on representative samples of the site soils to measure the percentage of water-soluble sulfate content. Results from the laboratory water-soluble sulfate tests are presented in Appendix B (Figure B10) and indicate that the on-site materials possess a sulfate exposure class of "S0" to concrete structures as defined by 2019 CBC Section 1904 and ACI 318-19 Table 19.3.1.1.

7.3.3 Geocon West, Inc. does not practice in the field of corrosion engineering and mitigation. If corrosion sensitive improvements are planned, it is recommended that a corrosion engineer be retained to evaluate corrosion test results and incorporate the necessary precautions to avoid premature corrosion of buried metal pipes and concrete structures in direct contact with the soils.

7.4 Grading

7.4.1 A preconstruction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer, geotechnical engineer, and, if applicable, building official in attendance. Special soil handling requirements can be discussed at that time.

7.4.2 Earthwork should be observed, and compacted fill tested by representatives of Geocon West, Inc. The existing fill encountered during exploration is suitable for re-use as an engineered fill, provided any encountered oversize material (greater than 6 inches) and any encountered deleterious debris is removed.

7.4.3 Screening of the earth materials will likely be required to remove oversize (greater than 6 inches) rock, prior to placement and compaction. Generation of oversized material (greater than 6 inches) should be anticipated. The contractor should be prepared for difficult excavation conditions. The presence of these materials and their impact on construction methods and equipment selection should be considered by both the owner and contractor prior to construction.

7.4.4 Rocks larger than 6 inches but less than 4 feet in maximum dimension may be incorporated into the engineered fill provided the oversized material (larger than 6 inches) is placed so that voids between the rocks are not created. It is recommended that placement of oversized materials be performed in non-building areas, if available. Consideration should be given to placing oversized material at least 3 feet below the deepest foundation or utility.

7.4.5 The acceptability of placing rock materials greater than 4 feet in maximum dimension shall be evaluated during grading as specific cases arise and shall be approved in writing by the Geotechnical Engineer prior to placement.

7.4.6 Grading should commence with the removal of all existing vegetation and existing improvements from the area to be graded. Deleterious debris such as wood and root structures should be exported from the site and should not be mixed with the fill soils. Asphalt and concrete should not be mixed with the fill soils unless approved by the Geotechnical Engineer. All existing underground improvements planned for removal should be completely excavated and the resulting depressions properly backfilled in accordance with the procedures described herein. Once a clean excavation bottom has been established it must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.).

7.4.7 As a minimum, it is recommended that the upper 5 feet of existing site soils within the proposed building footprint area be excavated and properly compacted for foundation and slab support. Deeper excavation should be conducted as necessary to completely remove all existing artificial fill or soft soil at the direction of the Geotechnical Engineer (a representative of Geocon). Proposed foundations should be underlain by a minimum of 3 feet of newly placed engineered fill. It is recommended that the grading contractor verify the depth of all building foundations prior to commencement of site grading activities in order to correctly determine the required grading overexcavations for foundations. The excavation should extend laterally a minimum distance of 3 feet beyond the building footprint area or a distance equal to the depth of fill below the foundation, whichever is greater. The limits of existing fill and/or soft fill soils removal will be verified by the Geocon representative during site grading activities.

7.4.8 All excavations must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).

7.4.9 All fill and backfill soils should be placed in horizontal loose layers approximately 6 to 8 inches thick, moisture conditioned to near optimum moisture content, and properly compacted to a minimum 90 percent of the maximum dry density in accordance with ASTM D 1557 (latest edition).

7.4.10 Foundations for small outlying structures, such as block walls up to 6 feet high, planter walls or trash enclosures, which will not be tied to the proposed buildings, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and proper compaction cannot be performed or is undesirable, foundations may derive support directly in the undisturbed alluvial soils at or below a depth of 24 inches, and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative.

7.4.11 Where new paving is to be placed, it is recommended that all existing fill and soft alluvial soils be excavated and properly compacted for paving support. The client should be aware that excavation and compaction of all existing fill and soft soils in the area of new paving is not required; however, paving constructed over existing uncertified fill or unsuitable alluvial soil may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of soil should be scarified, moisture conditioned to near optimum moisture content, and compacted to at least 95 percent relative compaction for paving support. Paving recommendations are provided in *Preliminary Pavement Recommendations* section of this report (see Section 7.11).

7.4.12 All imported fill shall be observed, tested, and approved by Geocon West, Inc. prior to bringing soil to the site. Rocks larger than 6 inches in diameter shall not be used in the fill. If necessary, import soils used as structural fill should have an expansion index less than 20 and corrosivity properties that are equally or less detrimental to that of the existing onsite soils (see Figure B10). Import soils must be placed uniformly and at equal thickness or in a manner that is approved by the Geotechnical Engineer (a representative of Geocon).

7.4.13 Utility trenches should be properly backfilled in accordance with the requirements of the Green Book (latest edition). The pipe should be bedded with clean sands (Sand Equivalent greater than 30) to a depth of at least 1 foot over the pipe, and the bedding material must be inspected and approved in writing by the Geotechnical Engineer (a representative of Geocon). The use of gravel is not acceptable unless used in conjunction with filter fabric to prevent the gravel from having direct contact with soil. The remainder of the trench backfill may be derived from onsite soil or approved import soil, compacted as necessary, until the required compaction is obtained. The use of minimum 2-sack slurry as backfill is also acceptable. Prior to placing any bedding materials or pipes, the trench excavation bottom must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).

7.4.14 All trench and foundation excavation bottoms must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to placing bedding sands, fill, steel, gravel, or concrete.

7.5 Shrinkage

7.5.1 Shrinkage results when a volume of material removed at one density is compacted to a higher density. A shrinkage factor between 10 and 15 percent should be anticipated when excavating and compacting the upper 5 feet of existing earth materials on the site to an average relative compaction of 92 percent. The shrinkage factor does not include the removal of oversized material.

7.4.2 If import soils will be utilized in the building pad, the soils must be placed uniformly and at equal thickness at the direction of the Geotechnical Engineer (a representative of Geocon West, Inc.). Soils can be borrowed from non-building pad areas and later replaced with imported soils.

7.6 Foundation Design

7.6.1 Subsequent to the recommended grading, a conventional shallow spread foundation system may be utilized for support of the proposed structures provided foundations derive support in newly placed engineered fill. Proposed foundations should be underlain by a minimum of 3 feet of newly placed engineered fill.

7.6.2 Continuous footings may be designed for an allowable bearing capacity of 2,000 pounds per square foot (psf), and should be a minimum of 12 inches in width, 18 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.

7.6.3 Isolated spread foundations may be designed for an allowable bearing capacity of 2,500 psf, and should be a minimum of 24 inches in width, 18 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.

7.6.4 The allowable soil bearing pressure above may be increased by 250 psf and 500 psf for each additional foot of foundation width and depth, respectively, up to a maximum allowable soil bearing pressure of 4,000 psf.

7.6.5 The allowable bearing pressures may be increased by one-third for transient loads due to wind or seismic forces.

7.6.6 If depth increases are utilized for the exterior wall footings, this office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary. Additional grading should be conducted as needed in order to maintain the recommended 3-foot-thick blanket of engineered fill below proposed foundations.

7.6.7 Continuous footings should be reinforced with four No. 4 steel reinforcing bars, two placed near the top of the footing and two near the bottom. Reinforcement for spread footings should be designed by the project structural engineer.

7.6.8 The above foundation dimensions and minimum reinforcement recommendations are based on soil conditions and building code requirements only, and are not intended to be used in lieu of those required for structural purposes.

7.6.9 No special subgrade presaturation is required prior to placement of concrete. However, the moisture in the foundation subgrade should be sprinkled as necessary to maintain a moist condition at the time of concrete placement

7.6.10 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated. If unanticipated soil conditions are encountered, foundation modifications may be required.

7.6.11 This office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary.

7.7 Foundation Settlement

7.7.1 The maximum expected static settlement for a structure supported on a conventional foundation system designed with a maximum bearing pressure of 4,000 psf, and deriving support in the recommended bearing materials is estimated to be less than 1 inch and occur below the heaviest loaded structural element. Settlement of the foundation system is expected to occur on initial application of loading. Differential settlement is not expected to exceed ½ inch over a distance of 20 feet.

7.7.2 Once the design and foundation loading configurations for the proposed structures proceeds to a more finalized plan, the estimated settlements presented in this report should be reviewed and revised, if necessary. If the final foundation loading configurations are greater than the assumed loading conditions, the potential for settlement should be reevaluated by this office.

7.8 Miscellaneous Foundations

7.8.1 Foundations for small outlying structures, such as block walls up to 6 feet in height, planter walls or trash enclosures which will not be tied to the proposed structures may be supported on conventional foundations bearing on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and compaction cannot be performed or is undesirable, such as adjacent to property lines, foundations may derive support in the undisturbed alluvial soils at and below a depth of 24 inches below the existing ground surface, and should be deepened as necessary to maintain a minimum 12-inch embedment into undisturbed alluvial soils and must be observed and approved by a Geocon representative.

7.8.2 If the soils exposed in the excavation bottom are soft, compaction of the soft soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative. Miscellaneous foundations may be designed for a bearing value of 1,500 psf, and should be a minimum of 12 inches in width, 18 inches in depth below the lowest adjacent grade and 12 inches into the recommended bearing material. The allowable bearing pressure may be increased by up to one-third for transient loads due to wind or seismic forces.

7.8.3 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated.

7.9 Lateral Design

7.9.1 Resistance to lateral loading may be provided by friction acting at the base of foundations, slabs and by passive earth pressure. An allowable coefficient of friction of 0.4 may be used with the dead load forces in the new placed engineered fill or competent alluvial soils.

7.9.2 Passive earth pressure for the sides of foundations and slabs poured against newly placed engineered fill or the alluvial soils may be computed as an equivalent fluid having a density of 260 pcf with a maximum earth pressure of 2,600 pcf. When combining passive and friction for lateral resistance, the passive component should be reduced by one-third.

7.10 Concrete Slabs-on-Grade

7.10.1 Concrete slabs-on-grade near the ground surface that are subject to vehicle loading should be designed in accordance with the recommendations in the *Preliminary Pavement Recommendations* section of this report (Section 7.11).

7.10.2 Subsequent to the recommended grading, concrete slab-on-grade, not subject to vehicle or equipment loading, should be a minimum of 4 inches thick and minimum slab reinforcement should consist of No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions. Steel reinforcing should be positioned vertically near the slab midpoint.

7.10.3 It is our understanding that unreinforced slabs-on-grade are being considered as a design alternative for this project. While our typical recommendations provide minimum reinforcement for slabs-on-grade, the slabs may be designed by a qualified Structural Engineer. The structural engineer may design the slab thickness and reinforcing or eliminate the reinforcing if they so choose. The design provided by the structural engineer may supersede those provided herein.

7.10.4 Slabs-on-grade at the ground surface that may receive moisture-sensitive floor coverings or may be used to store moisture-sensitive materials should be underlain by a vapor retarder placed directly beneath the slab. The vapor retarder and acceptable permeance should be specified by the project architect or developer based on the type of floor covering that will be installed. The vapor retarder design should be consistent with the guidelines presented in Section 9.3 of the American Concrete Institute's (ACI) Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials (ACI 302.2R-06) and should be installed in general conformance with ASTM E 1643 (latest edition) and the manufacturer's recommendations. A minimum thickness of 15 mils extruded polyolefin plastic is recommended; vapor retarders which contain recycled content or woven materials are not recommended. The vapor retarder should have a permeance of less than 0.01 perms demonstrated by testing before and after mandatory conditioning. At the direction of the client, it is our understanding that a product by Stego Industries, LLC is preferred. Geocon does not object to the use of Stego. The vapor retarder should be installed in direct contact with the concrete slab with proper perimeter seal. If the California Green Building Code requirements apply to this project, the vapor retarder should be underlain by 4 inches of clean aggregate. It is important that the vapor retarder be puncture resistant since it will be in direct contact with angular gravel. As an alternative to the clean aggregate suggested in the Green Building Code, it is our opinion that the concrete slab-on-grade may be underlain by a vapor retarder over 4 inches of clean sand (sand equivalent greater than 30), since the sand will serve a capillary break and will minimize the potential for punctures and damage to the vapor barrier.

7.10.5 For seismic design purposes, a coefficient of friction of 0.4 may be utilized between concrete slabs and subgrade soils without a moisture barrier, and 0.15 for slabs underlain by a moisture barrier.

7.10.6 Unless designed and evaluated by the project structural engineer, exterior slabs for walkways or flatwork, not subject to traffic loads, should be at least 4 inches thick and reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions, positioned near the slab midpoint. Prior to construction of slabs, the upper 12 inches of subgrade should be moistened to near optimum moisture content and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition). Crack control joints should be spaced at intervals not greater than 10 feet and should be constructed using saw-cuts or other methods as soon as practical following concrete placement. Crack control joints should extend a minimum depth of one-fourth the slab thickness. The project structural engineer should design construction joints as necessary.

7.10.7 The recommendations of this report are intended to reduce the potential for cracking of slabs due to settlement. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade may exhibit some cracking due to minor soil movement and/or concrete shrinkage. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement and curing, and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.

7.11 Preliminary Pavement Recommendations

7.11.1 Where new paving is to be placed, it is recommended that all existing fill and soft or unsuitable materials be excavated and properly recompacted for paving support. The client should be aware that excavation and compaction of all existing artificial fill and soft soils in the area of new paving is not required; however, paving constructed over existing unsuitable material may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of paving subgrade should be scarified, moisture conditioned to near optimum moisture content, and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition).

7.11.2 The following pavement sections are based on an assumed R-Value of 35. Once site grading activities are complete an R-Value should be obtained by laboratory testing to confirm the properties of the soils serving as paving subgrade, prior to placing pavement.

7.11.3 The Traffic Indices listed below are estimates. Geocon does not practice in the field of traffic engineering. The actual Traffic Index for each area should be determined by the project civil engineer. If pavement sections for Traffic Indices other than those listed below are required, Geocon should be contacted to provide additional recommendations. Asphalt concrete pavement thicknesses were determined following procedures outlined in the *California Highway Design Manual* (Caltrans). Concrete pavement sections were determined using AASHTO design procedures. It is anticipated that the majority of traffic will consist of automobile and large truck traffic.

PRELIMINARY ASPHALT PAVEMENT DESIGN SECTIONS

Location	Estimated Traffic Index (TI)	Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)
Automobile Parking And Driveways	4.0	3.0	4.0
Trash Truck & Fire Lanes (Intermittent Heavy Use)	7.0	4.0	9.0
Truck Drive Aisles (Regular Heavy Use)	8.0	4.5	10.5

PRELIMINARY CONCRETE PAVEMENT DESIGN SECTIONS

Location	Traffic Index	Concrete (inches)	Class 2 Aggregate Base (inches)	Minimum Reinforcement*
Pedestrian Walkways (No Traffic)	--	4.0	None (on native)	No. 3, 18" O.C. Both Ways
Automobile Parking And Driveways	4.0	4.0	4.0	No. 3, 18" O.C. Both Ways
Trash Truck & Fire Lanes (Intermittent Heavy Use)	7.0	6.5	4.0	--
Truck Drive Aisles (Regular Heavy Use)	8.0	8.0	4.0	--
Building Slab (No vehicle/equipment loading)	--	4.0	None (on native, after over-ex)	No. 3, 18" O.C. Both Ways
*Note: Optional provided it is evaluated and designed by the project structural engineer.				

7.11.4 Asphalt concrete should conform to Section 203-6 of the "*Standard Specifications for Public Works Construction"* (Green Book). Class 2 aggregate base materials should conform to Section 26-1.02A of the "*Standard Specifications of the State of California, Department of Transportation"* (Caltrans). The use of Crushed Miscellaneous Base in lieu of Class 2 aggregate base is acceptable. Crushed Miscellaneous Base should conform to Section 200-2.4 of the "*Standard Specifications for Public Works Construction"* (Green Book).

7.11.5 Concrete paving supporting vehicular traffic should be underlain by a minimum of 4 inches of aggregate base and a properly compacted subgrade. The subgrade and base material should be compacted to 95 percent relative compaction as determined by ASTM Test Method D 1557 (latest edition).

7.11.6 A thickened edge or integral curb should be constructed on the outside of concrete slabs subjected to wheel loads. The thickened edge should be 1.2 times the slab thickness or a minimum thickness of 2 inches, whichever results in a thicker edge, and taper back to the recommended slab thickness 4 feet behind the face of the slab (e.g., 6-inch and 7.5-inch-thick slabs would have an 8- and 9.5-inch-thick edge, respectively).

7.11.7 In order to control the location and spread of concrete shrinkage cracks, crack-control joints (weakened plane joints) should be included in the design of the concrete pavement slab in accordance with applicable design standards.

7.11.8 The performance of pavements is highly dependent upon providing positive surface drainage away from the edge of pavements. Ponding of water on or adjacent to the pavement will likely result in saturation of the subgrade materials and subsequent cracking, subsidence and pavement distress. If planters are planned adjacent to paving, it is recommended that the perimeter curb be extended at least 12 inches below the bottom of the aggregate base to minimize the introduction of water beneath the paving.

7.12 Retaining Wall Design

7.12.1 The recommendations presented below are generally applicable to the design of rigid concrete or masonry retaining walls having a maximum height of 5 feet. In the event that walls higher than 5 feet are planned, Geocon should be contacted for additional recommendations.

7.12.2 Retaining wall foundations may be designed in accordance with the recommendations provided in the *Foundation Design* section of this report (see Section 7.6).

7.12.3 Retaining walls with a level backfill surface that are not restrained at the top should be designed utilizing a triangular distribution of pressure (active pressure) of 30 pcf.

7.12.4 Restrained walls are those that are not allowed to rotate more than 0.001H (where H equals the height of the retaining portion of the wall in feet) at the top of the wall. Assuming that proper drainage and permanent dewatering is maintained, where walls are restrained from movement at the top, walls may be designed utilizing a triangular distribution of pressure (at-rest pressure) of 61 pcf.

7.12.5 The wall pressures provided above assume that the retaining wall will be properly drained preventing the buildup of hydrostatic pressure. If retaining wall drainage is not implemented, the equivalent fluid pressure to be used in design of undrained walls is 93 pcf. The value includes hydrostatic pressures plus buoyant lateral earth pressures.

7.12.6 The wall pressures provided above assume that the proposed retaining walls will support relatively undisturbed alluvial soils or engineered fill derived from onsite soils. If import soil will be used to backfill proposed retaining walls, revised earth pressures may be required to account for the geotechnical properties of the import soil used as engineered fill. This should be evaluated once the use of import soil is established. All imported fill shall be observed, tested, and approved by Geocon West, Inc. prior to bringing soil to the site.

7.12.7 Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic or adjacent structures and should be designed for each condition as the project progresses.

7.13 Retaining Wall Drainage

7.13.1 Unless designed for hydrostatic pressures, retaining walls should be provided with a drainage system extended at least two-thirds the height of the wall. At the base of the drain system, a subdrain covered with a minimum of 12 inches of gravel should be installed, and a compacted fill blanket or other seal placed at the surface (see Figure 5). The clean bottom and subdrain pipe, behind a retaining wall, should be observed by the Geotechnical Engineer (a representative of Geocon), prior to placement of gravel or compacting backfill.

7.13.2 As an alternative, a plastic drainage composite such as Miradrain or equivalent may be installed in continuous, 4-foot wide columns along the entire back face of the wall, at 8 feet on center. The top of these drainage composite columns should terminate approximately 18 inches below the ground surface, where either hardscape or a minimum of 18 inches of relatively cohesive material should be placed as a cap (see Figure 6). These vertical columns of drainage material would then be connected at the bottom of the wall to a collection panel or a 1-cubic-foot rock pocket drained by a 4-inch subdrain pipe.

7.13.3 Subdrainage pipes at the base of the retaining wall drainage system should outlet to an acceptable location via controlled drainage structures. Drainage should not be allowed to flow uncontrolled over descending slopes.

7.13.4 Moisture affecting below grade walls is one of the most common post-construction complaints. Poorly applied or omitted waterproofing can lead to efflorescence or standing water. Particular care should be taken in the design and installation of waterproofing to avoid moisture problems, or actual water seepage into the structure through any normal shrinkage cracks which may develop in the concrete walls, floor slab, foundations and/or construction joints. The design and inspection of the waterproofing is not the responsibility of the geotechnical engineer. A waterproofing consultant should be retained in order to recommend a product or method, which would provide protection to subterranean walls, floor slabs and foundations.

7.14 Temporary Excavations

7.14.1 Excavations on the order of 5 feet in height may be required during grading and construction activities. The excavations are expected to expose fill and alluvial soils, which may be subject to caving. Due to the presence of cobbles, the contractor should be prepared for difficult excavation conditions. Vertical excavations up to 5 feet in height may be attempted where not surcharged; however, the contractor should be prepared for caving, sloughing, and raveling in open excavations. Due to the granular nature of soils and potential for caving, the contractor should also be prepared to form foundation excavations at the excavation bottom.

7.14.2 Vertical excavations greater than 5 feet will require sloping or shoring measures in order to provide a stable excavation. It is anticipated that stable excavations for construction of the proposed improvements can be achieved and maintained with sloping measures. Where sufficient space is available, temporary unsurcharged embankments could be sloped back at a uniform 1:1 slope gradient or flatter, up to a maximum height of 10 feet. A uniform slope does not have a vertical portion.

7.14.3 Where temporary slopes are utilized, the top of the slope should be barricaded to prevent vehicles and storage loads at the top of the slope within a horizontal distance equal to the height of the slope. If the temporary slopes are to be maintained during the rainy season, berms are suggested along the tops of the slopes where necessary to prevent runoff water from entering the excavation and eroding the slope faces. Geocon personnel should inspect the soils exposed in the cut slopes during excavation so that modifications of the slopes can be made if variations in the soil conditions occur. All excavations should be stabilized within 30 days of initial excavation.

7.15 Stormwater Infiltration

7.15.1 During the July 22, 2021 site exploration, boring B6 was utilized to perform percolation testing. The boring was advanced to the depth listed in the table below. Slotted casing was placed in the boring, and the annular space between the casing and excavation was filled with gravel. The boring was then filled with water to pre-saturate the soils. The casing was refilled with water and percolation test readings were performed after repeated flooding of the cased excavation. Based on the test results, the average infiltration rate (adjusted percolation rate), for the earth materials encountered, is provided in the following table. The field-measured percolation rate has been adjusted to infiltration rates in accordance with the County of San Bernardino Technical Guidance Document for Water Quality Management Plans (June 2013). Additional correction factors may be required and should be applied by the engineer in responsible charge of the design of the stormwater infiltration system and based on applicable guidelines. Percolation test field data and calculation of the measured percolation rate and design infiltration rate are provided on Figure 7.

Boring	Soil Type	Infiltration Depth (ft)	Average Infiltration Rate (in / hour)
B6	Sand (SP)	5 – 10½	16.9

7.15.2 The results of the percolation testing indicate that the soils are conducive to infiltration. It is our opinion that the soil zones encountered at the depths and locations as listed in the table above are suitable for infiltration of stormwater.

7.15.3 It is our further opinion that infiltration of stormwater and will not induce excessive hydro-consolidation (see Figures B3 through B8), will not create a perched groundwater condition, will not affect soil structure interaction of existing or proposed foundations due to expansive soils, will not saturate soils supported by existing or proposed retaining walls, and will not increase the potential for liquefaction. Resulting settlements are anticipated to be less than ¼ inch, if any.

7.15.4 Where infiltration systems will be utilized, it is recommended that a minimum 10-foot horizontal and vertical setback be maintained from existing or proposed foundations. Additional setbacks may be required by the governing jurisdiction and should be incorporated into the stormwater infiltration system design as necessary.

7.15.5 Where the 10-foot horizontal setback cannot be maintained between the infiltration system and an adjacent footing, and the infiltration system penetrates below the foundation influence line, the proposed stormwater infiltration system must be designed to resist the surcharge from the adjacent foundation. The foundation surcharge line may be assumed to project down away from the bottom of the foundation at a 1:1 gradient. The stormwater infiltration system must still be sufficiently deep to maintain the 10-foot vertical offset between the bottom of the footing and the zone of saturation.

7.15.6 Subsequent to the placement of the infiltration system, it is acceptable to backfill the resulting void space between the excavation sidewalls and the infiltration system with minimum two-sack slurry provided the slurry is not placed in the infiltration zone. It is recommended that pea gravel be utilized adjacent to the infiltration zone so communication of water to the soil is not hindered.

7.15.7 Due to the preliminary nature of the project at this time, the location of the stormwater infiltration system has not yet been determined. The design drawings should be reviewed and approved by the Geotechnical Engineer. The installation of the stormwater infiltration system should be observed and approved by the Geotechnical Engineer (a representative of Geocon).

7.16 Surface Drainage

7.16.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change in the original designed engineering properties. Proper drainage should be maintained at all times.

7.16.2 All site drainage should be collected and controlled in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with 2019 CBC 1804.4 or other applicable standards. In addition, drainage should not be allowed to flow uncontrolled over any descending slope. Discharge from downspouts, roof drains and scuppers are not recommended onto unprotected soils within 5 feet of the building perimeter. Planters which are located adjacent to foundations should be sealed to prevent moisture intrusion into the soils providing foundation support. Landscape irrigation is not recommended within 5 feet of the building perimeter footings except when enclosed in protected planters.

7.16.3 Positive site drainage should be provided away from structures, pavement, and the tops of slopes to swales or other controlled drainage structures. The building pad and pavement areas should be fine graded such that water is not allowed to pond.

7.16.4 Landscaping planters immediately adjacent to paved areas are not recommended due to the potential for surface or irrigation water to infiltrate the pavement's subgrade and base course. Either a subdrain, which collects excess irrigation water and transmits it to drainage structures, or an impervious above-grade planter boxes should be used. In addition, where landscaping is planned adjacent to the pavement, it is recommended that consideration be given to providing a cutoff wall along the edge of the pavement that extends at least 12 inches below the base material.

7.17 Plan Review

7.17.1 Grading, foundation, and, if applicable, shoring plans should be reviewed by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to finalization to verify that the plans have been prepared in substantial conformance with the recommendations of this report and to provide additional analyses or recommendations.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon West, Inc. should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon West, Inc.

2. This report is issued with the understanding that it is the responsibility of the owner, or of his representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

3. The findings of this report are valid as of the date of this report. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.

4. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

LIST OF REFERENCES

California Division of Mines and Geology, 1998, *State of California Seismic Hazard Zone Map for the Devore Quadrangle,* Official Map, Revised: June 1, 1995

California Geologic Energy Management Division, 2021, Geologic Energy Management Division Well Finder, http://maps.conservation.ca.gov.doggr/index.html#close.

California Geological Survey, 2021a, CGS Information Warehouse, Regulatory Map Portal, http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps.

California Geological Survey, 2021b, Earthquake Zones of Required Investigation, https://maps.conservation.ca.gov/cgs/EQZApp/app/.

California Geological Survey, 2018a, *Earthquake Fault Zones, A Guide for Government Agencies, Property Owners/Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California,* Special Publication 42, Revised 2018.

Jennings, C. W. and Bryant, W. A., 2010, *Fault Activity Map of California,* California Geological Survey Geologic Data Map No. 6.

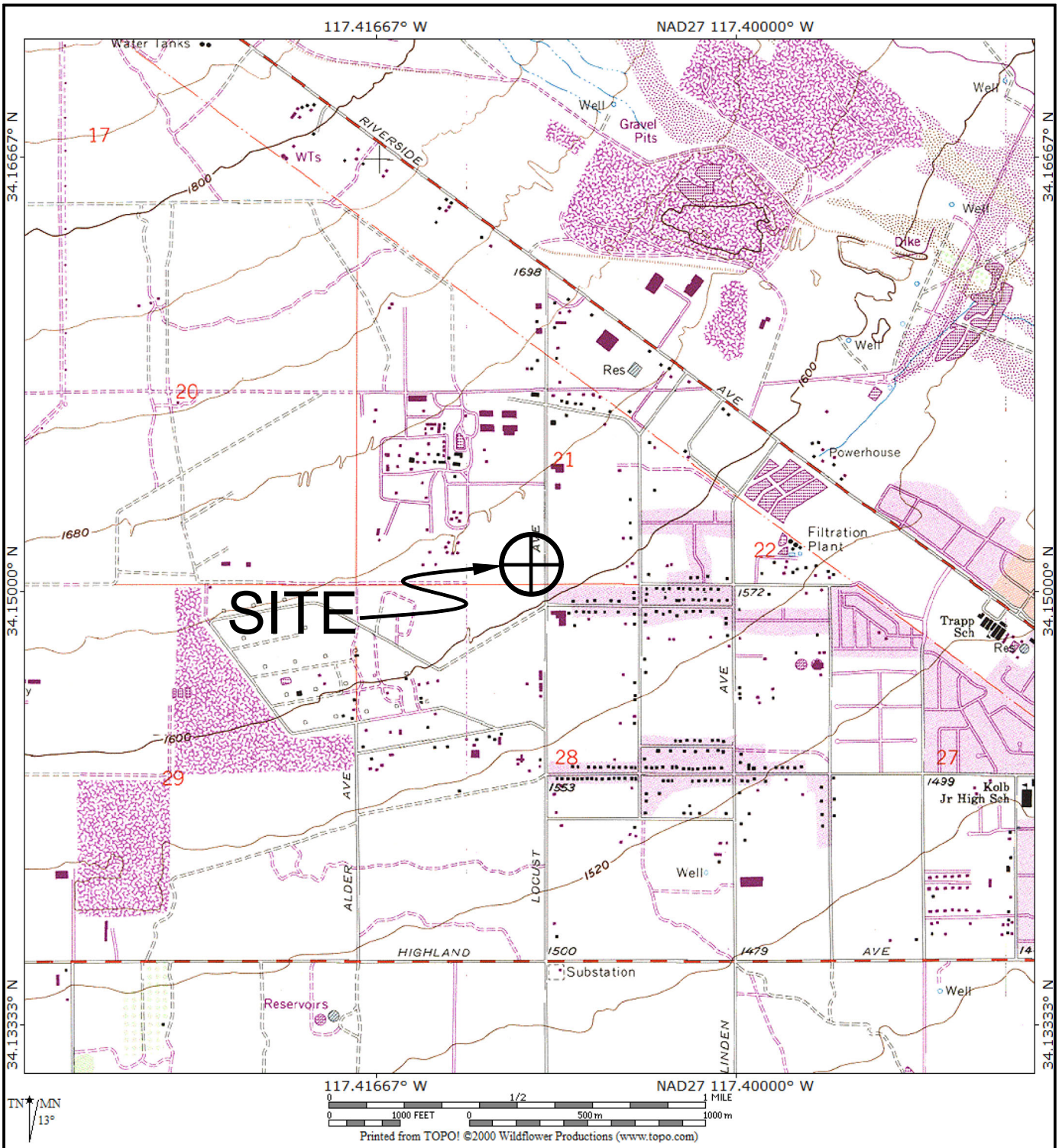
Morton, D. M. and Miller, F. K., 2003, *Preliminary Geologic Map of the San Bernardino 30' x 60' Quadrangle, California,* Scale 1:100,000, U. S. Geological Survey Open-File Report 03-293, Sheet 1 of 5.

Rialto, City of, 2010, General Plan Update, Safety and Noise Chapter.

San Bernardino County General Plan, Safety Element, 2005.

U.S. Geological Survey, 2021, *National Water Information System: Web Interface,* Web Site Address: http://waterdata.usgs.gov/nwis/gw

Ziony, J. I., and Jones, L. M., 1989, *Map Showing Late Quaternary Faults and 1978–1984 Seismicity of the Los Angeles Region, California*, U.S. Geological Survey Miscellaneous Field Studies Map MF-1964.



REFERENCE: U.S.G.S. TOPOGRAPHIC MAPS, 7.5 MINUTE SERIES, SAN BERNARDINO, CA QUADRANGLE

GEOCON WEST, INC.

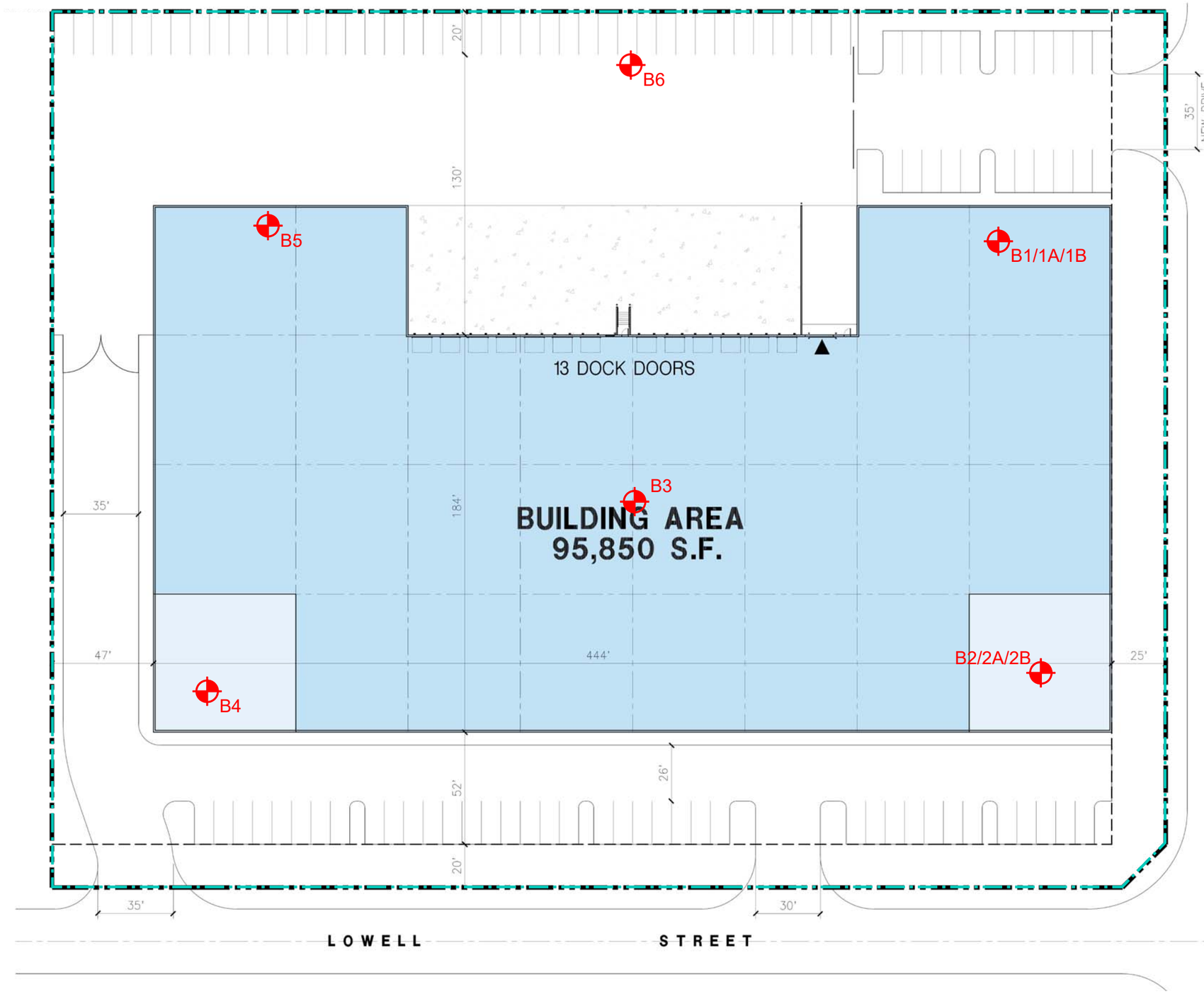
ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: RA | CHECKED BY: SFK

VICINITY MAP

NW CORNER LOCUST AVENUE
AND LOWELL STREET
RIALTO, CALIFORNIA

AUGUST 2021 | PROJECT NO. W1393-99-01 | FIG. 1



LEGEND

B6 Approximate Location of Boring

Approximate Location of Property Line

0 50' 100'

GEOCON WEST, INC.
ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: PZ	CHECKED BY: JTA

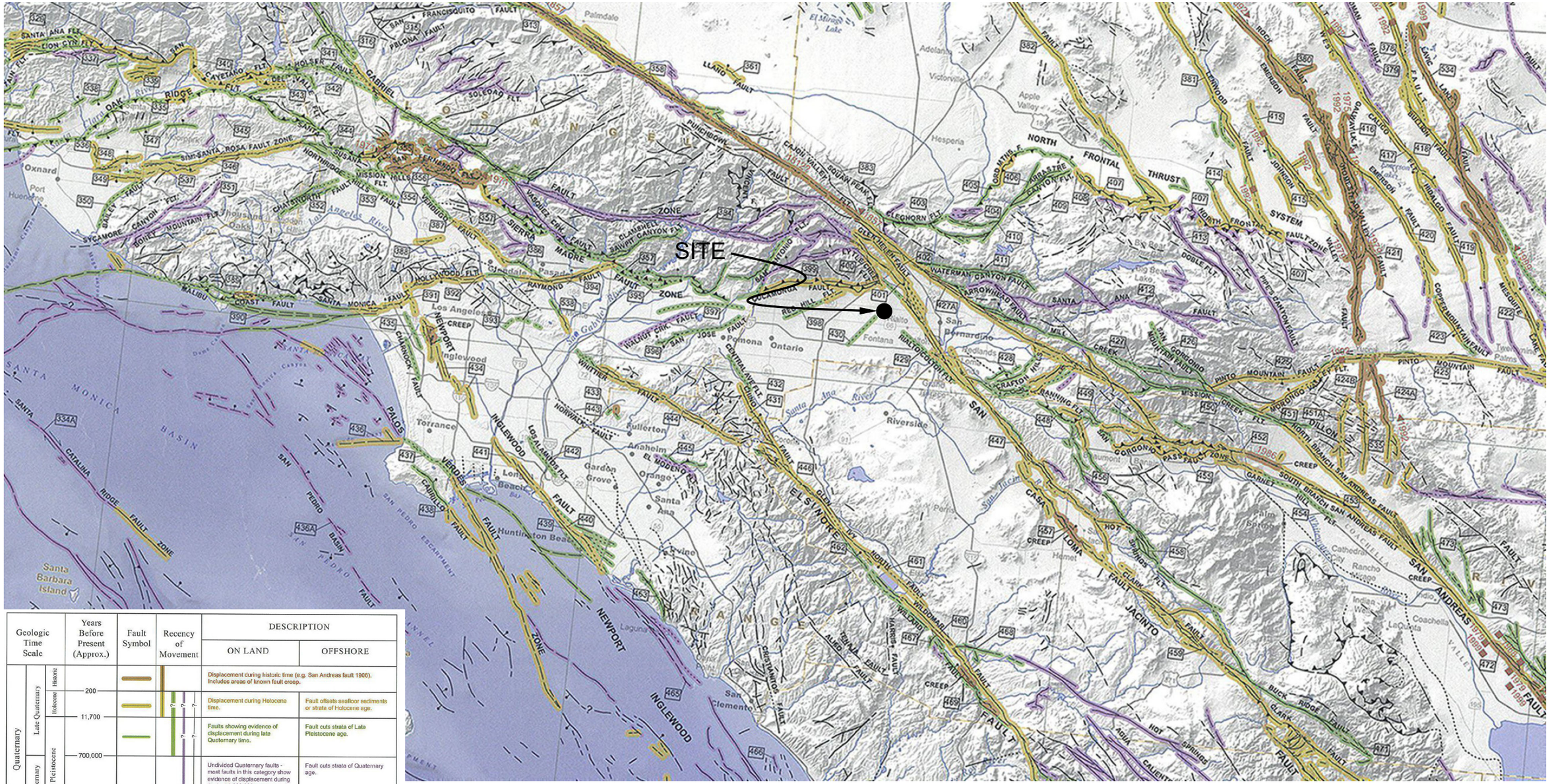
SITE PLAN

NW CORNER OF LOCUST AVENUE
AND LOWELL STREET
RIALTO, CALIFORNIA

AUGUST 2021	PROJECT NO. W1393-99-01	FIG. 2

1063

Reference: Jennings, C.W. and Bryant, W. A., 2010, Fault Activity Map of California, California Geological Survey Geologic Data Map No. 6.



Geologic Time Scale			Years Before Present (Approx.)	Fault Symbol	Recency of Movement	DESCRIPTION: ON LAND	DESCRIPTION: OFFSHORE
Quaternary	Late Quaternary	Historic				Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault creep.	
		Holocene	200			Displacement during Holocene time.	Fault offsets seafloor sediments or strata of Holocene age.
			11,700			Faults showing evidence of displacement during late Quaternary time.	Fault cuts strata of Late Pleistocene age.
	Early Quaternary	Pleistocene	700,000			Undivided Quaternary faults - most faults in this category show evidence of displacement during the last 1,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age.	Fault cuts strata of Quaternary age.
Pre-Quaternary			1,600,000*			Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive.	Fault cuts strata of Pliocene or older age.
			4.5 billion (Age of Earth)				

* Quaternary now recognized as extending to 2.6 Ma (Walker and Geissman, 2009). Quaternary faults in this map were established using the previous 1.6 Ma criterion.

N

0 12 24 Miles

GEOCON WEST, INC.

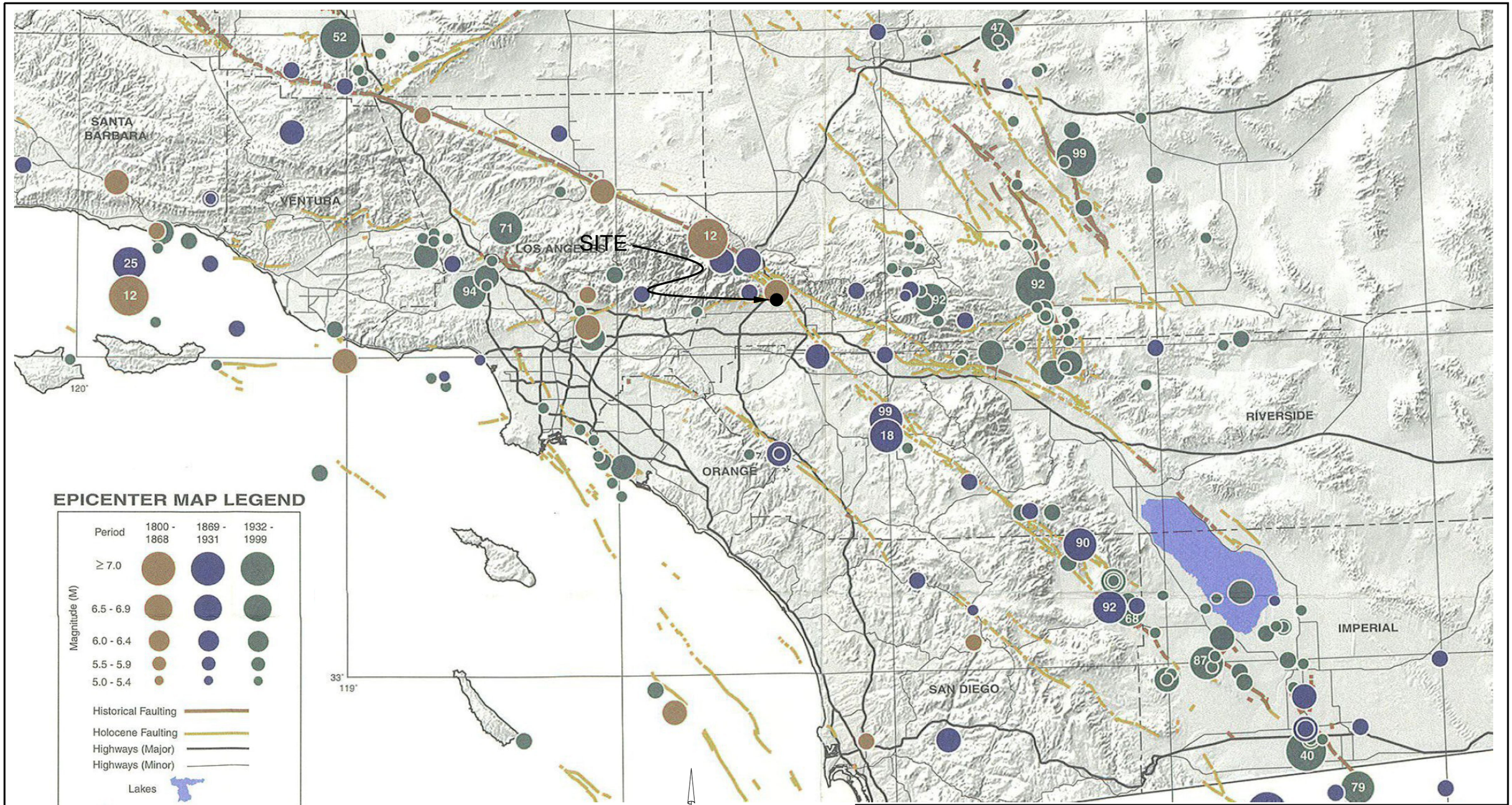
ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: RA | CHECKED BY: SFK

REGIONAL FAULT MAP

NW CORNER OF LOCUST AVENUE AND LOWELL STREET
RIALTO, CALIFORNIA

AUGUST 2021 | PROJECT NO. W1393-99-01 | FIG. 3



EPICENTER MAP LEGEND

Period	1800 - 1868	1869 - 1931	1932 - 1999
Magnitude (M) ≥ 7.0			
6.5 - 6.9			
6.0 - 6.4			
5.5 - 5.9			
5.0 - 5.4			

Historical Faulting

Holocene Faulting

Highways (Major)

Highways (Minor)

Lakes

65 Last two digits of M ≥ 6.5 earthquake year

Reference: Toppozada, T., Branum, D., Petersen, M., Hallstrom, C., Cramer, C., and Reichle, M., 2000, Epicenters and Areas Damaged by M≥5 California Earthquakes, 1800 - 1999, California Geological Survey, Map Sheet 49.

N

0 20 40 Miles

GEOCON WEST, INC.

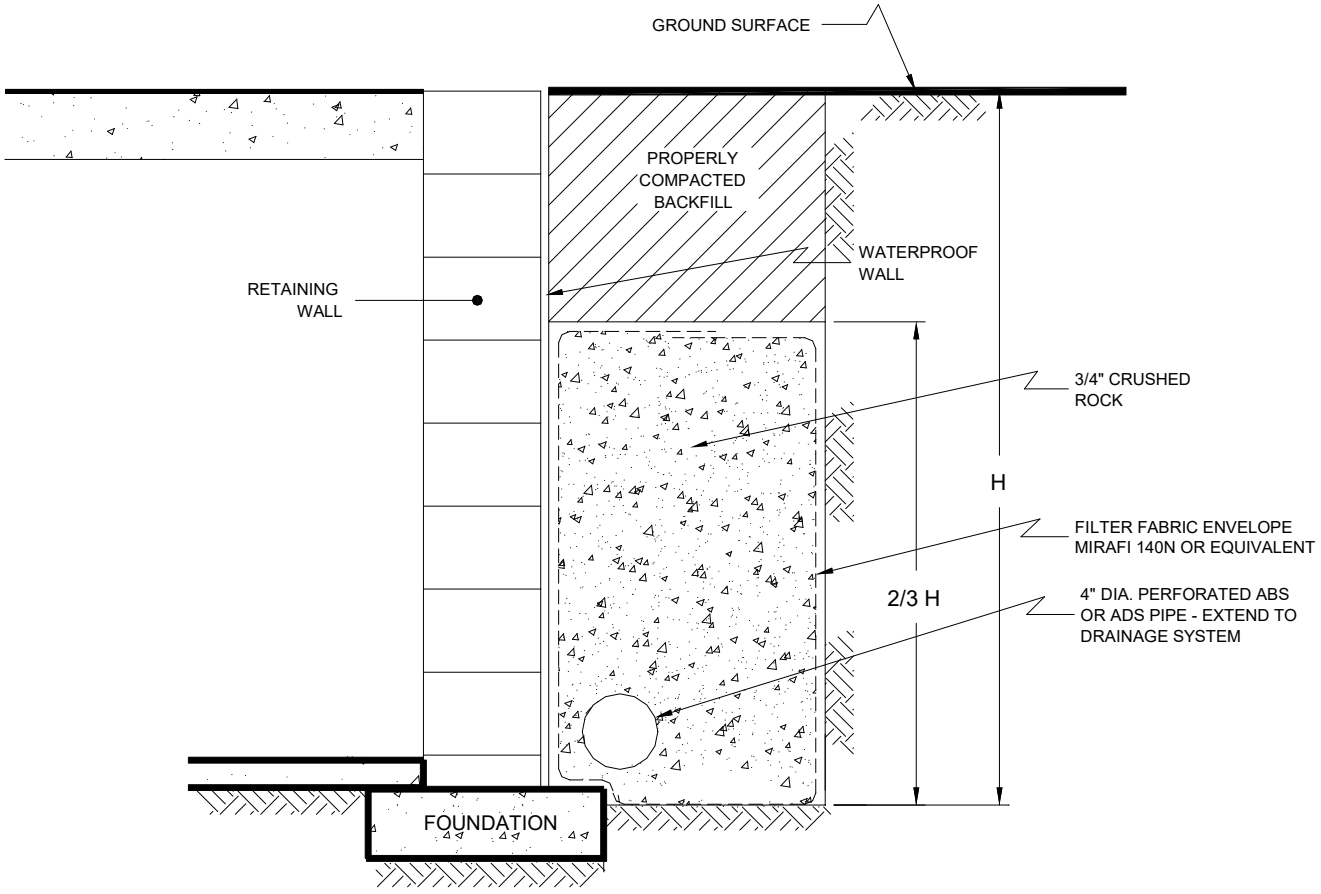
ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: RA | CHECKED BY: SFK

REGIONAL SEISMICITY MAP

NW CORNER OF LOCUST AVENUE
AND LOWELL STREET
RIALTO, CALIFORNIA

AUGUST 2021 | PROJECT NO. W1393-99-01 | FIG.4



NO SCALE

GEOCON WEST, INC.

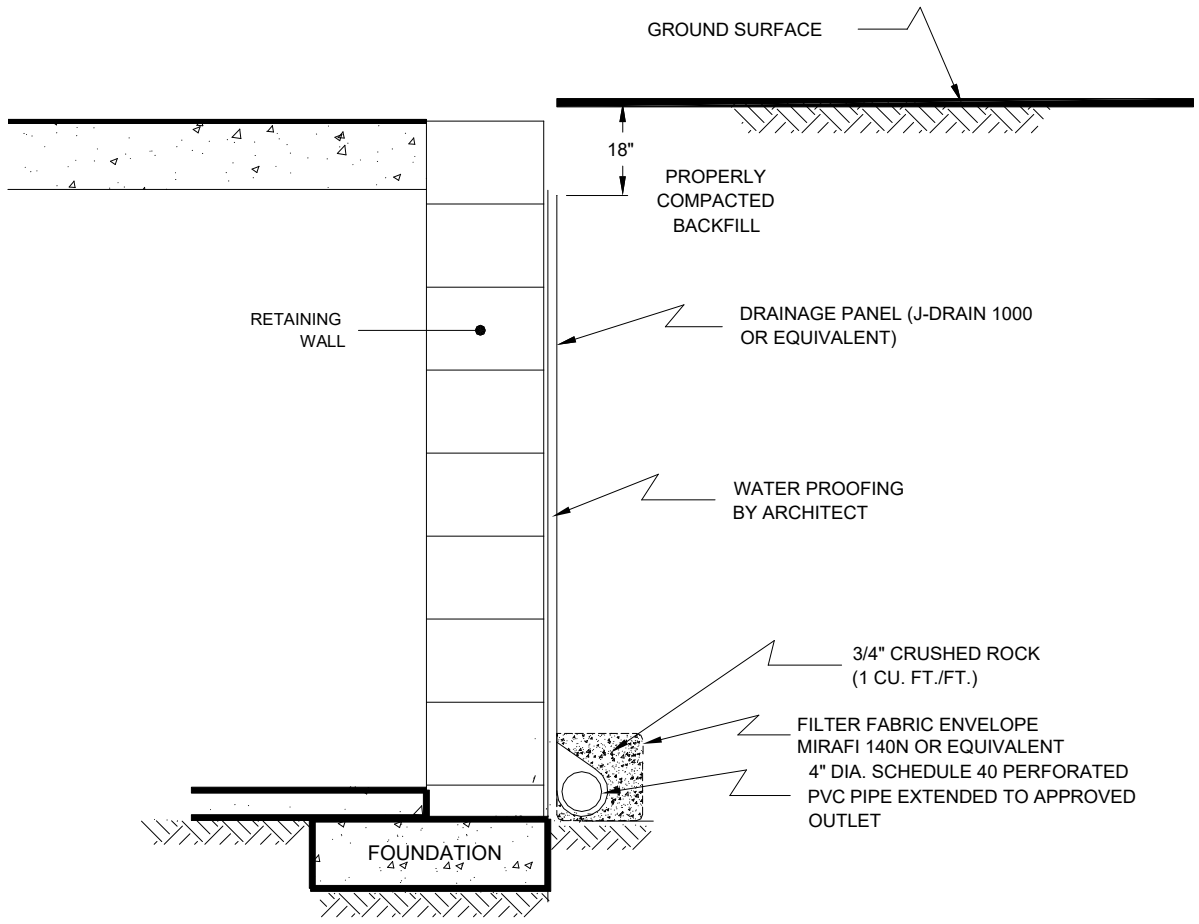
ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: PZ	CHECKED BY: JTA

RETAINING WALL DRAIN DETAIL

NW CORNER OF LOCUST AVENUE
AND LOWELL STREET
RIALTO, CALIFORNIA

AUGUST 2021	PROJECT NO. W1393-99-01	FIG. 5



NO SCALE

GEOCON
W E S T, I N C.

ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: PZ	CHECKED BY: JTA

RETAINING WALL DRAIN DETAIL

NW CORNER OF LOCUST AVENUE
AND LOWELL STREET
RIALTO, CALIFORNIA

AUGUST 2021	PROJECT NO. W1393-99-01	FIG. 6

PERCOLATION TEST DATA SHEET

Project:	Locust/Lowell	Project No:	W1393-99-01	Date:	7/22/2021
Test Hole No:	B6	Tested By:	JS		
Depth of Test Hole, D_T:	10.5	USCS Soil Classification:	SP		
Test Hole Dimensions (inches)			Length	Width	
Diameter (if round) =	8	Sides (if rectangular) =	---	---	

Sandy Soil Criteria Test*

Trial No.	Start Time	Stop Time	Δt Time Interval (min)	D_0 Initial Depth to Water (in)	D_f Final Depth to Water (in)	ΔD Change in Water Level (in)	Greater than or Equal to 6"? (y/n)
1	14:30	14:37	7	60.0	114.6	54.6	y
2	14:38	14:42	4	60.0	106.8	46.8	y

*If two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements, taken every 10 minutes. Otherwise, pre-soak (fill) overnight. Obtain at least twelve measurements per hole over at least six hours (approximately 30 minute intervals) with a precision of at least 0.25".

Trial No.	Start Time	Stop Time	Δt Time Interval (min)	D_0 Initial Depth to Water (in)	D_f Final Depth to Water (in)	ΔD Change in Water Level (in)	Percolation Rate (min/in)
1	14:44	14:54	10	60.0	117.0	57.0	0.18
2	14:55	15:05	10	60.0	115.8	55.8	0.18
3	15:05	15:15	10	60.0	116.3	56.3	0.18
4	15:16	15:26	10	60.0	116.2	56.2	0.18
5	15:27	15:37	10	60.0	116.5	56.5	0.18
6	15:38	15:48	10	60.0	116.2	56.2	0.18
7							
8							

Infiltration Rate Calculation:

Time Interval, Δt =	10	minutes	Ho =	66.0	inches
Final Depth to Water, Df =	116.2	inches	Hf =	9.8	inches
Test Hole Radius, r =	4	inches	ΔH =	56.2	inches
Initial Depth to Water, Do =	60.0	inches	Havg =	37.9	inches
Total Depth of Test Hole, DT =	126.0	inches			

$$I_t = \frac{\Delta H(60r)}{\Delta t(r + 2H_{avg})}$$

Infiltration Rate, It = **16.9** inches/hour

APPENDIX A

APPENDIX A

FIELD INVESTIGATION

The site was explored on July 22, 2021 by excavating six 8-inch diameter borings utilizing a truck-mounted hollow stem auger drilling machine. Borings B1 and B2 had several attempts but the planned boring depths were not reached due to refusal on cobbles. The borings were excavated to depths between 9 and 20½ feet below existing ground surface. Representative and relatively undisturbed samples were obtained by driving a 3 inch O. D., California Modified Sampler into the "undisturbed" soil mass with blows from a 140-pound auto-hammer falling 30 inches. The California Modified Sampler was equipped with 1-inch high by 2⅜-inch diameter brass sampler rings to facilitate soil removal and testing. Bulk samples were also obtained.

The soil conditions encountered in the borings were visually examined, classified and logged in general accordance with the Unified Soil Classification System (USCS). The logs of the borings are presented on Figures A1 through A10. The logs depict the soil and geologic conditions encountered and the depth at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the logs were revised based on subsequent laboratory testing. The locations of the borings are shown on Figure 2.

PROJECT NO. W1393-99-01

BORING 1

ELEV. (MSL.) -- DATE COMPLETED **7/22/2021**

EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	BULK 0-5'				**ARTIFICIAL FILL** Sand with Gravel, medium dense, slightly moist, brown, fine- to medium-grained, fine gravel, concrete fragments.			
2	B1@2.5'			SP	**ALLUVIUM** Sand with Gravel and Cobbles, very dense, slightly moist to moist, brown, fine- to medium-grained, up to 35% gravel and cobbles, fine to coarse gravel, cobbles (to 7").	50 (4")	--	--
4					- no recovery, medium dense			
6	B1@5'				- no recovery		--	--
8	B1@7.5'					50 (5.5")	--	--

Total depth of boring: 9 feet (refusal)
Fill to 1.5 feet.
No groundwater encountered.
Backfilled with soil cuttings and tamped.

*Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.

NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.

W1393-99-01 BORING LOGS.GPJ

Figure A1,
Log of Boring 1, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 1A** ELEV. (MSL.) -- DATE COMPLETED **7/22/2021** EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**ARTIFICIAL FILL** Sand, poorly-graded, medium dense, moist, dark brown, fine- to medium-grained, trace fine gravel.			
2					**ALLUVIUM** Sand with Gravel and Cobbles, well-graded, very dense, slightly moist, brown, fine- to coarse-grained, up to 35% gravel and cobbles, fine to coarse gravel.			
4				SW				
6					- large cobble/boulder			
					Total depth of boring: 7 feet (refusal) Fill to 2 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A2,
Log of Boring 1A, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 1B** ELEV. (MSL.) -- DATE COMPLETED **7/22/2021** EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**ARTIFICIAL FILL** Sand, poorly graded, medium dense, moist, brown, fine- to medium-grained, trace fine gravel.			
2					**ALLUVIUM** Sand with Gravel and Cobbles, poorly-graded, very dense, slightly moist, light brown, fine- to medium-grained, up to 35% gravel and cobbles, fine to coarse gravel.			
4								
6								
8				SP				
10	B1B@10'					50 (1")		
12								
14								
16	B1B@15'				- medium dense, no recovery	37		
					Total depth of boring: 17.5 feet (refusal) Fill to 1.5 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A3,
Log of Boring 1B, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

BORING 2

ELEV. (MSL.) -- DATE COMPLETED **7/22/2021**

EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	BULK 0-5'			SP	**ALLUVIUM** Sand with gravel, poorly-graded, dense, slightly moist to moist, brown, fine- to medium-grained, up to 30% gravel, fine to medium gravel.			
2								
4	B2@3'				- cobbles, no recovery, dense	86	--	--
6	B2@6'			GP	Gravel with Sand and Cobbles, very dense, slightly moist, light brown, fine- to coarse-grained, up to 30% sand, up to 15% cobbles, medium to coarse gravel, cobbles (to 8").	50 (6")	126.0	0.9
8								
10	B2@9'					50 (6")	--	--
12					Total depth of boring: 12 feet (refusal) No fill. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A4,
Log of Boring 2, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 2A** ELEV. (MSL.) -- DATE COMPLETED **7/22/2021** EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SP	**ALLUVIUM** Sand with Gravel, dense, slightly moist to moist, brown, fine- to medium-grained, fine gravel.			
2								
4				GP	Gravel with Sand and Cobbles, very dense, slightly moist, brown, fine- to medium-grained, up to 30% sand, up to 20% cobbles, medium to coarse gravel.			
6								
8				SP	Sand with Gravel, poorly-graded, very dense, slightly moist, brown, fine- to medium-grained, up to 30% gravel, medium to coarse gravel.			
10								
12					- some cobbles			
					Total depth of boring: 12.5 feet (refusal) No fill. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A5,
Log of Boring 2A, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

BORING 2B

ELEV. (MSL.) -- DATE COMPLETED 7/22/2021

EQUIPMENT HOLLOW STEM AUGER BY: JS

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ALLUVIUM**			
2					Sand with Gravel, medium dense to dense, slightly moist to moist, brown, fine- to medium-grained, up to 30% gravel, medium to coarse gravel.			
4					- cobbles			
6								
8								
10				SP				
12					- cobbles (to 5")			
14								
16	B2B@15'				- very dense, increase in gravel and cobbles	50 (1")	--	--
18								
20	B2B@20'					50 (5")	129.2	1.4
					Total depth of boring: 20.5 feet (refusal) No fill. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A6,
Log of Boring 2B, Page 1 of 1

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

BORING 3

ELEV. (MSL.) -- DATE COMPLETED **7/22/2021**

EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	BULK 0-5'				**ARTIFICIAL FILL** Sand, poorly graded, medium dense, moist, very dark brown, fine- to meidum-grained, trace fine gravel.			
2	B3@2.5'					26	107.8	6.7
4	B3@5'				**ALLUVIUM** Sand with Gravel and Cobbles, well-graded, very dense, slightly moist, light brown, fine-to coarse-grained, up to 35% gravel, up to 10% cobbles, fine to coarse gravel.	50 (5")	130.4	1.2
6								
8	B3@7.5'				- no recovery	50 (5.5")	--	--
10	B3@10'				- no recovery	50 (6")	--	--
12				SW				
	B3@12.5'				- dense	57	132.3	1.9
14								
	B3@15'				- very dense, yellowish brown, decrease in gravel content	50 (5")	110.0	3.5
16								
18								
20	B3@20'					50 (5.5")	90.7	1.4
					Total depth of boring: 20.5 feet Fill to 4 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A7,
Log of Boring 3, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

BORING 4

ELEV. (MSL.) -- DATE COMPLETED 7/22/2021

EQUIPMENT HOLLOW STEM AUGER BY: JS

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	BULK 0-5'				**ALLUVIUM** Sand with Gravel and Cobbles, well-graded, dense, slightly moist, light brown to brown, fine- to coarse-grained, up to 35% gravel, up to 20% cobbles, fine to coarse gravel.			
2	B4@2.5'					55	129.4	0.9
4								
6	B4@5'					50 (6")	122.9	1.6
8	B4@7.5'			SW	- very dense, grades to cobbly/gravelly sand	50 (4")	--	--
10	B4@10'					50 (6")	124.1	1.9
12	B4@12.5'				- dense	60	133.4	1.3
14					- very dense, increase in cobbles			
16	B4@15'					50 (5.5")	--	--
18								
20	B4@20'					50 (5")	128.5	2.3

Total depth of boring: 20.5 feet
No fill.
No groundwater encountered.
Backfilled with soil cuttings and tamped.

*Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.

NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.

W1393-99-01 BORING LOGS.GPJ

Figure A8,
Log of Boring 4, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

BORING 5

ELEV. (MSL.) -- DATE COMPLETED **7/22/2021**

EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	BULK 0-5'				**ARTIFICIAL FILL** Sand, poorly graded, medium dense, moist, dark brown, fine- to medium-grained.			
2					**ALLUVIUM** Sand with Gravel, well-graded, dense, slightly moist, light brown to brown, fine- to coarse-grained, up to 35% gravel, up to 10% cobbles, fine to coarse gravel, some cobbles.			
4	B5@3'					63	121.3	1.3
6	B5@6'				- very dense	50 (4")	139.7	2.4
8								
10	B5@9'			SW		50 (6")	124.6	1.6
12	B5@12'				- no recovery	50 (5")	--	--
14								
16	B5@15'					50 (6")	--	--
18								
20	B5@20'				- moist, dark yellowish brown	50 (2")	121.2	2.0

Total depth of boring: 20.5 feet
Fill to 2 feet.
No groundwater encountered.
Backfilled with soil cuttings and tamped.

*Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.

NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.

W1393-99-01 BORING LOGS.GPJ

Figure A9,
Log of Boring 5, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

BORING 6

ELEV. (MSL.) -- DATE COMPLETED **7/22/2021**

EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ARTIFICIAL FILL** Sand, poorly graded, medium dense, slightly moist, dark brown, fine- to medium-grained, trace fine gravel.			
2	B6@2.5'					15	106.3	2.7
4					**ALLUVIUM** Sand with Gravel and Cobbles, well-graded, very dense, slightly moist, brown, fine- to coarse-grained, up to 35% gravel, up to 15% cobbles, fine to coarse gravel.			
6	B6@5'			SW		50 (5")	--	--
8								
10	B6@10'					50 (6")	125.7	1.1
					Total depth of boring: 10.5 feet Fill to 3 feet. No groundwater encountered. Percolation testing performed. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A10,
Log of Boring 6, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

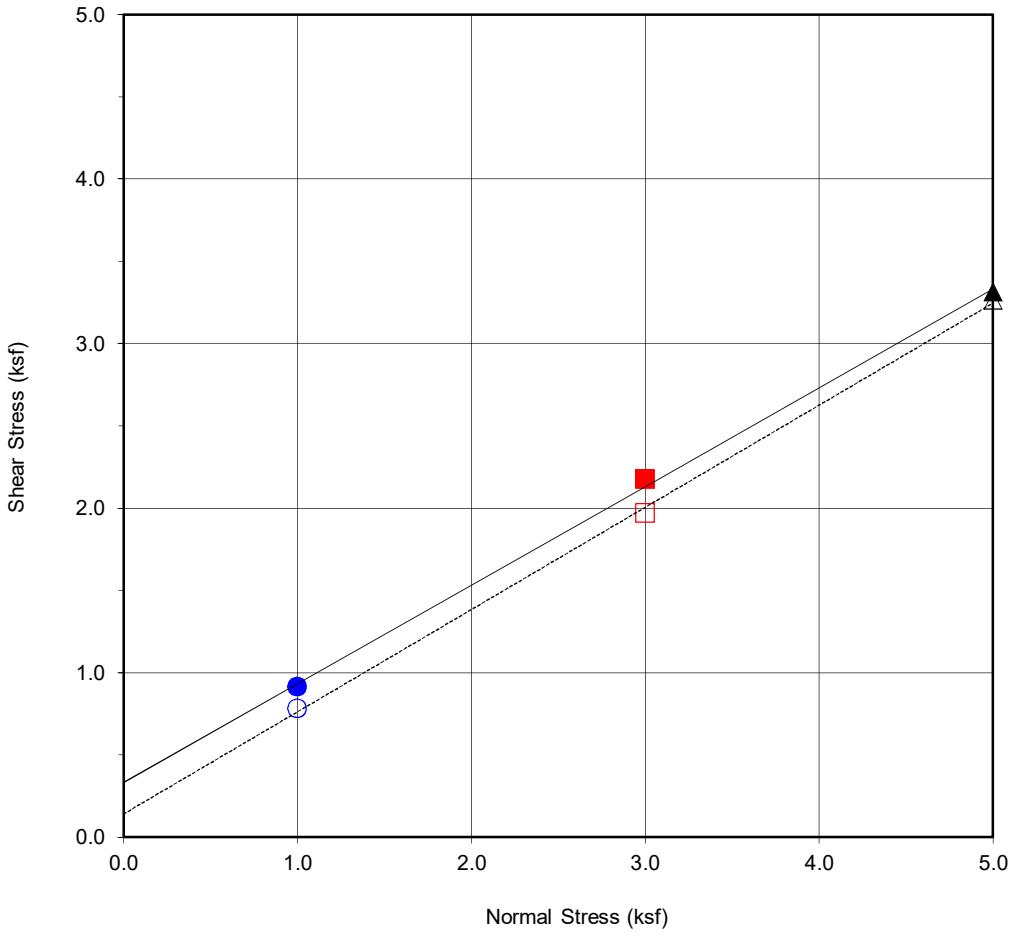
NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

APPENDIX B

APPENDIX B

LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM), or other suggested procedures. Selected samples were tested for direct shear strength, consolidation characteristics, corrosivity, in-place dry density and moisture content. The results of the laboratory tests are summarized in Figures B1 through B10. The in-place dry density and moisture content of the samples tested are presented in the boring logs, Appendix A.



Boring No.	**B1+B4**
Sample No.	**B1+B4@0-5'**
Depth (ft)	**0-5'**
Sample Type:	Ring

Soil Identification:

Brown Sand with Gravel (SP)

Strength Parameters

	C (psf)	ϕ (^{o})
Peak	332	31.0
Ultimate	141	31.8

Normal Strest (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.91	■ 2.17	▲ 3.31
Shear Stress @ End of Test (ksf)	○ 0.78	□ 1.97	△ 3.26
Deformation Rate (in./min.)	0.01	0.01	0.01
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	10.1	10.2	11.2
Initial Dry Density (pcf)	114.9	115.0	113.7
Initial Degree of Saturation (%)	58.2	58.8	62.5
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	14.6	13.9	13.8

GEOCON

DIRECT SHEAR TEST RESULTS

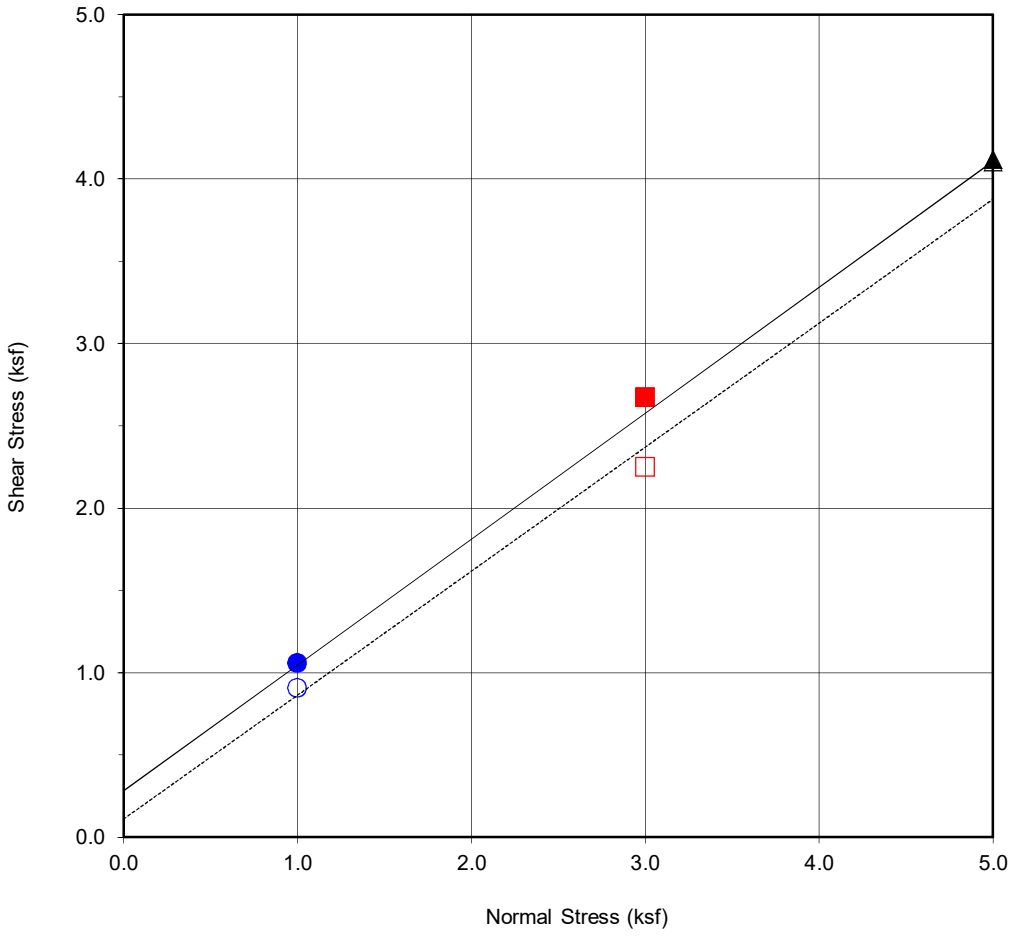
Consolidated Drained ASTM D-3080

Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B1



Boring No.	**B-4**
Sample No.	**B4@2.5'**
Depth (ft)	**2.5'**
Sample Type:	Ring

Soil Identification:

Brown Sand with Gravel (SW)

Strength Parameters

	C (psf)	ϕ (^{o})
Peak	281	37.4
Ultimate	110	37.0

Normal Strest (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 1.06	■ 2.67	▲ 4.12
Shear Stress @ End of Test (ksf)	○ 0.91	□ 2.25	△ 4.10
Deformation Rate (in./min.)	0.01	0.01	0.01
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	6.1	7.8	6.0
Initial Dry Density (pcf)	121.1	121.0	123.4
Initial Degree of Saturation (%)	41.8	53.5	44.6
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	10.7	13.5	11.4

GEOCON

DIRECT SHEAR TEST RESULTS

Consolidated Drained ASTM D-3080

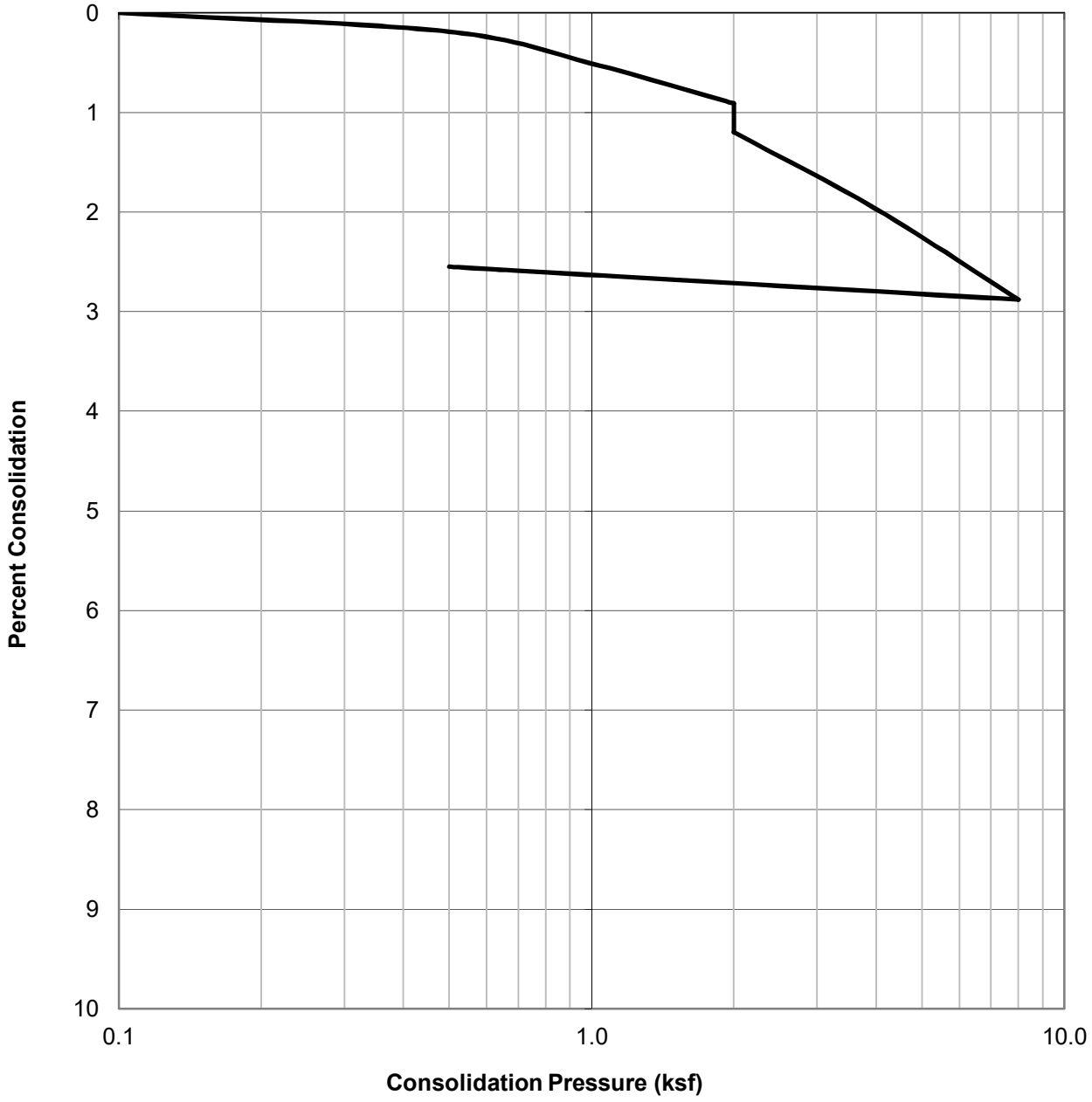
Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B2

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B2@6'	Gravel with Sand and Cobbles (GP)	122.9	2.2	11.7

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

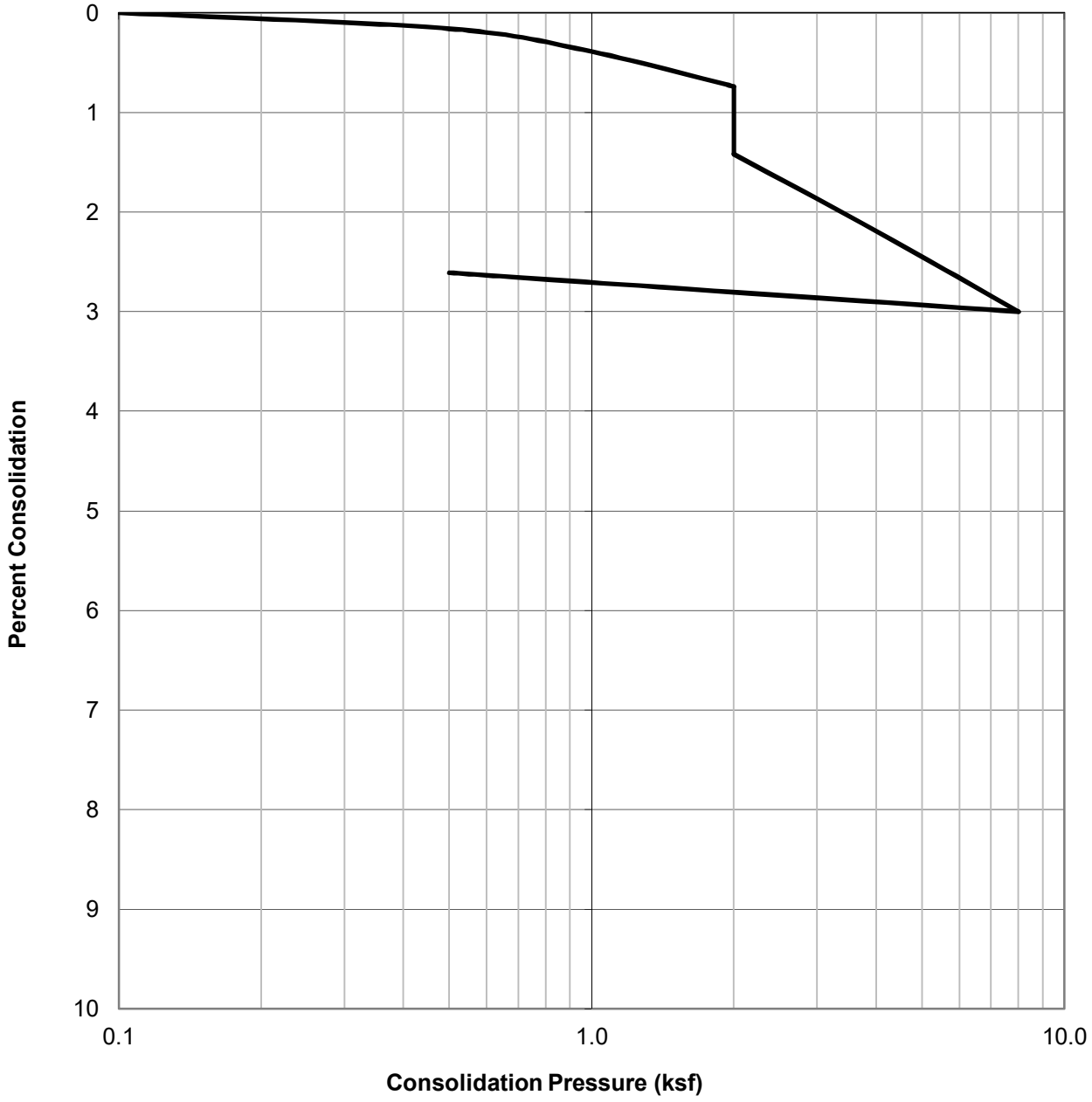
Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B3

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@6'	Brown Sand with Gravel (SP)	127.8	2.9	11.3

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

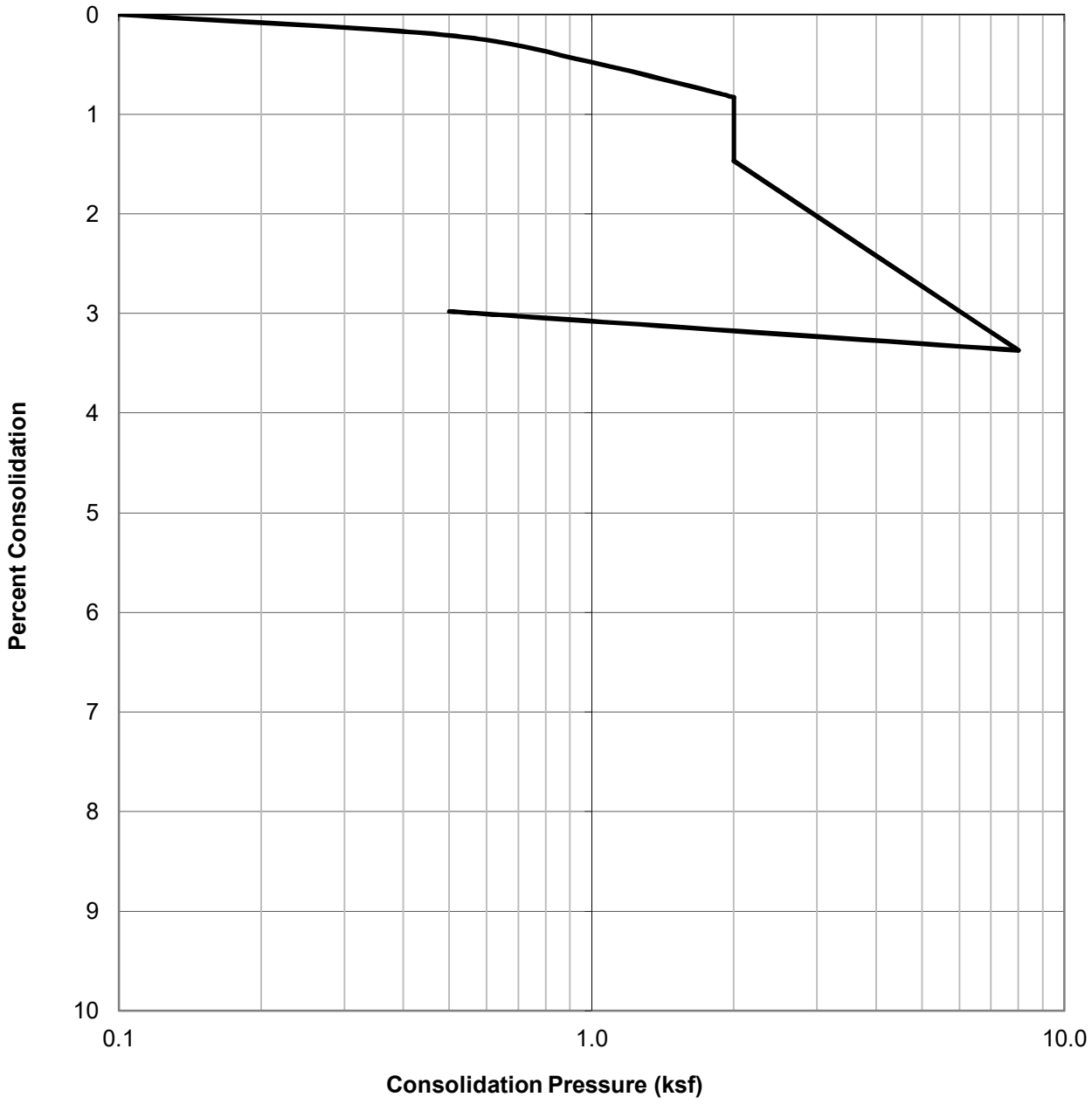
Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B4

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@9'	Brown Sand with Gravel (SW)	121.6	2.4	13.0

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

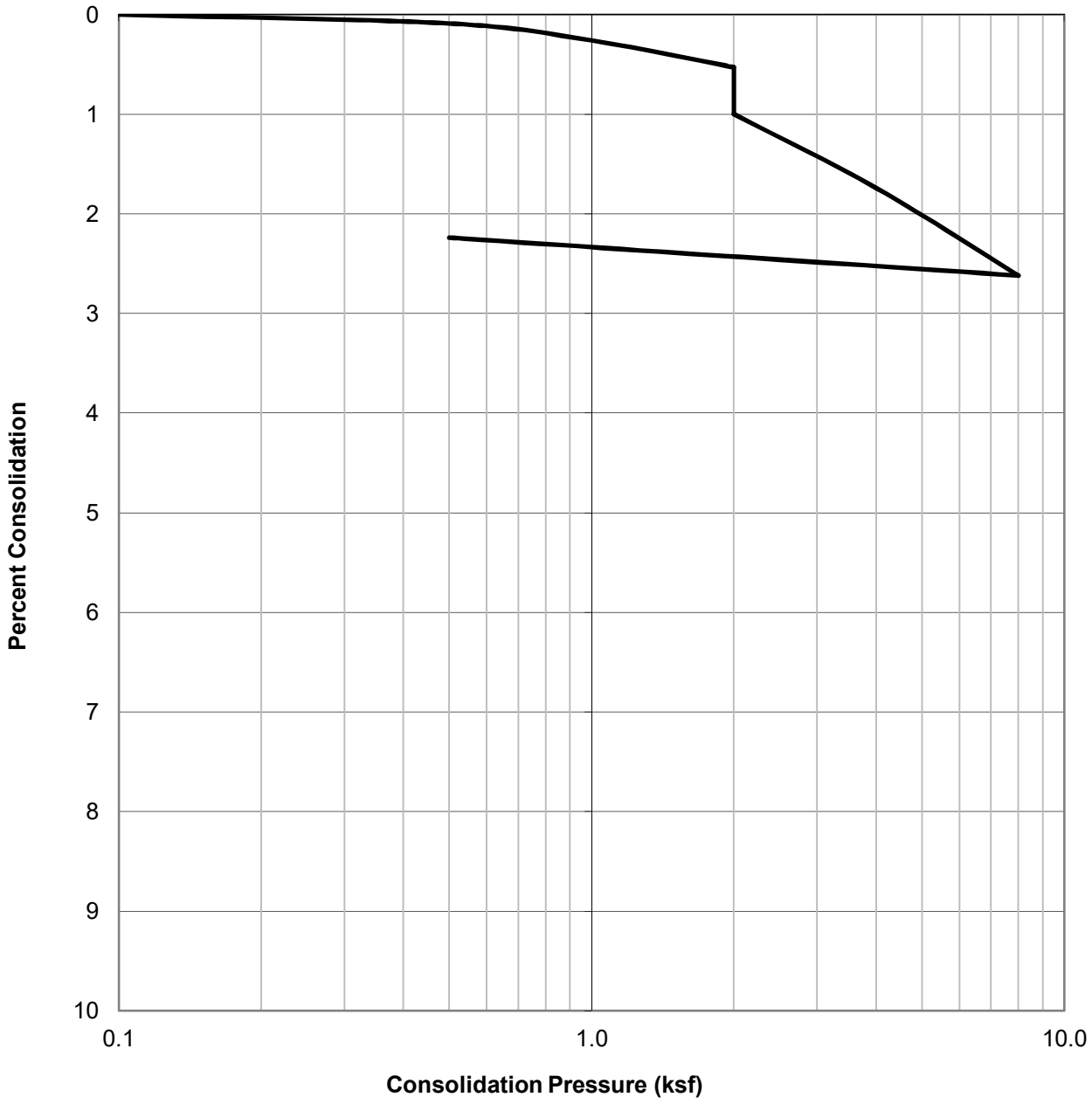
Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B5

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B3@12.5'	Light Brown Sand with Gravel and Cobbles (SW)	124.7	2.4	11.8

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

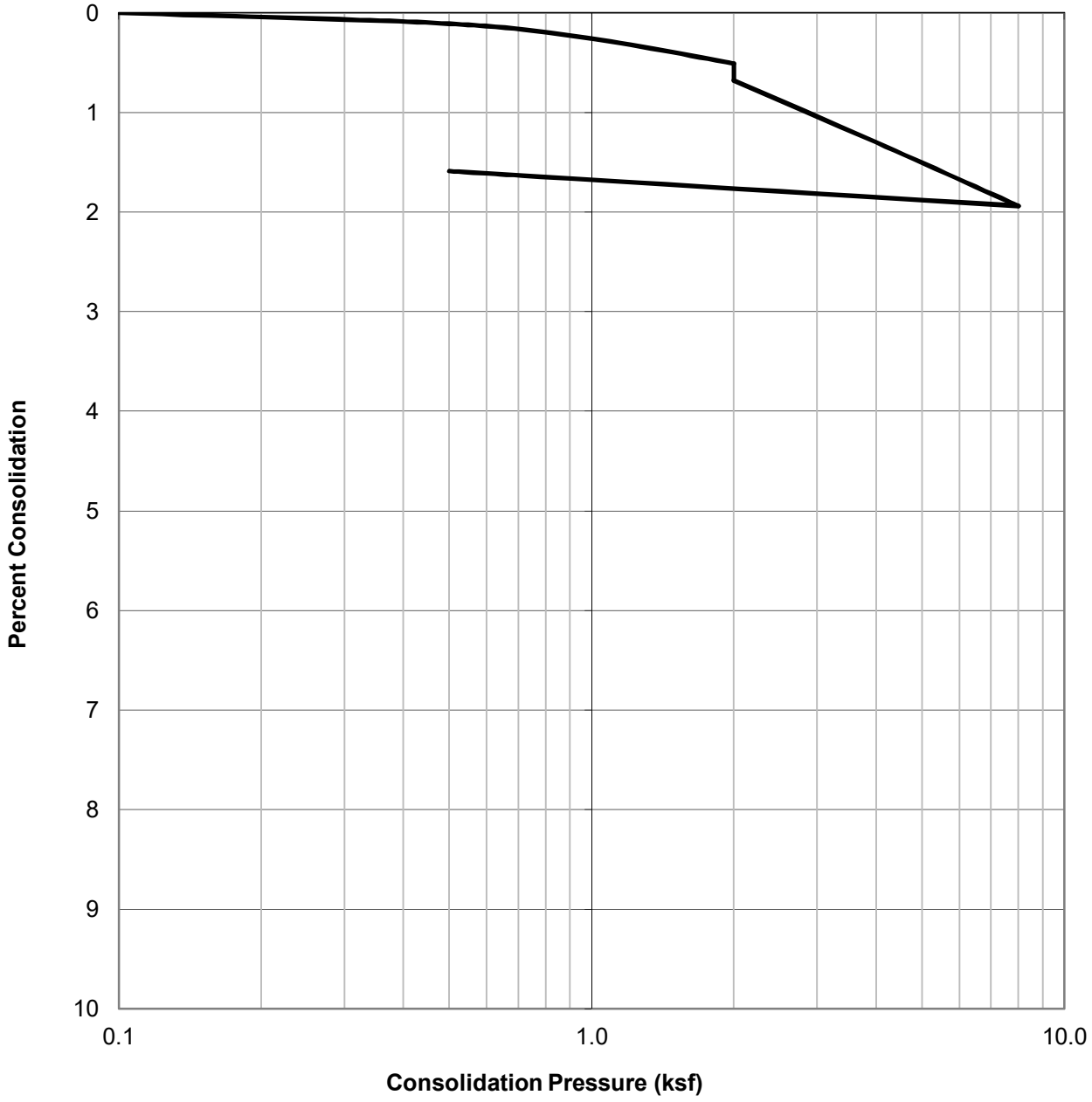
Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B6

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B4@12.5'	Brown Sand with Gravel (SW)	130.1	2.4	11.2

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

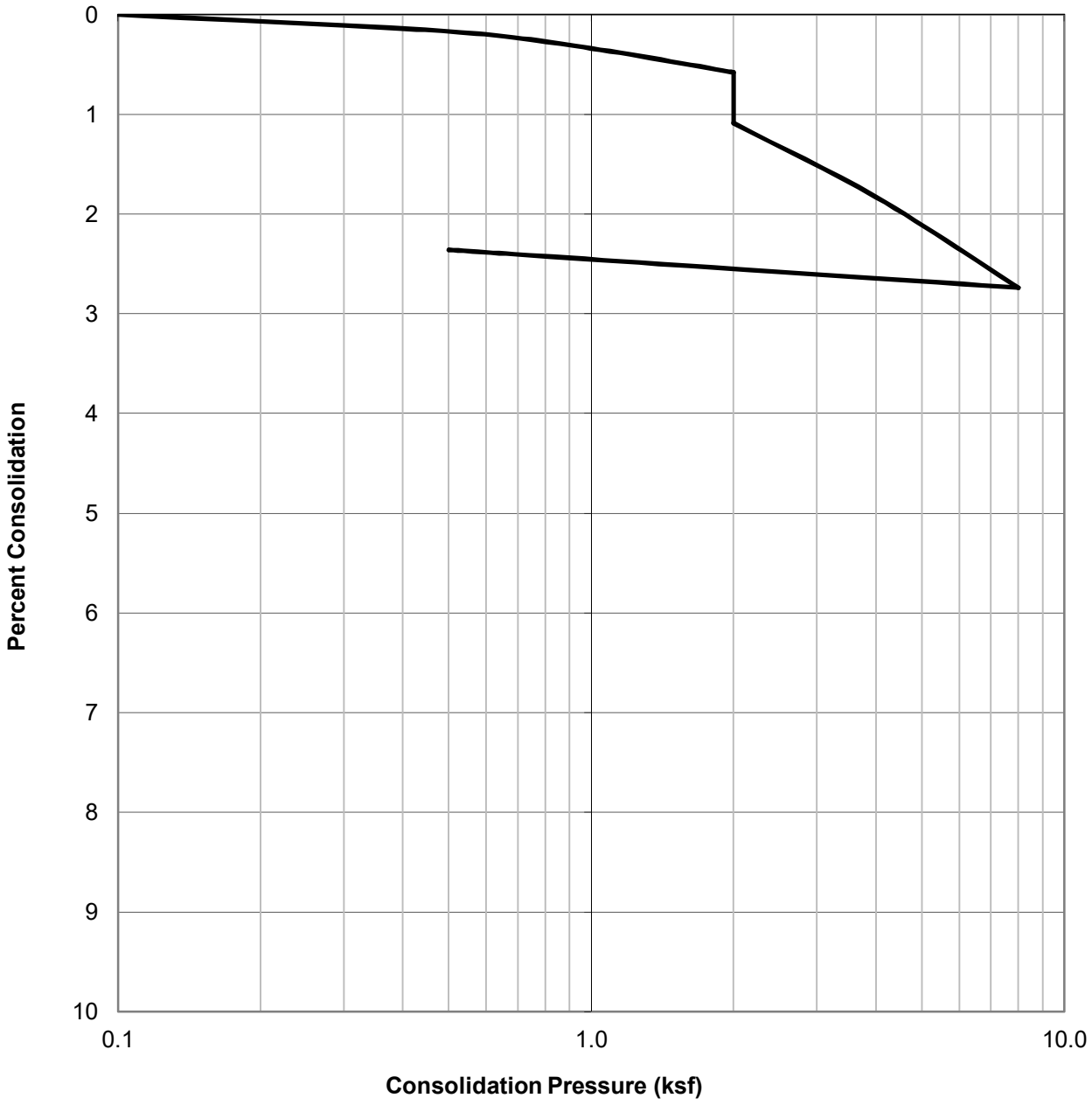
Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B7

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B2B@20'	Brown Sand with Gravel (SP)	126.1	2.8	11.1

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B8

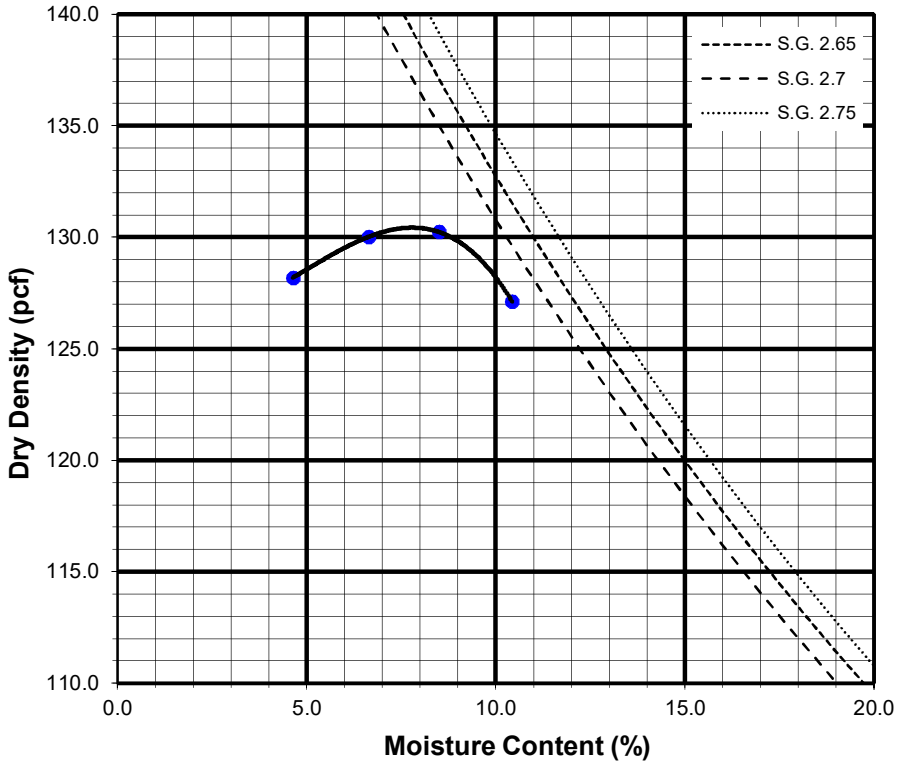
Sample No:

B1+B4@0-5'	Brown Sand with Gravel (SP)

TEST NO.		1	2	3	4	5	6
Wt. Compacted Soil + Mold	(g)	6312	6380	6420	6406		
Weight of Mold	(g)	4292	4292	4292	4292		
Net Weight of Soil	(g)	2020	2088	2128	2114		
Wet Weight of Soil + Cont.	(g)	2397.9	2470.4	2538.1	2493.6		429.1
Dry Weight of Soil + Cont.	(g)	2308.4	2340.2	2371.2	2293.8		420.7
Weight of Container	(g)	378.7	378.8	409.0	379.0		95.2
Moisture Content	(%)	4.6	6.6	8.5	10.4	0.0	2.6
Wet Density	(pcf)	134.1	138.6	141.3	140.4		
Dry Density	(pcf)	128.2	130.0	130.2	127.1	0.0	0.0

Maximum Dry Density (pcf)	**130.6**
Bulk Specific Gravity (dry)	**2.64**
Corrected Maximum Dry Density (pcf)	**147.8**

Optimum Moisture Content (%)	**7.6**
Oversized Fraction (%)	**55.8**
Corrected Moisture Content (%)	**3.3**



Preparation Method: A

GEOCON

COMPACTION CHARACTERISTICS USING MODIFIED EFFORT TEST RESULTS

ASTM D-1557

Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue and Lowell Street Rialto, California

August 2021 Figure B9

SUMMARY OF LABORATORY POTENTIAL
OF HYDROGEN (pH) AND RESISTIVITY TEST RESULTS
CALIFORNIA TEST NO. 643

Sample No.	pH	Resistivity (ohm centimeters)
B1+B4@0-5'	7.7	6000 (Moderately Corrosive)

SUMMARY OF LABORATORY CHLORIDE CONTENT TEST RESULTS
EPA NO. 325.3

Sample No.	Chloride Ion Content (%)
B1+B4@0-5'	0.015

SUMMARY OF LABORATORY WATER SOLUBLE SULFATE TEST RESULTS
CALIFORNIA TEST NO. 417

Sample No.	Water Soluble Sulfate (% SO_4)	Sulfate Exposure*
B1+B4@0-5'	0.000	S0

GEOCON

CORROSIVITY TEST RESULTS

Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B10

APPENDIX D

GREENHOUSE GAS EMISSIONS ASSESSMENT

Greenhouse Gas Emissions Assessment
Locust Avenue and Lowell Street Development Project
City of Rialto, California

Prepared by:

Kimley-Horn and Associates, Inc.
1100 W. Town and Country Road, Suite 700
Orange, California 92868
Contact: Ms. Olivia Chan
714.939.1030

May 2022

TABLE OF CONTENTS

1 INTRODUCTION
1.1 Project Location and Setting 1
1.2 Project Description....1

2 ENVIRONMENTAL SETTING
2.1 Greenhouse Gases and Climate Change 6

3 REGULATORY SETTING
3.1 Federal 8
3.2 State of California....10
3.3 Regional....17
3.4 Local 17

4 SIGNIFICANCE CRITERIA AND METHODOLOGY
4.1 Thresholds and Significant Criteria....20
4.2 Methodology....21

5 POTENTIAL IMPACTS AND MITIGATION
5.1 Greenhouse Gas Emissions 22
5.2 Greenhouse Gas Reduction Plan Compliance 24
5.3 Cumulative Setting, Impacts, and Mitigation Measures 31

6 **REFERENCES**
References....31

TABLES
Table 1 Description of Greenhouse Gases....7
Table 2 Construction-Related Greenhouse Gas Emissions 22
Table 3 Project Greenhouse Gas Emissions....23
Table 4 Regional Transportation Plan/Sustainable Communities Strategy Consistency 24
Table 5 Project Consistency with Applicable CARB Scoping Plan Measures....26

EXHIBITS
Exhibit 1 Regional Location Map....3
Exhibit 2 Project Vicinity Map 4
Exhibit 3 Conceptual Site Plan 5

APPENDIX
Appendix A: Greenhouse Gas Emissions Data

LIST OF ABBREVIATED TERMS

AB	Assembly Bill
CARB	California Air Resource Board
CCR	California Code of Regulations
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CALGreen Code	California Green Building Standards Code
CPUC	California Public Utilities Commission
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CFC	Chlorofluorocarbon
CPP	Clean Power Plan
CCSP	Climate Change Scoping Plan
cy	cubic yard
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
FR	Federal Register
GHG	greenhouse gas
HCFC	Hydrochlorofluorocarbon
HFC	Hydrofluorocarbon
LCFS	Low Carbon Fuel Standard
CH_4	Methane
$MMTCO_2e$	million metric tons of carbon dioxide equivalent
$MTCO_2e$	million tons of carbon dioxide equivalent
NHTSA	National Highway Traffic Safety Administration
NF_3	nitrogen trifluoride
N_2O	nitrous oxide
PFC	Perfluorocarbon
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCAG	Southern California Association of Government
Sf	square foot
SF_6	sulfur hexafluoride
TAC	toxic air contaminants

1 INTRODUCTION

This report documents the results of a greenhouse gas (GHG) assessment completed for the Thrifty Oil Project ("Project" or "Proposed Project"). The purpose of this analysis is to identify the air quality emissions associated with construction and operations of the Project as part of the Rialto Airport Environmental Impact Report (EIR) Addendum, located in the City of Rialto, California. This comparative analysis has been undertaken to analyze whether the proposed Project would result in any new or substantially more severe significant environmental impacts as compared to the conclusions discussed in the certified Final Program Environmental Impact Report (FEIR) for the Rialto Airport Specific Plan (November 1997) (Approved Project).

1.1 Project Location and Setting

The Project site is in the northern area of the City of Rialto in San Bernardino County, approximately one mile north of State Route (SR) 210; refer to **Exhibit 1, Regional Location Map**. The Project site is approximately 4.78 acres and regional access to the Project site is provided via SR-210. Local access to the Project site is provided via Lowell Street which is a two-lane undivided roadway, trending in an east-west direction and Locust Avenue which is a two-lane undivided roadway, trending in a north-south direction. The site is bordered by a recycling center to the north; Lowell Street and vacant land designated for General Industrial uses to the south; Locust Avenue, a truck trailer storage yard, and an industrial warehouse to the east; and a manufacturing facility to the west; refer to **Exhibit 2, Project Vicinity Map**.

1.2 Project Description

The Project proposes to develop a warehouse building with approximately 91,880 square feet (sf) of warehouse space and 9,000 sf of two-story office area for a total building area of 100,880 sf; refer to **Exhibit 3, Conceptual Site Plan**. The Project includes minimal production, use, storage, transport or disposal of hazardous materials for construction and operational activities. The Project is speculative in nature; the end user(s) and their hours of operation are unknown at this time. However, to be conservative, it has been assumed that the building would operate 24 hours per day/7 days per week for the Addendum's analyses referenced herein. The Project will not include refrigerated uses on-site.

The Project proposes two office spaces, one on the southwest corner of the warehouse building and one on the southeast corner of the warehouse building. The warehouse building would be designed to have a maximum building height of approximately 34.5'. The warehouse building would provide ingress and egress via 40' wide driveway and one 32' wide driveway on Lowell Street and one 50' wide driveway on Locust Avenue. Drive aisles along the northern, southern and western frontages would range from 26 to 40 feet in width to allow for onsite movement for workers and emergency vehicles alike. The building will be provided with 87 vehicle parking stalls, 12 dock doors, and one drive thru door on the north side of the building. Vehicle parking will be provided on the north, west, and south sides of the site, while all truck doors will be located on the north side of the building.

As noted above, Project site's ingress and egress would be provided via three driveways with two located on Lowell Street and one located on Locust Avenue. The 32-foot wide driveway located on the south side of the Project site would allow for right-in-right-out access onto Lowell Street for passenger vehicles and emergency vehicles. The 40-foot wide driveway located at the southwest corner of the Project site would allow for right-in and left-out secondary truck access onto Lowell Street. The 50-foot wide driveway

located at the northeast corner of the Project site would allow for left-in-right-out primary truck access onto Locust Avenue.

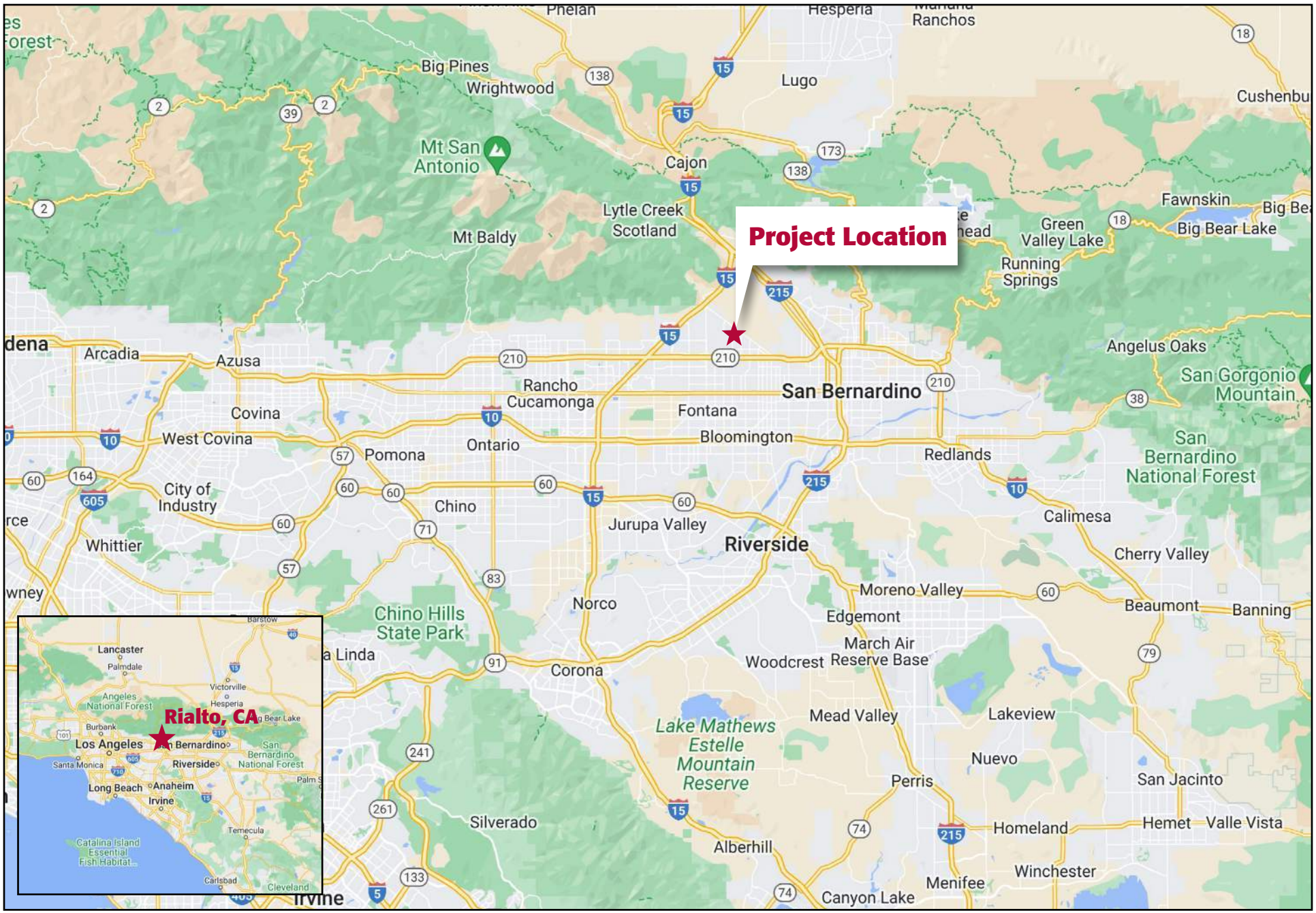
Construction is anticipated to occur over a duration of approximately nine months, commencing in the fourth quarter of 2022.

Parking

The Project is anticipated to provide 87 vehicle parking stalls. Additionally, the warehouse building includes 12 dock doors and one drive thru door located on the northern side of the building. All auto parking would be located on the parking will be provided on the north and west, and south sides of the site portions of the Project site.

Landscaping

The Project site would be landscaped in accordance with the landscape design guidelines set forth in Municipal Code Section 18.61.250 and Section 18.61.270, Landscaping would comply with City requirements for the efficient use of water in the landscape design plan.



Source: Google Maps, 2022

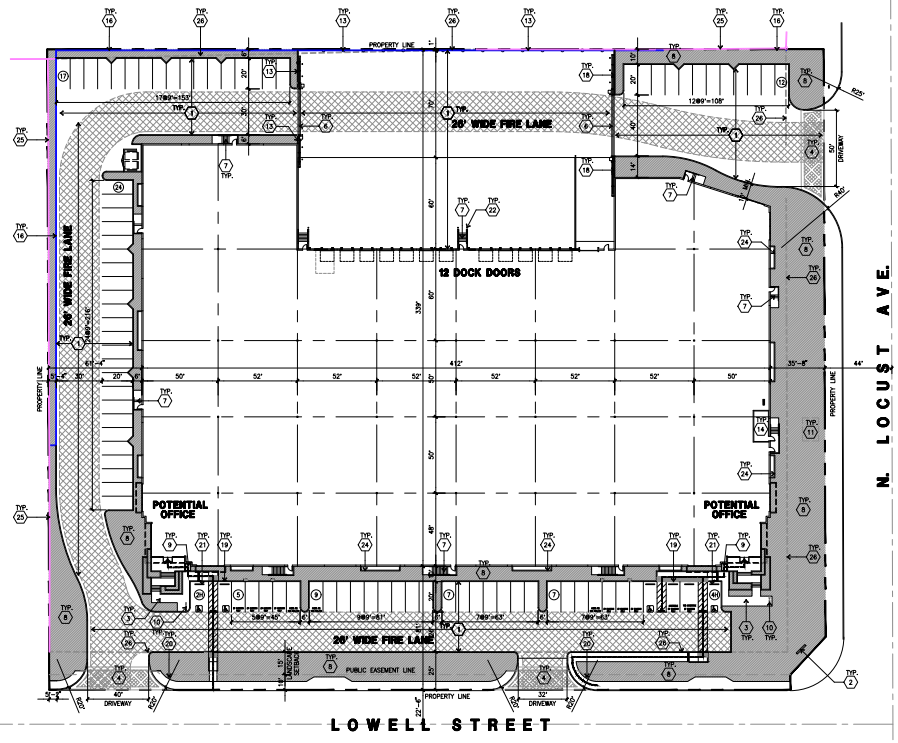
Exhibit 1: Regional Vicinity Map

Locust Avenue and Lowell Street Development Project



Source: Nearmap, 2022

Exhibit 2: Local Vicinity Map
Locust Avenue and Lowell Street Development Project



OVERALL SITE PLAN

SCALE: 1" = 30'-0"

VICINITY MAP



PROJECT DATA

SITE AREA	
In s.f. (Less pedestrian easement)	208,131 s.f.
In acres	4.78 ac
BUILDING AREA	
Office	4,500 s.f.
Office 2nd floor	4,500 s.f.
Warehouse	91,880 s.f.
TOTAL	100,880 s.f.
COVERAGE	48.5%
AUTO PARKING REQUIRED	
Office: 1/250 s.f.	36 stalls
Whse: 1st 10'k @ 1/1000 s.f.	10 stalls
w hse: above 10'k @ 1/2000 s.f.	41 stalls
TOTAL	87 stalls
AUTO PARKING PROVIDED	
Standard (9' x 20')	87 stalls
ZONING ORDINANCE FOR CITY	
Zoning Designation - Rialto Airport Specific Plan - I-GM (General Manufacturing)	
MAXIMUM BUILDING HEIGHT ALLOWED	
Height - 35' w ith 1:1 Setback Ratio	
MAXIMUM FLOOR AREA RATIO	
FAR - 3:1	

SETBACKS	Building	Landscape
Locust Ave/Front - 25'		15'
Low ell St/Side - 15'		15'
Rear - 0'-15'		0

PROPERTY OWNER

THRIFTY OIL CO.
13116 IMPERIAL HIGHWAY
SANTA FE SPRINGS CA 90670
TEL: 562-921-3581
ATTN: STEPHANE WANDEL

ADDRESS OF THE PROPERTY

TBD

ASSESSOR'S PARCEL NUMBER

0232-192-12-0-000

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF RIALTO, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL NO. 5 OF PARCEL MAP NO. 7173, IN BERNARDINO, STATE OF CALIFORNIA, AS PER INCLUSIVE OF PARCEL MAPS, IN THE OFFICE THE CITY OF RIALTO, COUNTY OF SAN MAP RECORDED IN BOOK 77 PAGES 64 TO 68 OF THE COUNTY RECORDER OF SAID COUNTY.

APN: 0239-192-12-0-000

ZONING

ZONING DESIGNATION – RIALTO AIRPORT SPECIFIC PLAN
– I-GM (GENERAL MANUFACTURING)

APPLICANT

THRIFTY OIL CO.
13116 IMPERIAL HIGHWAY
SANTA FE SPRINGS CA 90670
TEL: 562-921-3581
ATTN: STEPHANE WANDEL

APPLICANT'S REPRESENTATIVE

HPA, INC.
18831 BARDEEN AVE SUITE 100
IRVINE CA 92612
TEL: 949-862-2137
ATTN: JOSEPH KIM

SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONC. PAVEMENT.
2. FUTURE MONUMENT SIGN
3. CONCRETE WALKWAY
4. DRIVEWAY APRONS TO BE CONSTRUCTED PER "L" DRAWINGS.
5. 5'-6"X5'-6"X4" MIN. THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. SLOPE TO BE 1/4" - 1'2" MAX. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY W/ 1'20 MAX. AS REQ. BY CITY INSPECTOR.
6. PROVIDE METAL, MANUAL OPERATED GATES W/ KNOX-PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
7. EXTERIOR CONC. STAIR.
8. LANDSCAPE. SEE "L" DWGS.
9. ACCESSIBLE LIFT.
10. BIKE RACK.
11. APPROXIMATE LOCATION OF TRANSFORMER.
12. NOT USED.
13. 8'H WROUGHT IRON FENCE
14. ELECTRICAL ROOM
15. SITE LIGHT FIXTURE
16. PROPOSED RETAINING WALL.
17. TRASH ENCLOSURE PER CITY STANDARD.
18. 12'H CONCRETE TILT SCREEN WALL
19. HANDICAPPED PARKING STALL SIGN
20. HANDICAPPED ENTRY SIGN
21. PRE-CAST CONC. WHEEL STOP
22. CONC. FILLED GUARD POST "6 DIA. U.N.O. 42" H.
23. EMPLOYEE BREAK AREA WITH TRELLIS
24. NON-STRUCTURAL ARCHITECTURAL TREATMENT WITH SMOOTH PLASTER FINISH
25. EXISTING RETAINING WALL TO REMAIN.
26. EXISTING RETAINING WALL TO BE DEMOLISHED

SITE LEGEND

- LANDSCAPED AREA
- CONCRETE PAVING SEE "C" DRWGS. FOR THICKNESS
- STANDARD PARKING STALL (9' X 20')
- HANDICAP PARKING STALL (12' X 20')
- 26' FIRE LANE.
- PROPERTY LINE
- PATH OF TRAVEL

SITE PLAN GENERAL NOTES

1. THE SOILS REPORT PREPARED BY _____ SHOULD BE A PART OF THESE CONTRACT DOCUMENTS.
2. IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE.
3. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINE U.N.O.
4. SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES. DETAILS ON SHEET AD.1 ARE MINIMUM STANDARDS.
5. THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM, PRIOR TO INSTALLATION & AT LEAST 60 DAYS BEFORE BLDG. COMPLETION.
6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
9. SEE "C"DRAWINGS FOR FINISH GRADE ELEVATIONS.
10. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY W/ 1:20 MAX. SLOPE. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4". SEE "L" DRAWINGS FOR FINISH.
11. PROVIDE TWO FIRE HYDRANT ON THE SITE. FINAL LOCATION WILL DETERMINATE IN DURING SUBMITTAL.
12. PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.
13. CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND IRRIGATION OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
14. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
15. NOT USED
16. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
17. NOT USED.
18. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB
19. APPROVED CONCEPTUAL LANDSCAPE PLAN PRIOR TO GRADING PERMIT

OFFICIAL USE ONLY

Source: HPA Architecture

Exhibit 3: Site Plan
Locust Avenue and Lowell Street Development Project

2 ENVIRONMENTAL SETTING

2.1 Greenhouse Gases and Climate Change

Certain gases in the earth's atmosphere classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

The primary GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Examples of fluorinated gases include chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3); however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of GHGs exceeding natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the Earth's climate, known as global climate change or global warming.

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants (TACs), which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of a GHG molecule is dependent on multiple variables and cannot be pinpointed, more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms of carbon sequestration. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere.[1] Table 1: Description of Greenhouse Gases describes the primary GHGs attributed to global climate change, including their physical properties.

[1] Intergovernmental Panel on Climate Change, *Carbon and Other Biogeochemical Cycles. In: Climate Change 2013: The Physical Science Basis*, *Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2013. http://www.climatechange2013.org/ images/report/WG1AR5_ALL_FINAL.pdf.

Table 1: Description of Greenhouse Gases

Greenhouse Gas	Description
Carbon Dioxide (CO_2)	CO_2 is a colorless, odorless gas that is emitted naturally and through human activities. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, and industrial facilities. The atmospheric lifetime of CO_2 is variable because it is readily exchanged in the atmosphere. CO_2 is the most widely emitted GHG and is the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other GHGs.
Nitrous Oxide (N_2O)	N_2O is largely attributable to agricultural practices and soil management. Primary human-related sources of N_2O include agricultural soil management, sewage treatment, combustion of fossil fuels, and adipic and nitric acid production. N_2O is produced from biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years. The Global Warming Potential of N_2O is 298.
Methane (CH_4)	CH_4, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Methane is the major component of natural gas, about 87 percent by volume. Human-related sources include fossil fuel production, animal husbandry, rice cultivation, biomass burning, and waste management. Natural sources of CH_4 include wetlands, gas hydrates, termites, oceans, freshwater bodies, non-wetland soils, and wildfires. The atmospheric lifetime of CH_4 is about 12 years and the Global Warming Potential is 25.
Hydrofluorocarbons (HFCs)	HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is increasing, as the continued phase out of CFCs and HCFCs gains momentum. The 100-year Global Warming Potential of HFCs range from 124 for HFC-152 to 14,800 for HFC-23.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Global Warming Potentials range from 6,500 to 9,200.
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987. Global Warming Potentials for CFCs range from 3,800 to 14,400.
Sulfur Hexafluoride (SF_6)	SF_6 is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas. The Global Warming Potential of SF_6 is 23,900.
Hydrochlorofluorocarbons (HCFCs)	HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, HCFCs are subject to a consumption cap and gradual phase out. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The 100-year Global Warming Potentials of HCFCs range from 90 for HCFC-123 to 1,800 for HCFC-142b.
Nitrogen Trifluoride (NF_3)	NF_3 was added to Health and Safety Code section 38505(g)(7) as a GHG of concern. This gas is used in electronics manufacture for semiconductors and liquid crystal displays. It has a high global warming potential of 17,200.

Source: Compiled from U.S. EPA, *Overview of Greenhouse Gases*, April 11, 2018 (https://www.epa.gov/ghgemissions/overview-greenhouse-gases); U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016*, 2018; Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis*, 2007; National Research Council, Advancing the Science of Climate Change, 2010; U.S. EPA, *Methane and Nitrous Oxide Emission from Natural Sources*, April 2010.

3 REGULATORY SETTING

3.1 Federal

To date, national standards have not been established for nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

U.S. Environmental Protection Agency Endangerment Finding

The U.S. Environmental Protection Agency (EPA) authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Federal Clean Air Act (FCAA) and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing FCAA and the EPA's assessment of the scientific evidence that form the basis for the EPA's regulatory actions.

Federal Vehicle Standards

In response to the U.S. Supreme Court ruling discussed above, Executive Order 13432 was issued in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, an Executive Memorandum was issued directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction,

clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency.

In 2018, the President and the EPA stated their intent to halt various federal regulatory activities to reduce GHG emission, including the phase two program. California and other states have stated their intent to challenge federal actions that would delay or eliminate GHG reduction measures and have committed to cooperating with other countries to implement global climate change initiatives. On September 27, 2019, the EPA and the NHTSA published the "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program." (84 Fed. Reg. 51,310 (Sept. 27, 2019.) The Part One Rule revokes California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. On March 31, 2020, the EPA and NHTSA finalized rulemaking for SAFE Part Two sets CO_2 emissions standards and corporate average fuel economy (CAFE) standards for passenger vehicles and light duty trucks, covering model years 2021-2026. The current U.S. EPA administration has repealed SAFE Rule Part One, effective January 28, 2022 and is reconsidering Part Two pursuant to Presidential Executive Order 13390 issued on January 20, 2021 as discussed below.

Presidential Executive Orders 13990 and 14008

On January 20, 2021, President Biden issued Executive Order 13990, "Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis". Executive Order 13990 directs Federal agencies to immediately review and take action to address the promulgation of Federal regulations and other actions that conflict with these important national objectives and to immediately commence work to confront the climate crisis. Executive Order 13990 directs the Council on Environmental Quality (CEQ) to review CEQ's 2020 regulations implementing the procedural requirements of the National Environmental Policy Act (NEPA) and identify necessary changes or actions to meet the objectives of Executive Order 13990.

Executive Order 13390 also directs the EPA to consider whether to propose suspending, revising, or rescinding the standards previously revised under the "The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks," promulgated in April 2020.

On January 27, 2021, President Biden signed Executive Order 14008, "Tackling the Climate Crisis at Home and Abroad," to declare the Administration's policy to move quickly to build resilience, both at home and abroad, against the impacts of climate change that are already manifest and will continue to intensify according to current trajectories. In line with these Executive Order directives, CEQ is reviewing the 2020 NEPA regulations and plans to publish a notice of proposed rulemaking (NPRM) to identify necessary revisions in order to comply with the law; meet the environmental, climate change, and environmental justice objectives of Executive Orders 13990 and 14008; ensure full and fair public involvement in the NEPA process; provide regulatory certainty to stakeholders; and promote better decision making consistent with NEPA's statutory requirements. This phase 1 rulemaking will propose a narrow set of changes to the 2020 NEPA regulations to address these goals.

3.2 State of California

California Air Resources Board

The California Air Resources Board (CARB) is responsible for the coordination and oversight of State and local air pollution control programs in California. Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness about climate change and its potential for severe long-term adverse environmental, social, and economic effects. California is a significant emitter of CO_2 equivalents (CO_2e) in the world and produced 459 million gross metric tons of CO_2e in 2013. In the State, the transportation sector is the largest emitter of GHGs, followed by industrial operations such as manufacturing and oil and gas extraction.

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation, such as the landmark Assembly Bill (AB) 32, *California Global Warming Solutions Act of 2006*, was specifically enacted to address GHG emissions. Other legislation, such as Title 24 building efficiency standards and Title 20 appliance energy standards, were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

AB 32 instructs the CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. AB 32 also directed CARB to set a GHG emissions limit based on 1990 levels, to be achieved by 2020. It set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

CARB Scoping Plan

CARB adopted the Scoping Plan to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that would be adopted to reduce California's GHG emissions. CARB determined that achieving the 1990 emissions level would require a reduction of GHG emissions of approximately 29 percent below what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as "business-as-usual").[2] The Scoping Plan evaluates opportunities for sector-specific reductions, integrates early actions and additional GHG reduction measures by both CARB and the State's Climate Action Team, identifies additional measures to be pursued as regulations, and outlines the adopted role of a cap-and-trade program.[3] Additional development of these measures and adoption of the appropriate regulations occurred through the end of 2013. Key elements of the Scoping Plan include:

[2] CARB defines business-as-usual (BAU) in its Scoping Plan as emissions levels that would occur if California continued to grow and add new GHG emissions but did not adopt any measures to reduce emissions. Projections for each emission-generating sector were compiled and used to estimate emissions for 2020 based on 2002–2004 emissions intensities. Under CARB's definition of BAU, new growth is assumed to have the same carbon intensities as was typical from 2002 through 2004.

[3] The Climate Action Team, led by the secretary of the California Environmental Protection Agency, is a group of State agency secretaries and heads of agencies, boards, and departments. Team members work to coordinate statewide efforts to implement global warming emissions reduction programs and the State's Climate Adaptation Strategy.

- Expanding and strengthening existing energy efficiency programs, as well as building and appliance standards.
- Achieving a statewide renewables energy mix of 33 percent by 2020.
- Developing a California cap-and-trade program that links with other programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions (adopted in 2011).
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets (several sustainable community strategies have been adopted).
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, heavy-duty truck measures, the Low Carbon Fuel Standard (amendments to the Pavley Standard adopted 2009; Advanced Clean Car standard adopted 2012), goods movement measures, and the Low Carbon Fuel Standard (adopted 2009).
- Creating targeted fees, including a public goods charge on water use, fees on gasses with high global warming potential, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.
- The California Sustainable Freight Action Plan was developed in 2016 and provides a vision for California's transition to a more efficient, more economically competitive, and less polluting freight transport system. This transition of California's freight transport system is essential to supporting the State's economic development in coming decades while reducing pollution.
- CARB's Mobile Source Strategy demonstrates how the State can simultaneously meet air quality standards, achieve GHG emission reduction targets, decrease health risk from transportation emissions, and reduce petroleum consumption over the next fifteen years. The mobile Source Strategy includes increasing ZEV buses and trucks.

In 2012, CARB released revised estimates of the expected 2020 emissions reductions. The revised analysis relied on emissions projections updated in light of current economic forecasts that accounted for the economic downturn since 2008, reduction measures already approved and put in place relating to future fuel and energy demand, and other factors. This update reduced the projected 2020 emissions from 596 million metric tons of CO_2e ($MMTCO_2e$) to 545 $MMTCO_2e$. The reduction in forecasted 2020 emissions means that the revised business-as-usual reduction necessary to achieve AB 32's goal of reaching 1990 levels by 2020 is now 21.7 percent, down from 29 percent. CARB also provided a lower 2020 inventory forecast that incorporated State-led GHG emissions reduction measures already in place. When this lower forecast is considered, the necessary reduction from business-as-usual needed to achieve the goals of AB 32 is approximately 16 percent.

CARB adopted the first major update to the Scoping Plan on May 22, 2014. The updated Scoping Plan summarizes the most recent science related to climate change, including anticipated impacts to California and the levels of GHG emissions reductions necessary to likely avoid risking irreparable damage. It identifies the actions California has already taken to reduce GHG emissions and focuses on areas where further reductions could be achieved to help meet the 2020 target established by AB 32.

In 2016, the Legislature passed Senate Bill (SB) 32, which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the Legislature passed companion legislation, AB 197, which provides additional direction for developing the Scoping Plan. On December 14, 2017 CARB adopted a

second update to the Scoping Plan.[4] The 2017 Scoping Plan details how the State will reduce GHG emissions to meet the 2030 target set by Executive Order B-30-15 and codified by SB 32. Other objectives listed in the 2017 Scoping plan are to provide direct GHG emissions reductions; support climate investment in disadvantaged communities; and support the Clean Power Plan and other Federal actions.

Senate Bill 32 (California Global Warming Solutions Act of 2006: Emissions Limit)

Signed into law in September 2016, SB 32 codifies the 2030 GHG reduction target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

SB 375 (The Sustainable Communities and Climate Protection Act of 2008)

Signed into law on September 30, 2008, SB 375 provides a process to coordinate land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction goals established by AB 32. SB 375 requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, aligns planning for transportation and housing, and creates specified incentives for the implementation of the strategies.

AB 1493 (Pavley Regulations and Fuel Efficiency Standards)

AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011. The regulations establish one set of emission standards for model years 2009–2016 and a second set of emissions standards for model years 2017 to 2025. By 2025, when all rules will be fully implemented, new automobiles will emit 34 percent fewer CO_2e emissions and 75 percent fewer smog-forming emissions. In 2019 the EPA published the SAFE Rule that revoked California's waiver. However, the EPA is currently reconsidering the SAFE rule pursuant to Presidential Executive Order 13390.

SB 1368 (Emission Performance Standards)

SB 1368 is the companion bill of AB 32, which directs the California Public Utilities Commission (CPUC) to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 limits carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. The new law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. The CPUC adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, for 1,100 pounds of CO_2 per megawatt-hour.

[4] California Air Resources Board, *California's 2017 Climate Change Scoping Plan,* https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf, accessed May 25, 2022.

SB 1078 and SBX1-2 (Renewable Electricity Standards)

SB 1078 requires California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Executive Order S-21-09 also directed CARB to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020. CARB approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23. SBX1-2, which codified the 33 percent by 2020 goal.

SB 350 (Clean Energy and Pollution Reduction Act of 2015)

Signed into law on October 7, 2015, SB 350 implements the goals of Executive Order B-30-15. The objectives of SB 350 are to increase the procurement of electricity from renewable sources from 33 percent to 50 percent (with interim targets of 40 percent by 2024, and 25 percent by 2027) and to double the energy efficiency savings in electricity and natural gas end uses of retail customers through energy efficiency and conservation. SB 350 also reorganizes the Independent System Operator to develop more regional electricity transmission markets and improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

AB 398 (Market-Based Compliance Mechanisms)

Signed on July 25, 2017, AB 398 extended the duration of the Cap-and-Trade program from 2020 to 2030. AB 398 required CARB to update the Scoping Plan and for all GHG rules and regulations adopted by the State. It also designated CARB as the statewide regulatory body responsible for ensuring that California meets its statewide carbon pollution reduction targets, while retaining local air districts' responsibility and authority to curb toxic air contaminants and criteria pollutants from local sources that severely impact public health. AB 398 also decreased free carbon allowances over 40 percent by 2030 and prioritized Cap-and-Trade spending to various programs including reducing diesel emissions in impacted communities.

SB 150 (Regional Transportation Plans)

Signed on October 10, 2017, SB 150 aligns local and regional GHG reduction targets with State targets (i.e., 40 percent below their 1990 levels by 2030). SB 150 creates a process to include communities in discussions on how to monitor their regions' progress on meeting these goals. The bill also requires the CARB to regularly report on that progress, as well as on the successes and the challenges regions experience associated with achieving their targets. SB 150 provides for accounting of climate change efforts and GHG reductions and identify effective reduction strategies.

SB 100 (California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases)

Signed into Law in September 2018, SB 100 increased California's renewable electricity portfolio from 50 to 60 percent by 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045.

CARB Advanced Clean Truck Regulation

CARB adopted the Advanced Clean Truck Regulation in June 2020 requiring truck manufacturers to transition from diesel trucks and vans to electric zero-emission trucks beginning in 2024. By 2045, every new truck sold in California is required to be zero-emission. This rule directly addresses disproportionate risks and health and pollution burdens and puts California on the path for an all zero-emission short-haul drayage fleet in ports and railyards by 2035, and zero-emission "last-mile" delivery trucks and vans by 2040. The Advanced Clean Truck Regulation accelerates the transition of zero-emission medium-and heavy-duty vehicles from Class 2b to Class 8. The regulation has two components including a manufacturer sales requirement, and a reporting requirement:

- Zero-Emission Truck Sales: Manufacturers who certify Class 2b through 8 chassis or complete vehicles with combustion engines are required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales need to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 straight truck sales, and 40 percent of truck tractor sales.

- Company and Fleet Reporting: Large employers including retailers, manufacturers, brokers and others would be required to report information about shipments and shuttle services. Fleet owners, with 50 or more trucks, would be required to report about their existing fleet operations. This information would help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs using executive orders. Although not regulatory, they set the tone for the State and guide the actions of state agencies.

Executive Order S-3-05. Executive Order S-3-05 was issued on June 1, 2005, which established the following GHG emissions reduction targets:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07. Issued on January 18, 2007, Executive Order S 01-07 mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. The executive order established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. CARB adopted the LCFS on April 23, 2009.

Executive Order S-13-08. Issued on November 14, 2008, Executive Order S-13-08 facilitated the California Natural Resources Agency development of the 2009 California Climate Adaptation Strategy. Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order S-14-08. Issued on November 17, 2008, Executive Order S-14-08 expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. CARB adopted the Renewable Electricity Standard on September 23, 2010, which requires 33 percent renewable energy by 2020 for most publicly owned electricity retailers.

Executive Order S-21-09. Issued on July 17, 2009, Executive Order S-21-09 directs CARB to adopt regulations to increase California's RPS to 33 percent by 2020. This builds upon SB 1078 (2002), which established the California RPS program, requiring 20 percent renewable energy by 2017, and SB 107 (2006), which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Executive Order B-30-15. Issued on April 29, 2015, Executive Order B-30-15 established a California GHG reduction target of 40 percent below 1990 levels by 2030 and directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of CO_2e ($MMTCO_2e$). The 2030 target acts as an interim goal on the way to achieving reductions of 80 percent below 1990 levels by 2050, a goal set by Executive Order S-3-05. The executive order also requires the State's climate adaptation plan to be updated every three years and for the State to continue its climate change research program, among other provisions. With the enactment of SB 32 in 2016, the Legislature codified the goal of reducing GHG emissions by 2030 to 40 percent below 1990 levels.

Executive Order B-55-18. Issued on September 10, 2018, Executive Order B-55-18 establishes a goal to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. This goal is in addition to the existing statewide targets of reducing GHG emissions. The executive order requires CARB to work with relevant state agencies to develop a framework for implementing this goal. It also requires CARB to update the Scoping Plan to identify and recommend measures to achieve carbon neutrality. The executive order also requires state agencies to develop sequestration targets in the Natural and Working Lands Climate Change Implementation Plan.

Executive Order N-79-20. Signed in September 2020, Executive Order N-79-20 establishes as a goal that where feasible, all new passenger cars and trucks, as well as all drayage/cargo trucks and off-road vehicles and equipment, sold in California, will be zero-emission by 2035. The executive order sets a similar goal requiring that all medium and heavy-duty vehicles will be zero-emission by 2045 where feasible. It also directs CARB to develop and propose rulemaking for passenger vehicles and trucks, medium-and heavy-duty fleets where feasible, drayage trucks, and off-road vehicles and equipment "requiring increasing volumes" of new zero emission vehicles (ZEVs) "towards the target of 100 percent." The executive order directs the California Environmental Protection Agency, the California Geologic Energy Management Division (CalGEM), and the California Natural Resources Agency to transition and repurpose oil production facilities with a goal toward meeting carbon neutrality by 2045. Executive Order N-79-20 builds upon the CARB Advanced Clean Trucks regulation, which was adopted by CARB in July 2020.

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 Appliance Efficiency Regulations. The appliance efficiency regulations (California Code of Regulations [CCR] Title 20, Sections 1601-1608) include standards for new appliances. Twenty-three categories of appliances are included in the scope of these regulations. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

Title 24 Building Energy Efficiency Standards. California's Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR Title 24, Part 6) was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2016 Building Energy Efficiency Standards approved on January 19, 2016 went into effect on January 1, 2017. The 2019 Building Energy Efficiency Standards were adopted on May 9, 2018 and went into effect on January 1, 2020. Under the 2019 standards, homes will use about 53 percent less energy and nonresidential buildings will use about 30 percent less energy than buildings under the 2016 standards.

On August 11, 2021, the CEC adopted the 2022 Energy Code. In December, it was approved by the California Building Standards Commission for inclusion into the California Building Standards Code. Among other updates like strengthened ventilation standards for gas cooking appliances, the 2022 Energy Code includes updated standards such as new electric heat pump requirements for residential uses, schools, offices, banks, libraries, retail, and grocery stores; the promotion of electric-ready requirements for new homes including the addition of circuitry for electric appliances, battery storage panels, and dedicated infrastructure to allow for the conversion from natural gas to electricity; and the expansion of solar photovoltaic and battery storage standards to additional land uses including high-rise multifamily residences, hotels and motels, tenant spaces, offices, (including medical offices and clinics), retail and grocery stores, restaurants, schools, and civic uses (including theaters auditoriums, and convention centers). Projects whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 Energy Code.[5]

Title 24 California Green Building Standards Code. The California Green Building Standards Code (CCR Title 24, Part 11 code) commonly referred to as the CALGreen Code, is a statewide mandatory construction code developed and adopted by the California Building Standards Commission and the Department of Housing and Community Development. The CALGreen standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency/conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code went into effect January 1, 2017. Updates to the 2016 CALGreen Code took take effect on January

[5] California Energy Commission, *2022 Building Energy Efficiency Standards*, https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency, accessed May 2022.

1, 2020 (2019 CALGreen). The 2019 CALGreen standards will continue to improve upon the existing standards for new construction of, and additions and alterations to, residential and nonresidential buildings.

3.3 Regional

South Coast Air Quality Management District Thresholds

The South Coast Air Quality Management District (SCAQMD) formed a GHG California Environmental Quality Act (CEQA) Significance Threshold Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. As of the last Working Group meeting (Meeting #15) held in September 2010, the SCAQMD is proposing to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency.

With the tiered approach, the Project is compared with the requirements of each tier sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt from SB 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold. The SCAQMD has adopted a threshold of 10,000 metric tons of CO_2e ($MTCO_2e$) per year for industrial projects and a 3,000 $MTCO_2e$ threshold was proposed for non-industrial projects but has not been adopted. During Working Group Meeting #7 it was explained that this threshold was derived using a 90 percent capture rate of a large sampling of industrial facilities. During Meeting #8, the Working Group defined industrial uses as production, manufacturing, and fabrication activities or storage and distribution (e.g., warehouse, transfer facility, etc.). The Working Group indicated that the 10,000 $MTCO_2e$ per year threshold applies to both emissions from construction and operational phases plus indirect emissions (electricity, water use, etc.). The SCAQMD concluded that projects with emissions less than the screening threshold would not result in a significant cumulative impact.

Southern California Association of Governments

On September 3, 2020, SCAG's Regional Council adopted Connect SoCal (2020 - 2045 Regional Transportation Plan/Sustainable Communities Strategy [2020 RTP/SCS]). The RTP/SCS charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably. The strategy was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The RTP/SCS is a long-range vision plan that balances future mobility and housing needs with economic, environmental, and public health goals. The SCAG region strives toward sustainability through integrated land use and transportation planning. The SCAG region must achieve specific federal air quality standards and is required by state law to lower regional GHG emissions.

3.4 Local

City of Rialto General Plan

Chapter 2, Managing Our Land Supply of the City's General Plan identifies goals related to greenhouse gas emissions within the City. Goals and policies that relate to air quality impacts include the following:

Goal 2-30: Incorporate green building and other sustainable building practices into development projects.

Policy 2-30.1: Explore and adopt the use of green building standards and Leadership in Energy and Environmental Design (LEED) or similar in both private and public projects.

Policy 2-30.2: Promote sustainable building practices that go beyond the requirements of Title 24 of the California Administrative Code, and encourage energy-efficient design elements, as appropriate.

Goal 2-31: Conserve energy resources.

Policy 2-31.1: Require the incorporation of energy conservation features into the design of all new construction and site development activities.

Goal 2-34: Achieve waste recycling levels that meet or exceed State mandates. Achieve maximum waste recycling in all sectors of the community: residential, commercial, industrial, institutional, and construction.

Policy 2-34.2: Utilize source reduction, recycling, and other appropriate measures to reduce the amount of solid waste generated in Rialto that is disposed of in landfills.

Policy 2-31.3: Encourage the maximum diversion from landfills of construction and demolition materials through recycling and reuse programs.

Goal 2-38: Mitigate against climate change.

Policy 2-38.1: Consult with State agencies, SCAG, and the San Bernardino Associated Governments (SANBAG) to implement AB32 and SB375 by utilizing incentives to facilitate infill and transit-oriented development.

Policy 2-38.2: Encourage development of transit-oriented and infill development, and encourage a mix of uses that foster walking and alternative transportation in Downtown and along Foothill Boulevard.

Policy 2-38.3: Provide enhanced bicycling and walking infrastructure, and support public transit, including public bus service, the Metrolink, and the potential for Bus Rapid Transit (BRT).

City of Rialto Climate Action Plan

The City of Rialto Climate Action Plan (Rialto CAP) [6]outlines goals to reduce energy consumption and GHG emissions to become a more sustainable community. Goals include:

- Prevent truck routes from disproportionately impacting disadvantaged communities;
- Create a clean air checklist for new development of sensitive land uses;

[6] Rialto Climate Adaption Plan. https://www.yourrialto.com/DocumentCenter/View/1761/Rialto-Climate-Adaptation-Draft-Plan-July-2021.

- Increase use of low-emission and electric vehicles where feasible;
- Adopt building and maintenance standards that reflect the regional best practices in reducing urban heat island effect.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 Thresholds and Significance Criteria

Addressing GHG emissions generation impacts requires an agency to determine what constitutes a significant impact. The amendments to the CEQA Guidelines specifically allow lead agencies to determine thresholds of significance that illustrate the extent of an impact and are a basis from which to apply mitigation measures. This means that each agency is left to determine whether a project's GHG emissions will have a "significant" impact on the environment. The guidelines direct that agencies are to use "careful judgment" and "make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" the project's GHG emissions[7].

Based upon the criteria derived from Appendix G of the CEQA Guidelines, a project normally would have a significant effect on the environment if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance; or
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

South Coast Air Quality Management District Thresholds

On December 5, 2008, the SCAQMD Governing Board adopted a 10,000 $MTCO_2e$ industrial threshold for projects where the SCAQMD is lead agency. During the GHG CEQA Significance Threshold Working Group Meeting #15, the SCAQMD noted that it was considering extending the industrial GHG significance threshold for use by all lead agencies. This working group was formed to assist SCAQMD's efforts to develop a GHG significance threshold and is composed of a wide variety of stakeholders including the State Office of Planning and Research, CARB, the Attorney General's Office, a variety of city and county planning departments in the SCAB, various utilities such as sanitation and power companies throughout the SCAB, industry groups, and environmental and professional organizations. However, the SCAQMD has not announced when staff is expecting to present GHG thresholds for land use projects where the SCAQMD is not the lead agency to the governing board. During Meeting #8, the Working Group defined industrial uses as production, manufacturing, and fabrication activities or storage and distribution (e.g., warehouse, transfer facility, etc.). Additionally, the SCAQMD GHG Significance Threshold Stakeholder Working Group has specified that a warehouse is considered to be an industrial project.[8] Furthermore, the Working Group indicated that the 10,000 $MTCO_2e$ per year threshold applies to both emissions from construction and operational phases plus indirect emissions (electricity, water use, etc.).

[7] 14 California Code of Regulations, Section 15064.4a

[8] South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #8*, 2009.

4.2 Methodology

The Project's construction and operational emissions were calculated using the California Emissions Estimator Model version 2020.4.0 (CalEEMod). Details of the modeling assumptions and emission factors are provided in Appendix A: Greenhouse Gas Emissions Data. For construction, CalEEMod calculates emissions from off-road equipment usage and on-road vehicle travel associated with haul, delivery, and construction worker trips. GHG emissions during construction were forecasted based on the proposed construction schedule and applying the mobile-source and fugitive dust emissions factors derived from CalEEMod. The Project's construction-related GHG emissions would be generated from off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. The Project's operations-related GHG emissions would be generated by vehicular traffic, area sources (e.g. landscaping maintenance, consumer products), electrical generation, natural gas consumption, water supply and wastewater treatment, and solid waste.

5 POTENTIAL IMPACTS AND MITIGATION

5.1 Greenhouse Gas Emissions

Threshold 5.1 Would the Project generate GHG emissions, either directly or indirectly, that could have a significant impact on the environment?

Short-Term Construction Greenhouse Gas Emissions

The Project would result in direct emissions of GHGs from construction. The approximate quantity of daily GHG emissions generated by construction equipment utilized to build the Project is depicted in Table 2: Construction-Related Greenhouse Gas Emissions.

Table 2: Construction-Related Greenhouse Gas Emissions

Category	$MTCO_2e$
2022 Construction	134.10
2023 Construction	229.31
Total Construction Emissions	363.41
30-Year Amortized Construction	12.11

Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.

As shown, the Project would result in the generation of approximately 363.41 $MTCO_2e$ over the course of construction. Construction GHG emissions are typically summed and amortized over a 30year period, then added to the operational emissions.[9] The amortized Project construction emissions would be approximately 12.11 $MTCO_2e$ per year. Once construction is complete, the generation of these GHG emissions would cease.

Long-Term Operational Greenhouse Gas Emissions

Operational or long-term emissions occur over the life of the Project. GHG emissions would result from direct emissions such as Project generated vehicular traffic, on-site combustion of natural gas, and operation of any landscaping equipment. Operational GHG emissions would also result from indirect sources, such as off-site generation of electrical power, the energy required to convey water to, and wastewater from the Project, the emissions associated with solid waste generated from the Project, and any fugitive refrigerants from air conditioning or refrigerators.

Total GHG emissions associated with the Project are summarized in Table 3: Project Greenhouse Gas Emissions. As shown in Table 3, the Project would generate approximately 1,483.35 $MTCO_2e$ annually from both construction and operations and the Project. Project-related GHG emissions would not exceed the 10,000 $MTCO_2e$ per year threshold and impacts would be less than significant.

[9] Amortization period is based on the standard 30-year assumption of the South Coast Air Quality Management District (South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13,* August 26, 2009).

Table 3: Project Greenhouse Gas Emissions	
Emissions Source	**CO_2e Emissions, metric tons/year**
Area	<0.01
Energy	64.31
Mobile	1,226.48
Energy for Cargo Handling Equipment	46.73
Waste	47.64
Water	86.07
Subtotal Total	1,471.24
Amortized Construction Emissions	12.11
Total Annual Project GHG Emissions	**1,483.35**
Threshold	10,000
Exceeds Threshold?	**No**
Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.	

Conclusion

Project-related GHG emissions would not exceed the 10,000 $MTCO_2e$ per year threshold and impacts would be less than significant. Thus, the impact would not be cumulatively considerable.

The Rialto Airport Specific Plan EIR did not evaluate the effects of greenhouse gas (GHG) emissions. At the time of approval in 1997, the contribution of GHG emissions to climate change was not a prominent issue of concern. On March 18, 2010, amendments to the State CEQA Guidelines took effect which set forth requirements for the analysis of GHG emissions under CEQA. Since the EIR has already been certified, the determination of whether GHG emissions and climate change needs to be analyzed for this specific development is governed by the law on supplemental or subsequent EIRs (PRC § 21166 and CEQA Guidelines §§ 15162 and 15163). GHG emissions and climate change are not required to be analyzed under those standards unless it constitutes "new information of substantial importance, which was not known and could not have been known at the time" the Rialto Airport Specific Plan EIR was approved (State CEQA Guidelines § 15162(a)(3)).

The issue of GHG emissions and climate change impacts is not new information that was not known or could not have been known at the time of the certification of the Rialto Airport Specific Plan EIR. The USEPA publishes an annual GHG inventory (Inventory of U.S. Greenhouse Gas Emissions and Sinks),[10] which tracks the national trend in GHG emissions and removals back to 1990.

Therefore, the fact that GHG emissions could have a significant adverse environmental impact was known at the time the Specific Plan was approved and the Rialto Airport Specific Plan EIR was certified. Consistent with the statutory language, the courts have repeatedly held that new information that "was known" or "could have been known with the exercise of reasonable diligence" at the time of EIR certification does not trigger the supplemental EIR standard (Citizens for Responsible Equitable Environmental Development v. City of San Diego (2011) 196 Cal.App.4th 515, 532 ("CREED II"); ALARM, supra, 12 Cal.App.4th at 1800–1803).

[10] A greenhouse gas "sink" is a process, activity, or mechanism that absorbs more greenhouse gases than it releases.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less than significant impact.

5.2 Greenhouse Gas Reduction Plan Compliance

Threshold 5.2 Would the Project conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions?

SCAG RTP/SCS Consistency

On September 3, 2020, SCAG's Regional Council adopted Connect SoCal (*2020 - 2045 Regional Transportation Plan/Sustainable Communities Strategy* [2020 RTP/SCS]). The RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The RTP/SCS embodies a collective vision for the region's future and is developed with input from local governments, county transportation commissions, tribal governments, nonprofit organizations, businesses, and local stakeholders in the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. SCAG's RTP/SCS establishes GHG emissions goals for automobiles and light-duty trucks for 2020 and 2035 as well as an overall GHG target for the Project region consistent with both the target date of AB 32 and the post-2020 GHG reduction goals of Executive Orders 5-03-05 and B-30-15.

The RTP/SCS contains over 4,000 transportation projects, ranging from highway improvements, railroad grade separations, bicycle lanes, new transit hubs and replacement bridges. These future investments were included in county plans developed by the six county transportation commissions and seek to reduce traffic bottlenecks, improve the efficiency of the region's network, and expand mobility choices for everyone. The RTP/SCS is an important planning document for the region, allowing project sponsors to qualify for federal funding.

The plan accounts for operations and maintenance costs to ensure reliability, longevity, and cost effectiveness. The RTP/SCS is also supported by a combination of transportation and land use strategies that help the region achieve state GHG emissions reduction goals and Federal Clean Air Act (FCAA) requirements, preserve open space areas, improve public health and roadway safety, support our vital goods movement industry, and utilize resources more efficiently. GHG emissions resulting from development-related mobile sources are the most potent source of emissions, and therefore Project comparison to the RTP/SCS is an appropriate indicator of whether the Project would inhibit the post-2020 GHG reduction goals promulgated by the state. The Project's consistency with the RTP/SCS goals is analyzed in detail in Table 4: Regional Transportation Plan/Sustainable Communities Strategy Consistency.

Table 4: Regional Transportation Plan/Sustainable Communities Strategy Consistency

SCAG Goals		Compliance	
GOAL 1:	Encourage regional economic prosperity and global competitiveness.	N/A:	This is not a project-specific policy and is therefore not applicable. The Project would redevelop the site which would contribute to regional economic prosperity.
GOAL 2:	Improve mobility, accessibility, reliability, and travel safety for people and goods.	Consistent:	Although this Project is not a transportation improvement project, the Project is located near existing transit route on Locust Avenue.

Table 4: Regional Transportation Plan/Sustainable Communities Strategy Consistency

SCAG Goals		Compliance	
GOAL 3:	Enhance the preservation, security, and resilience of the regional transportation system.	N/A:	This is not a transportation improvement project and is therefore not applicable.
GOAL 4:	Increase person and goods movement and travel choices within the transportation system.	N/A:	This is not a transportation improvement project and is therefore not applicable. However, the Project includes a warehouse use that would support goods movement.
GOAL 5:	Reduce greenhouse gas emissions and improve air quality.	Consistent:	The Project is located within an urban area in proximity to existing truck routes and freeways. Location of the project within a developed area would reduce trip lengths, which would reduce GHG and air quality emissions.
GOAL 6:	Support healthy and equitable communities	Consistent:	The Project does not exceed the SCAQMD's regional or localized thresholds. Based on the Friant Ranch decision, projects that do not exceed the SCAQMD's LSTs would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and result in no criteria pollutant health impacts.
GOAL 7:	Adapt to a changing climate and support an integrated regional development pattern and transportation network.	N/A:	This is not a project-specific policy and is therefore not applicable.
GOAL 8:	Leverage new transportation technologies and data-driven solutions that result in more efficient travel.	N/A:	This is not a project-specific policy and is therefore not applicable.
GOAL 9:	Encourage development of diverse housing types in areas that are supported by multiple transportation options.	N/A:	The Project involves development of a warehouse and does not include housing.
GOAL 10:	Promote conservation of natural and agricultural lands and restoration of habitats.	N/A:	The Project is not located on agricultural lands.

Source: Southern California Association of Governments, *Connect SoCal – The Regional Transportation Plan/Sustainable Communities Strategy*, 2020.

Compliance with applicable State standards would ensure consistency with State and regional GHG reduction planning efforts. The goals stated in the RTP/SCS were used to determine consistency with the planning efforts previously stated. As shown in Table 4, the proposed Project would be consistent with the stated goals of the RTP/SCS. Therefore, the proposed Project would not result in any significant impacts or interfere with SCAG's ability to achieve the region's post-2020 mobile source GHG reduction targets.

Consistency with the CARB Scoping Plan

The California State Legislature adopted AB 32 in 2006. AB 32 focuses on reducing GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) to 1990 levels by the year 2020. Pursuant to the requirements in AB 32, CARB adopted the *Climate Change Scoping Plan* (Scoping Plan) in 2008, which outlines actions recommended to obtain that goal. The Scoping Plan provides a range of GHG reduction actions that include direct regulations,

alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as the cap-and-trade program, and an AB 32 implementation fee to fund the program. The 2017 Scoping Plan Update identifies additional GHG reduction measures necessary to achieve the 2030 target. These measures build upon those identified in the first update to the Scoping Plan in 2013. Although a number of these measures are currently established as policies and measures, some measures have not yet been formally proposed or adopted. It is expected that these actions to reduce GHG emissions will be adopted as required to achieve statewide GHG emissions targets.

As shown in Table 5: Project Consistency with Applicable CARB Scoping Plan Measures, the Project is consistent with most of the strategies, while others are not applicable to the Project. As such, impacts related to consistency with the Scoping Plan would be less than significant.

Table 5: Project Consistency with Applicable CARB Scoping Plan Measures

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
Transportation	California Cap-and-Trade Program Linked to Western Climate Initiative	Regulation for the California Cap on GHG Emissions and Market-Based Compliance Mechanism October 20, 2015 (CCR 95800)	**Consistent.** The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers. However, the regulation indirectly affects people who use the products and services produced by these industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period.
	California Light-Duty Vehicle GHG Standards	Pavley I 2005 Regulations to Control GHG Emissions from Motor Vehicles Pavley I 2005 Regulations to Control GHG Emissions from Motor Vehicles	**Consistent**. This measure applies to all new vehicles starting with model year 2012. The Project would not conflict with its implementation as it would apply to all new passenger vehicles purchased in California. Passenger vehicles, model year 2012 and later, associated with construction and operation of the Project would be required to comply with the Pavley emissions standards.
		2012 LEV III California GHG and Criteria Pollutant Exhaust and Evaporative Emission Standards	**Consistent.** The LEV III amendments provide reductions from new vehicles sold in California between 2017 and 2025. Passenger vehicles associated with the site would comply with LEV III standards.
	Low Carbon Fuel Standard	2009 readopted in 2015. Regulations to Achieve GHG Emission Reductions Subarticle 7. Low Carbon Fuel Standard CCR 95480	**Consistent.** This measure applies to transportation fuels utilized by vehicles in California. The Project would not conflict with implementation of this measure. Motor vehicles associated with construction and operation of the Project would utilize low carbon transportation fuels as required under this measure.
	Regional Transportation-	SB 375. Cal. Public Resources Code §§	**Consistent**. The Project would provide development in the region that is consistent with the growth projections in the RTP/SCS.

Table 5: Project Consistency with Applicable CARB Scoping Plan Measures

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
	Related GHG Targets.	21155, 21155.1, 21155.2, 21159.28	
	Goods Movement	Goods Movement Action Plan January 2007	**Not applicable**. The Project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
	Medium/Heavy-Duty Vehicle	2010 Amendments to the Truck and Bus Regulation, the Drayage Truck Regulation and the Tractor-Trailer GHG Regulation	**Consistent**. This measure applies to medium and heavy-duty vehicles that operate in the state. The Project would not conflict with implementation of this measure. Medium and heavy-duty vehicles associated with construction and operation of the Project would be required to comply with the requirements of this regulation.
	High Speed Rail	Funded under SB 862	**Not applicable**. This is a statewide measure that cannot be implemented by a project applicant or Lead Agency.
Electricity and Natural Gas	Energy Efficiency	Title 20 Appliance Efficiency Regulation	**Consistent.** The Project would not conflict with implementation of this measure. The Project would comply with the latest energy efficiency standards.
		Title 24 Part 6 Energy Efficiency Standards for Residential and Non-Residential Building	
		Title 24 Part 11 California Green Building Code Standards	
	Renewable Portfolio Standard/Renewable Electricity Standard.	2010 Regulation to Implement the Renewable Electricity Standard (33% 2020)	**Consistent**. The Project would obtain electricity from the electric utility, Southern California Edison (SCE). SCE obtained 35 percent of its power supply from renewable sources in 2019. Therefore, the utility would provide power when needed on site that is composed of a greater percentage of renewable sources.
	Million Solar Roofs Program	SB 350 Clean Energy and Pollution Reduction Act of 2015 (50% 2030)	
	Million Solar Roofs Program	Tax Incentive Program	**Consistent.** This measure is to increase solar throughout California, which is being done by various electricity providers and existing solar programs. The program provides incentives that are in place at the time of construction.
Water	Water	Title 24 Part 11 California Green Building Code Standards	**Consistent.** The Project would comply with the CalGreen standards, which requires a 20 percent reduction in indoor water use. The Project would also comply with the City's Water-Efficient Landscaping Regulations (Chapter 28, Article IV of the Fontana Municipal Code).
		SBX 7-7—The Water Conservation Act of 2009	
		Model Water Efficient Landscape Ordinance	
Green Buildings	Green Building Strategy	Title 24 Part 11 California Green Building Code Standards	**Consistent.** The State is to increase the use of green building practices. The Project would implement required green building strategies through existing regulation that requires the Project to comply with various CalGreen requirements.
Industry	Industrial Emissions	2010 CARB Mandatory Reporting Regulation	**Not applicable.** The Mandatory Reporting Regulation requires facilities and entities with more than 10,000

Table 5: Project Consistency with Applicable CARB Scoping Plan Measures

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
			$MTCO_2e$ of combustion and process emissions, all facilities belonging to certain industries, and all electric power entities to submit an annual GHG emissions data report directly to CARB. As shown above, total Project GHG emissions would not exceed 10,000 $MTCO_2e$. Therefore, this regulation would not apply.
Recycling and Waste Management	Recycling and Waste	Title 24 Part 11 California Green Building Code Standards AB 341 Statewide 75 Percent Diversion Goal	**Consistent.** The Project would not conflict with implementation of these measures. The Project is required to achieve the recycling mandates via compliance with the CALGreen code. The City has consistently achieved its state recycling mandates.
Forests	Sustainable Forests	Cap and Trade Offset Projects	**Not applicable.** The Project is not located in a forested area.
High Global Warming Potential	High Global Warming Potential Gases	CARB Refrigerant Management Program CCR 95380	**Not applicable**. The regulations are applicable to refrigerants used by large air conditioning systems and large commercial and industrial refrigerators and cold storage system. The Project would not conflict with the refrigerant management regulations adopted by CARB.
Agriculture	Agriculture	Cap and Trade Offset Projects for Livestock and Rice Cultivation	**Not applicable**. No grazing, feedlot, or other agricultural activities that generate manure occur currently exist on-site or are proposed to be implemented by the Project.

Source: California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, November 2017 and CARB, *Climate Change Scoping Plan*, December 2008.

Consistency with the City of Rialto Climate Action Plan

The Rialto CAP outlines goals to reduce energy consumption and GHG emissions to become a more sustainable community. The proposed Project would be required to comply with all building codes in effect at the time of construction which include energy conservation measures mandated by Title 24 of the California Building Standards Code – Energy Efficiency Standards and the California Green Building Standards. Because Title 24 standards require energy conservation features in new construction (e.g., high-efficiency lighting, high-efficiency heating, ventilating, and air-conditioning (HVAC) systems, thermal insulation, double-glazed windows, water-conserving plumbing fixtures), these standards indirectly regulate and reduce GHG emissions. California's Building Energy Efficiency Standards are updated on an approximately three-year cycle. The most recent 2019 standards went into effect January 1, 2020.

Further, the Project would comply with the City's General Plan policies, and State Building Code provisions designed to reduce GHG emissions. The proposed Project would also comply with all SCAQMD applicable rules and regulations during construction of the operational phase and would not interfere with the State's goals of reducing GHG emission to 1990 levels by 2020 as stated AB 32.

In accordance with AB 32 and SB 32, CARB's Scoping Plan outlines the State's strategy to achieve 1990 level emissions by year 2020 and a 40 percent reduction from 1990 emissions by year 2030. The CARB Scoping Plan has been the primary tool to develop performance-based and efficiency-based CEQA criteria and GHG reduction targets for climate action planning efforts. Statewide strategies to reduce GHG emissions in the latest 2017 Climate Change Scoping Plan include implementing SB 350, which expands the Renewables Portfolio Standard to 50 percent by 2030 and doubles energy efficiency savings; expanding the Low Carbon Fuel Standard to 18 percent by 2030; implementing the Mobile Source Strategy

to deploy zero-electric vehicle buses and trucks; implementation of the Sustainable Freight Action Plan; implementation of the Short-Lived Climate Pollutant Reduction Strategy, which reduces methane and hydrofluorocarbons 40 percent below 2013 levels by 2030 and black carbon emissions 50 percent below 2013 levels by 2030; continuing to implement SB 375; creation of a post-2020 Cap-and-Trade Program; and development of an Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink. Statewide GHG emissions reduction measures that are being implemented as a result of the Scoping Plan would reduce the proposed Project's GHG emissions.

Additionally, approximately 91 percent of the project's emissions are from energy and mobile sources which would be further reduced by the 2017 Scoping Plan measures described above. It should be noted that the City has no control over vehicle emissions (approximately 88 percent of the project's total emissions). However, these emissions would decline in the future due to statewide measures including the reduction in the carbon content of fuels, CARB's advanced clean car program, CARB's mobile source strategy, fuel efficiency standards, cleaner technology, and fleet turnover. Additionally, SCAG's RTP/SCS is also expected to help California reach its GHG reduction goals, with reductions in per capita transportation emissions of 8 percent by 2020 and 19 percent by 2035.[11] The Project is an infill industrial development within the Rialto Airport Specific Plan Area and near other large employment areas such as the industrial uses to the north, west, and south and near residential areas to the northwest and east, which could reduce the need to travel long distances for some residents and reducing associated GHG emissions.[12]

As seen in Tables 4 and Table 5, the Project would be consistent with all applicable plan goals. As shown in Table 3, the Project is estimated to emit approximately 1,483.35 $MTCO_2e$ per year directly from on-site activities and indirectly from off-site motor vehicles.

Regarding goals for 2050 under Executive Order S-3-05, at this time it is not possible to quantify the emissions savings from future regulatory measures, as they have not yet been developed; nevertheless, it can be anticipated that operation of the proposed Project would benefit from the implementation of current and potential future regulations (e.g., improvements in vehicle emissions, SB 100/renewable electricity portfolio improvements, etc.) enacted to meet an 80 percent reduction below 1990 levels by 2050.

The majority of the GHG reductions from the Scoping Plan would result from continuation of the Cap-and-Trade regulation. Assembly Bill 398 (2017) extends the state's Cap-and-Trade program through 2030 and the Scoping Plan provide a comprehensive plan for the state to achieve its GHG targets through a variety of regulations enacted at the state level. Additional reductions are achieved from electricity sector standards (i.e., utility providers to supply 60 percent renewable electricity by 2030 and 100 percent renewable by 2045), doubling the energy efficiency savings at end uses, additional reductions from the LCFS, implementing the short-lived GHG strategy (e.g., hydrofluorocarbons), and implementing the Mobile Source Strategy and Sustainable Freight Action Plan.

Several of the State's plans and policies would contribute to a reduction in mobile source emissions from the Project. These include the following:

[11] Southern California Association of Governments, *2020-2045 Regional Transportation Plan/Sustainable Communities Strategy*, September 3, 2020, p. 9.

[12] The California Air Pollution Control Officers Association, *Quantifying Greenhouse Gas Mitigation Measures* (August 2010) identifies that infill developments, such as the proposed Project reduce vehicle miles traveled which reduces fuel consumption. Infill projects such as the proposed Project would have an improved location efficiency.

- **CARB's Advanced Clean Truck Regulation:** Adopted in 2020, CARB's Advanced Clean Truck Regulation requires truck manufacturers to transition from diesel trucks and vans to electric zero-emission trucks beginning in 2024. By 2045, every new truck sold in California is required to be zero-emission. The Advanced Clean Truck Regulation accelerates the transition of zero-emission medium-and heavy-duty vehicles from Class 2b to Class 8.

- **Executive Order N-79-20**: Executive Order N-79-20 establishes the goal for all new passenger cars and trucks, as well as all drayage/cargo trucks and off-road vehicles and equipment, sold in California, will be zero-emission by 2035 and all medium and heavy-duty vehicles will be zero-emission by 2045. It also directs CARB to develop and propose rulemaking for passenger vehicles and trucks, medium-and heavy-duty fleets where feasible, drayage trucks, and off-road vehicles and equipment "requiring increasing volumes" of new zero-emission vehicles (ZEVs) "towards the target of 100 percent."

- **CARB's Mobile Source Strategy**: CARB's Mobile Source Strategy takes an integrated planning approach to identify the level of transition to cleaner mobile source technologies needed to achieve all of California's targets by increasing the adoption of ZEV buses and trucks.

- **CARB's Sustainable Freight Action Plan**: The Sustainable Freight Action Plan which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks. This Plan applies to all trucks accessing the Project site and may include existing trucks or new trucks that are part of the statewide goods movement sector.

- **CARB's Emissions Reduction Plan for Ports and Goods Movement**: CARB's Emissions Reduction Plan for Ports and Goods Movement identifies measures to improve goods movement efficiencies such as advanced combustion strategies, friction reduction, waste heat recovery, and electrification of accessories.

While these measures are not directly applicable to the Project, any commercial activity associated with goods movement would be required to comply with these measures as adopted.

The Project would not obstruct or interfere with efforts to increase ZEVs or state efforts to improve system efficiency. The Project would also benefit from implementation of these State programs and measures, which would reduce future GHG emissions from trucks. The Project's long-term operational GHG emissions would not exceed the threshold of 10,000 $MTCO_2e$ per year, and thus would not impede California's statewide GHG reduction goals for 2030 and 2050. Therefore, impacts would be less than significant.

Conclusion

The proposed Project would be consistent with applicable plans, policies, and regulations related to the reduction of GHG emissions. The Rialto Airport Specific Plan EIR did not evaluate the effects of greenhouse gas (GHG) emissions. At the time of approval in 1997, the contribution of GHG emissions to climate change was not a prominent issue of concern. As discussed above, the issue of GHG emissions and climate change impacts is not new information that was not known or could not have been known at the time of the certification of the Rialto Airport Specific Plan EIR. Consistent with the statutory language, the courts have repeatedly held that new information that "was known" or "could have been known with the exercise of reasonable diligence" at the time of EIR certification does not trigger the supplemental EIR standard

(Citizens for Responsible Equitable Environmental Development v. City of San Diego (2011) 196 Cal.App.4th 515, 532 ("CREED II"); ALARM, supra, 12 Cal.App.4th at 1800–1803).

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less than significant impact.

5.3 Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about 1 day), GHGs have much longer atmospheric lifetimes of 1 year to several thousand years that allow them to be dispersed around the globe.

Cumulative Impacts

It is generally the case that an individual project of this size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory. GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. The additive effect of Project-related GHGs would not result in a reasonably foreseeable cumulatively considerable contribution to global climate change. As discussed above, the Project-related GHG emissions would not exceed the threshold of 10,000 $MTCO_2e$ and would not impede statewide 2030 and 2050 GHG emission reduction targets. As such, the Project would not be cumulatively considerable, and impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less than significant impact.

6 REFERENCES

1. California Air Resources Board, *California's 2017 Climate Change Scoping Plan,* 2017.
2. City of Rialto, *General Plan*, December 2010
3. HPA Architecture, *Conceptual Site Plan for Thrifty Oil Project*, April 5, 2022.
4. Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis*, 2007.
5. Intergovernmental Panel on Climate Change, *Climate Change 2013: The Physical Science Basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2013.
6. Kimley-Horn*, Thrifty Rialto Warehouse – Traffic Scoping Agreement*, May 11, 2022.
7. National Research Council, *Advancing the Science of Climate Change*, 2010.
8. State of California, *Code of Regulations Section 15065.5a*, 2018.
9. Southern California Association of Governments, Connect SoCal - *2020 - 2045 Regional Transportation Plan/Sustainable Communities Strategy*, 2020.
10. South Coast Air Quality Management District, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold,* October 2008.
11. South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #8*, 2009.
12. South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13*, 2009.
13. South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15*, 2010.
14. U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016*, 2018.
15. U.S. EPA, *Methane and Nitrous Oxide Emission from Natural Sources*, 2010.
16. U.S. EPA, *Overview of Greenhouse Gases*, 2018.

Appendix A

Greenhouse Gas Emissions Data

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Rialto Thrifty Oil Warehouse

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	9.00	1000sqft	0.10	9,000.00	0
Unrefrigerated Warehouse-No Rail	91.88	1000sqft	2.11	91,880.00	0
Other Asphalt Surfaces	2.57	Acre	2.57	111,949.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 4,500 SF Office on ground floor, 4,500 SF Office on second floor

Construction Phase - Project Schedule

Trips and VMT - Estimated 25 miles to disposal site; 25 Construction workers per day

Demolition -

Grading -

Vehicle Trips - Trip generation per Scoping Agreement

Construction Off-road Equipment Mitigation - Water Exposed Area
Unpaved Road vehicle speed 15%
Clean Paved Road

Operational Off-Road Equipment - 5 Electric Forklifts

Rialto Thrifty Oil Warehouse - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Stationary Sources - Emergency Generators and Fire Pumps -

Fleet Mix - Fleet Mix per Scoping Agreement

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	230.00	136.00
tblConstructionPhase	NumDays	8.00	13.00
tblFleetMix	HHD	8.6520e-003	0.71
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.4370e-003	0.01
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	3.7060e-003	0.00
tblFleetMix	MHD	0.01	0.28
tblFleetMix	OBUS	8.1200e-004	0.00
tblFleetMix	SBUS	7.4500e-004	0.00
tblFleetMix	UBUS	5.0800e-004	0.00
tblGrading	MaterialExported	0.00	9,200.00
tblLandUse	LotAcreage	0.21	0.10
tblOperationalOffRoadEquipment	OperFuelType	Diesel	Electrical
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	5.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	WorkerTripNumber	15.00	25.00
tblTripsAndVMT	WorkerTripNumber	18.00	25.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblTripsAndVMT	WorkerTripNumber	15.00	25.00
tblTripsAndVMT	WorkerTripNumber	88.00	25.00
tblTripsAndVMT	WorkerTripNumber	20.00	25.00
tblTripsAndVMT	WorkerTripNumber	18.00	25.00
tblVehicleTrips	CNW_TL	6.90	33.20
tblVehicleTrips	CNW_TTP	41.00	100.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	2.21	11.56
tblVehicleTrips	ST_TR	1.74	0.74
tblVehicleTrips	SU_TR	0.70	11.56
tblVehicleTrips	SU_TR	1.74	0.74
tblVehicleTrips	WD_TR	9.74	11.56
tblVehicleTrips	WD_TR	1.74	0.74

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0581	0.6873	0.4594	1.4100e-003	0.1690	0.0263	0.1953	0.0615	0.0244	0.0859	0.0000	130.6762	130.6762	0.0230	9.5700e-003	134.1022
2023	0.6076	1.1182	1.2821	2.5600e-003	0.0371	0.0506	0.0877	0.0102	0.0476	0.0578	0.0000	226.3491	226.3491	0.0426	6.3500e-003	229.3060
Maximum	**0.6076**	**1.1182**	**1.2821**	**2.5600e-003**	**0.1690**	**0.0506**	**0.1953**	**0.0615**	**0.0476**	**0.0859**	**0.0000**	**226.3491**	**226.3491**	**0.0426**	**9.5700e-003**	**229.3060**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0581	0.6873	0.4594	1.4100e-003	0.0789	0.0263	0.1052	0.0275	0.0244	0.0520	0.0000	130.6762	130.6762	0.0230	9.5700e-003	134.1021
2023	0.6076	1.1182	1.2821	2.5600e-003	0.0353	0.0506	0.0860	9.7400e-003	0.0476	0.0574	0.0000	226.3489	226.3489	0.0426	6.3500e-003	229.3058
Maximum	**0.6076**	**1.1182**	**1.2821**	**2.5600e-003**	**0.0789**	**0.0506**	**0.1052**	**0.0275**	**0.0476**	**0.0574**	**0.0000**	**226.3489**	**226.3489**	**0.0426**	**9.5700e-003**	**229.3058**

Rialto Thrifty Oil Warehouse - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**44.58**	**0.00**	**32.46**	**47.98**	**0.00**	**23.92**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**11-1-2022**	**1-31-2023**	0.9233	0.9233
2	**2-1-2023**	**4-30-2023**	0.5548	0.5548
3	**5-1-2023**	**7-31-2023**	0.9409	0.9409
		Highest	0.9409	0.9409

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4202	1.0000e-005	1.3200e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5700e-003	2.5700e-003	1.0000e-005	0.0000	2.7300e-003
Energy	1.1600e-003	0.0106	8.8800e-003	6.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	63.9740	63.9740	4.6500e-003	7.5000e-004	64.3131
Mobile	0.0862	2.1378	1.1178	0.0120	0.5189	0.0153	0.5342	0.1442	0.0146	0.1588	0.0000	1,176.4653	1,176.4653	0.0595	0.1628	1,226.4801
Offroad	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	19.2314	0.0000	19.2314	1.1365	0.0000	47.6449
Water						0.0000	0.0000		0.0000	0.0000	7.2483	54.6900	61.9383	0.7491	0.0181	86.0704
Total	**0.5076**	**2.1484**	**1.1280**	**0.0120**	**0.5189**	**0.0161**	**0.5350**	**0.1442**	**0.0154**	**0.1596**	**26.4796**	**1,295.1319**	**1,321.6115**	**1.9498**	**0.1817**	**1,424.5112**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4202	1.0000e-005	1.3200e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5700e-003	2.5700e-003	1.0000e-005	0.0000	2.7300e-003
Energy	1.1600e-003	0.0106	8.8800e-003	6.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	63.9740	63.9740	4.6500e-003	7.5000e-004	64.3131
Mobile	0.0862	2.1378	1.1178	0.0120	0.5189	0.0153	0.5342	0.1442	0.0146	0.1588	0.0000	1,176.4653	1,176.4653	0.0595	0.1628	1,226.4801
Offroad	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	19.2314	0.0000	19.2314	1.1365	0.0000	47.6449
Water						0.0000	0.0000		0.0000	0.0000	7.2483	54.6900	61.9383	0.7491	0.0181	86.0704
Total	**0.5076**	**2.1484**	**1.1280**	**0.0120**	**0.5189**	**0.0161**	**0.5350**	**0.1442**	**0.0154**	**0.1596**	**26.4796**	**1,295.1319**	**1,321.6115**	**1.9498**	**0.1817**	**1,424.5112**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/1/2022	11/28/2022	5	20	
2	Site Preparation	Site Preparation	11/29/2022	12/5/2022	5	5	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3	Grading	Grading	12/6/2022	12/22/2022	5	13	
4	Building Construction	Building Construction	12/23/2022	6/30/2023	5	136	
5	Paving	Paving	7/3/2023	7/26/2023	5	18	
6	Architectural Coating	Architectural Coating	7/3/2023	7/26/2023	5	18	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 13

Acres of Paving: 2.57

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 151,320; Non-Residential Outdoor: 50,440; Striped Parking Area: 6,717 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	25.00	0.00	464.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	25.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	25.00	0.00	1,150.00	14.70	6.90	25.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	25.00	35.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	25.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0502	0.0000	0.0502	7.6000e-003	0.0000	7.6000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	**0.0264**	**0.2572**	**0.2059**	**3.9000e-004**	**0.0502**	**0.0124**	**0.0626**	**7.6000e-003**	**0.0116**	**0.0192**	**0.0000**	**33.9902**	**33.9902**	**9.5500e-003**	**0.0000**	**34.2289**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-003	0.0393	8.9300e-003	1.4000e-004	3.9900e-003	3.0000e-004	4.2900e-003	1.1000e-003	2.8000e-004	1.3800e-003	0.0000	14.1364	14.1364	8.4000e-004	2.2500e-003	14.8267
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.4000e-004	6.8000e-004	8.8600e-003	2.0000e-005	2.7400e-003	2.0000e-005	2.7600e-003	7.3000e-004	2.0000e-005	7.4000e-004	0.0000	2.2319	2.2319	6.0000e-005	6.0000e-005	2.2513
Total	**1.8400e-003**	**0.0400**	**0.0178**	**1.6000e-004**	**6.7300e-003**	**3.2000e-004**	**7.0500e-003**	**1.8300e-003**	**3.0000e-004**	**2.1200e-003**	**0.0000**	**16.3683**	**16.3683**	**9.0000e-004**	**2.3100e-003**	**17.0780**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0196	0.0000	0.0196	2.9600e-003	0.0000	2.9600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	**0.0264**	**0.2572**	**0.2059**	**3.9000e-004**	**0.0196**	**0.0124**	**0.0320**	**2.9600e-003**	**0.0116**	**0.0145**	**0.0000**	**33.9902**	**33.9902**	**9.5500e-003**	**0.0000**	**34.2289**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-003	0.0393	8.9300e-003	1.4000e-004	3.8100e-003	3.0000e-004	4.1100e-003	1.0500e-003	2.8000e-004	1.3400e-003	0.0000	14.1364	14.1364	8.4000e-004	2.2500e-003	14.8267
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.4000e-004	6.8000e-004	8.8600e-003	2.0000e-005	2.6000e-003	2.0000e-005	2.6200e-003	6.9000e-004	2.0000e-005	7.1000e-004	0.0000	2.2319	2.2319	6.0000e-005	6.0000e-005	2.2513
Total	**1.8400e-003**	**0.0400**	**0.0178**	**1.6000e-004**	**6.4100e-003**	**3.2000e-004**	**6.7300e-003**	**1.7400e-003**	**3.0000e-004**	**2.0500e-003**	**0.0000**	**16.3683**	**16.3683**	**9.0000e-004**	**2.3100e-003**	**17.0780**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.9300e-003	0.0827	0.0492	1.0000e-004		4.0300e-003	4.0300e-003		3.7100e-003	3.7100e-003	0.0000	8.3599	8.3599	2.7000e-003	0.0000	8.4274
Total	**7.9300e-003**	**0.0827**	**0.0492**	**1.0000e-004**	**0.0491**	**4.0300e-003**	**0.0532**	**0.0253**	**3.7100e-003**	**0.0290**	**0.0000**	**8.3599**	**8.3599**	**2.7000e-003**	**0.0000**	**8.4274**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.7000e-004	2.2100e-003	1.0000e-005	6.9000e-004	0.0000	6.9000e-004	1.8000e-004	0.0000	1.9000e-004	0.0000	0.5580	0.5580	2.0000e-005	1.0000e-005	0.5628
Total	**2.1000e-004**	**1.7000e-004**	**2.2100e-003**	**1.0000e-005**	**6.9000e-004**	**0.0000**	**6.9000e-004**	**1.8000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5580**	**0.5580**	**2.0000e-005**	**1.0000e-005**	**0.5628**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0192	0.0000	0.0192	9.8500e-003	0.0000	9.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.9300e-003	0.0827	0.0492	1.0000e-004		4.0300e-003	4.0300e-003		3.7100e-003	3.7100e-003	0.0000	8.3598	8.3598	2.7000e-003	0.0000	8.4274
Total	**7.9300e-003**	**0.0827**	**0.0492**	**1.0000e-004**	**0.0192**	**4.0300e-003**	**0.0232**	**9.8500e-003**	**3.7100e-003**	**0.0136**	**0.0000**	**8.3598**	**8.3598**	**2.7000e-003**	**0.0000**	**8.4274**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.7000e-004	2.2100e-003	1.0000e-005	6.5000e-004	0.0000	6.5000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5580	0.5580	2.0000e-005	1.0000e-005	0.5628
Total	**2.1000e-004**	**1.7000e-004**	**2.2100e-003**	**1.0000e-005**	**6.5000e-004**	**0.0000**	**6.5000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5580**	**0.5580**	**2.0000e-005**	**1.0000e-005**	**0.5628**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0466	0.0000	0.0466	0.0223	0.0000	0.0223	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1356	0.0993	1.9000e-004		6.1200e-003	6.1200e-003		5.6300e-003	5.6300e-003	0.0000	16.9356	16.9356	5.4800e-003	0.0000	17.0725
Total	**0.0127**	**0.1356**	**0.0993**	**1.9000e-004**	**0.0466**	**6.1200e-003**	**0.0527**	**0.0223**	**5.6300e-003**	**0.0280**	**0.0000**	**16.9356**	**16.9356**	**5.4800e-003**	**0.0000**	**17.0725**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.9700e-003	0.1190	0.0257	4.3000e-004	0.0124	9.2000e-004	0.0133	3.3900e-003	8.8000e-004	4.2700e-003	0.0000	43.4245	43.4245	2.5800e-003	6.9000e-003	45.5456
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	4.4000e-004	5.7600e-003	2.0000e-005	1.7800e-003	1.0000e-005	1.7900e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.4508	1.4508	4.0000e-005	4.0000e-005	1.4633
Total	**3.5100e-003**	**0.1194**	**0.0315**	**4.5000e-004**	**0.0141**	**9.3000e-004**	**0.0151**	**3.8600e-003**	**8.9000e-004**	**4.7500e-003**	**0.0000**	**44.8752**	**44.8752**	**2.6200e-003**	**6.9400e-003**	**47.0089**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0182	0.0000	0.0182	8.7100e-003	0.0000	8.7100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1356	0.0993	1.9000e-004		6.1200e-003	6.1200e-003		5.6300e-003	5.6300e-003	0.0000	16.9356	16.9356	5.4800e-003	0.0000	17.0725
Total	**0.0127**	**0.1356**	**0.0993**	**1.9000e-004**	**0.0182**	**6.1200e-003**	**0.0243**	**8.7100e-003**	**5.6300e-003**	**0.0143**	**0.0000**	**16.9356**	**16.9356**	**5.4800e-003**	**0.0000**	**17.0725**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.9700e-003	0.1190	0.0257	4.3000e-004	0.0118	9.2000e-004	0.0127	3.2600e-003	8.8000e-004	4.1400e-003	0.0000	43.4245	43.4245	2.5800e-003	6.9000e-003	45.5456
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	4.4000e-004	5.7600e-003	2.0000e-005	1.6900e-003	1.0000e-005	1.7000e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.4508	1.4508	4.0000e-005	4.0000e-005	1.4633
Total	**3.5100e-003**	**0.1194**	**0.0315**	**4.5000e-004**	**0.0135**	**9.3000e-004**	**0.0144**	**3.7100e-003**	**8.9000e-004**	**4.6000e-003**	**0.0000**	**44.8752**	**44.8752**	**2.6200e-003**	**6.9400e-003**	**47.0089**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.1200e-003	0.0469	0.0491	8.0000e-005		2.4300e-003	2.4300e-003		2.2800e-003	2.2800e-003	0.0000	6.9518	6.9518	1.6700e-003	0.0000	6.9934
Total	**5.1200e-003**	**0.0469**	**0.0491**	**8.0000e-005**		**2.4300e-003**	**2.4300e-003**		**2.2800e-003**	**2.2800e-003**	**0.0000**	**6.9518**	**6.9518**	**1.6700e-003**	**0.0000**	**6.9934**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-004	5.2000e-003	1.6800e-003	2.0000e-005	6.6000e-004	5.0000e-005	7.1000e-004	1.9000e-004	5.0000e-005	2.4000e-004	0.0000	1.9678	1.9678	7.0000e-005	2.9000e-004	2.0548
Worker	2.5000e-004	2.0000e-004	2.6600e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6696	0.6696	2.0000e-005	2.0000e-005	0.6754
Total	**4.4000e-004**	**5.4000e-003**	**4.3400e-003**	**3.0000e-005**	**1.4800e-003**	**6.0000e-005**	**1.5400e-003**	**4.1000e-004**	**5.0000e-005**	**4.6000e-004**	**0.0000**	**2.6373**	**2.6373**	**9.0000e-005**	**3.1000e-004**	**2.7302**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.1200e-003	0.0469	0.0491	8.0000e-005		2.4300e-003	2.4300e-003		2.2800e-003	2.2800e-003	0.0000	6.9518	6.9518	1.6700e-003	0.0000	6.9934
Total	**5.1200e-003**	**0.0469**	**0.0491**	**8.0000e-005**		**2.4300e-003**	**2.4300e-003**		**2.2800e-003**	**2.2800e-003**	**0.0000**	**6.9518**	**6.9518**	**1.6700e-003**	**0.0000**	**6.9934**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-004	5.2000e-003	1.6800e-003	2.0000e-005	6.3000e-004	5.0000e-005	6.8000e-004	1.8000e-004	5.0000e-005	2.3000e-004	0.0000	1.9678	1.9678	7.0000e-005	2.9000e-004	2.0548
Worker	2.5000e-004	2.0000e-004	2.6600e-003	1.0000e-005	7.8000e-004	1.0000e-005	7.9000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6696	0.6696	2.0000e-005	2.0000e-005	0.6754
Total	**4.4000e-004**	**5.4000e-003**	**4.3400e-003**	**3.0000e-005**	**1.4100e-003**	**6.0000e-005**	**1.4700e-003**	**3.9000e-004**	**5.0000e-005**	**4.4000e-004**	**0.0000**	**2.6373**	**2.6373**	**9.0000e-005**	**3.1000e-004**	**2.7302**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1022	0.9350	1.0559	1.7500e-003		0.0455	0.0455		0.0428	0.0428	0.0000	150.6731	150.6731	0.0358	0.0000	151.5692
Total	**0.1022**	**0.9350**	**1.0559**	**1.7500e-003**		**0.0455**	**0.0455**		**0.0428**	**0.0428**	**0.0000**	**150.6731**	**150.6731**	**0.0358**	**0.0000**	**151.5692**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3900e-003	0.0874	0.0324	4.1000e-004	0.0143	4.6000e-004	0.0148	4.1400e-003	4.4000e-004	4.5800e-003	0.0000	40.5995	40.5995	1.5000e-003	5.8900e-003	42.3932
Worker	5.0500e-003	3.8900e-003	0.0531	1.5000e-004	0.0178	1.0000e-004	0.0179	4.7300e-003	9.0000e-005	4.8300e-003	0.0000	14.1260	14.1260	3.6000e-004	3.6000e-004	14.2419
Total	**7.4400e-003**	**0.0913**	**0.0855**	**5.6000e-004**	**0.0322**	**5.6000e-004**	**0.0327**	**8.8700e-003**	**5.3000e-004**	**9.4100e-003**	**0.0000**	**54.7255**	**54.7255**	**1.8600e-003**	**6.2500e-003**	**56.6351**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1022	0.9350	1.0559	1.7500e-003		0.0455	0.0455		0.0428	0.0428	0.0000	150.6729	150.6729	0.0358	0.0000	151.5690
Total	**0.1022**	**0.9350**	**1.0559**	**1.7500e-003**		**0.0455**	**0.0455**		**0.0428**	**0.0428**	**0.0000**	**150.6729**	**150.6729**	**0.0358**	**0.0000**	**151.5690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3900e-003	0.0874	0.0324	4.1000e-004	0.0137	4.6000e-004	0.0142	3.9900e-003	4.4000e-004	4.4300e-003	0.0000	40.5995	40.5995	1.5000e-003	5.8900e-003	42.3932
Worker	5.0500e-003	3.8900e-003	0.0531	1.5000e-004	0.0169	1.0000e-004	0.0170	4.5100e-003	9.0000e-005	4.6000e-003	0.0000	14.1260	14.1260	3.6000e-004	3.6000e-004	14.2419
Total	**7.4400e-003**	**0.0913**	**0.0855**	**5.6000e-004**	**0.0306**	**5.6000e-004**	**0.0312**	**8.5000e-003**	**5.3000e-004**	**9.0300e-003**	**0.0000**	**54.7255**	**54.7255**	**1.8600e-003**	**6.2500e-003**	**56.6351**

Rialto Thrifty Oil Warehouse - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2600e-003	0.0791	0.1097	1.7000e-004		3.9200e-003	3.9200e-003		3.6200e-003	3.6200e-003	0.0000	14.7407	14.7407	4.6300e-003	0.0000	14.8565
Paving	3.3700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0116**	**0.0791**	**0.1097**	**1.7000e-004**		**3.9200e-003**	**3.9200e-003**		**3.6200e-003**	**3.6200e-003**	**0.0000**	**14.7407**	**14.7407**	**4.6300e-003**	**0.0000**	**14.8565**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-004	5.4000e-004	7.3500e-003	2.0000e-005	2.4700e-003	1.0000e-005	2.4800e-003	6.6000e-004	1.0000e-005	6.7000e-004	0.0000	1.9559	1.9559	5.0000e-005	5.0000e-005	1.9720
Total	**7.0000e-004**	**5.4000e-004**	**7.3500e-003**	**2.0000e-005**	**2.4700e-003**	**1.0000e-005**	**2.4800e-003**	**6.6000e-004**	**1.0000e-005**	**6.7000e-004**	**0.0000**	**1.9559**	**1.9559**	**5.0000e-005**	**5.0000e-005**	**1.9720**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2600e-003	0.0791	0.1097	1.7000e-004		3.9200e-003	3.9200e-003		3.6200e-003	3.6200e-003	0.0000	14.7407	14.7407	4.6300e-003	0.0000	14.8565
Paving	3.3700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0116**	**0.0791**	**0.1097**	**1.7000e-004**		**3.9200e-003**	**3.9200e-003**		**3.6200e-003**	**3.6200e-003**	**0.0000**	**14.7407**	**14.7407**	**4.6300e-003**	**0.0000**	**14.8565**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-004	5.4000e-004	7.3500e-003	2.0000e-005	2.3400e-003	1.0000e-005	2.3500e-003	6.2000e-004	1.0000e-005	6.4000e-004	0.0000	1.9559	1.9559	5.0000e-005	5.0000e-005	1.9720
Total	**7.0000e-004**	**5.4000e-004**	**7.3500e-003**	**2.0000e-005**	**2.3400e-003**	**1.0000e-005**	**2.3500e-003**	**6.2000e-004**	**1.0000e-005**	**6.4000e-004**	**0.0000**	**1.9559**	**1.9559**	**5.0000e-005**	**5.0000e-005**	**1.9720**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4832					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7200e-003	0.0117	0.0163	3.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	2.2979	2.2979	1.4000e-004	0.0000	2.3014
Total	**0.4849**	**0.0117**	**0.0163**	**3.0000e-005**		**6.4000e-004**	**6.4000e-004**		**6.4000e-004**	**6.4000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.4000e-004**	**0.0000**	**2.3014**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-004	5.4000e-004	7.3500e-003	2.0000e-005	2.4700e-003	1.0000e-005	2.4800e-003	6.6000e-004	1.0000e-005	6.7000e-004	0.0000	1.9559	1.9559	5.0000e-005	5.0000e-005	1.9720
Total	**7.0000e-004**	**5.4000e-004**	**7.3500e-003**	**2.0000e-005**	**2.4700e-003**	**1.0000e-005**	**2.4800e-003**	**6.6000e-004**	**1.0000e-005**	**6.7000e-004**	**0.0000**	**1.9559**	**1.9559**	**5.0000e-005**	**5.0000e-005**	**1.9720**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4832					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7200e-003	0.0117	0.0163	3.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	2.2979	2.2979	1.4000e-004	0.0000	2.3014
Total	**0.4849**	**0.0117**	**0.0163**	**3.0000e-005**		**6.4000e-004**	**6.4000e-004**		**6.4000e-004**	**6.4000e-004**	**0.0000**	**2.2979**	**2.2979**	**1.4000e-004**	**0.0000**	**2.3014**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-004	5.4000e-004	7.3500e-003	2.0000e-005	2.3400e-003	1.0000e-005	2.3500e-003	6.2000e-004	1.0000e-005	6.4000e-004	0.0000	1.9559	1.9559	5.0000e-005	5.0000e-005	1.9720
Total	**7.0000e-004**	**5.4000e-004**	**7.3500e-003**	**2.0000e-005**	**2.3400e-003**	**1.0000e-005**	**2.3500e-003**	**6.2000e-004**	**1.0000e-005**	**6.4000e-004**	**0.0000**	**1.9559**	**1.9559**	**5.0000e-005**	**5.0000e-005**	**1.9720**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0862	2.1378	1.1178	0.0120	0.5189	0.0153	0.5342	0.1442	0.0146	0.1588	0.0000	1,176.4653	1,176.4653	0.0595	0.1628	1,226.4801
Unmitigated	0.0862	2.1378	1.1178	0.0120	0.5189	0.0153	0.5342	0.1442	0.0146	0.1588	0.0000	1,176.4653	1,176.4653	0.0595	0.1628	1,226.4801

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	104.04	104.04	104.04	409,797	409,797
Other Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	67.99	67.99	67.99	821,660	821,660
Total	172.03	172.03	172.03	1,231,457	1,231,457

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	100	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	33.20	0.00	0.00	100.00	100	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.543401	0.061496	0.184986	0.128935	0.023820	0.006437	0.011961	0.008652	0.000812	0.000508	0.024540	0.000745	0.003706
Other Asphalt Surfaces	0.543401	0.061496	0.184986	0.128935	0.023820	0.006437	0.011961	0.008652	0.000812	0.000508	0.024540	0.000745	0.003706
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.000000	0.014706	0.279412	0.705882	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	52.4715	52.4715	4.4300e-003	5.4000e-004	52.7422
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	52.4715	52.4715	4.4300e-003	5.4000e-004	52.7422
NaturalGas Mitigated	1.1600e-003	0.0106	8.8800e-003	6.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	11.5025	11.5025	2.2000e-004	2.1000e-004	11.5709
NaturalGas Unmitigated	1.1600e-003	0.0106	8.8800e-003	6.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	11.5025	11.5025	2.2000e-004	2.1000e-004	11.5709

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	30870	1.7000e-004	1.5100e-003	1.2700e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.6473	1.6473	3.0000e-005	3.0000e-005	1.6571
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	184679	1.0000e-003	9.0500e-003	7.6000e-003	5.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004	0.0000	9.8552	9.8552	1.9000e-004	1.8000e-004	9.9137
Total		**1.1700e-003**	**0.0106**	**8.8700e-003**	**6.0000e-005**		**8.1000e-004**	**8.1000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**11.5025**	**11.5025**	**2.2000e-004**	**2.1000e-004**	**11.5709**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	30870	1.7000e-004	1.5100e-003	1.2700e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.6473	1.6473	3.0000e-005	3.0000e-005	1.6571
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	184679	1.0000e-003	9.0500e-003	7.6000e-003	5.0000e-005		6.9000e-004	6.9000e-004		6.9000e-004	6.9000e-004	0.0000	9.8552	9.8552	1.9000e-004	1.8000e-004	9.9137
Total		**1.1700e-003**	**0.0106**	**8.8700e-003**	**6.0000e-005**		**8.1000e-004**	**8.1000e-004**		**8.1000e-004**	**8.1000e-004**	**0.0000**	**11.5025**	**11.5025**	**2.2000e-004**	**2.1000e-004**	**11.5709**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	82710	14.6683	1.2400e-003	1.5000e-004	14.7439
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	213162	37.8033	3.1900e-003	3.9000e-004	37.9983
Total		**52.4715**	**4.4300e-003**	**5.4000e-004**	**52.7422**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	82710	14.6683	1.2400e-003	1.5000e-004	14.7439
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	213162	37.8033	3.1900e-003	3.9000e-004	37.9983
Total		**52.4715**	**4.4300e-003**	**5.4000e-004**	**52.7422**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4202	1.0000e-005	1.3200e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5700e-003	2.5700e-003	1.0000e-005	0.0000	2.7300e-003
Unmitigated	0.4202	1.0000e-005	1.3200e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5700e-003	2.5700e-003	1.0000e-005	0.0000	2.7300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0483					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3718					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.3200e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5700e-003	2.5700e-003	1.0000e-005	0.0000	2.7300e-003
Total	**0.4202**	**1.0000e-005**	**1.3200e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.5700e-003**	**2.5700e-003**	**1.0000e-005**	**0.0000**	**2.7300e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0483					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3718					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.3200e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5700e-003	2.5700e-003	1.0000e-005	0.0000	2.7300e-003
Total	**0.4202**	**1.0000e-005**	**1.3200e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.5700e-003**	**2.5700e-003**	**1.0000e-005**	**0.0000**	**2.7300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	61.9383	0.7491	0.0181	86.0704
Unmitigated	61.9383	0.7491	0.0181	86.0704

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.5996 / 0.980402	6.1330	0.0526	1.2900e-003	7.8319
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	21.2473 / 0	55.8053	0.6965	0.0169	78.2386
Total		**61.9383**	**0.7491**	**0.0181**	**86.0704**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.5996 / 0.980402	6.1330	0.0526	1.2900e-003	7.8319
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	21.2473 / 0	55.8053	0.6965	0.0169	78.2386
Total		**61.9383**	**0.7491**	**0.0181**	**86.0704**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	19.2314	1.1365	0.0000	47.6449
Unmitigated	19.2314	1.1365	0.0000	47.6449

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	8.37	1.6990	0.1004	0.0000	4.2093
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	86.37	17.5323	1.0361	0.0000	43.4356
Total		**19.2314**	**1.1365**	**0.0000**	**47.6449**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	8.37	1.6990	0.1004	0.0000	4.2093
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	86.37	17.5323	1.0361	0.0000	43.4356
Total		**19.2314**	**1.1365**	**0.0000**	**47.6449**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	5	8.00	260	89	0.20	Electrical

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Forklifts	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Electric Equipment Emissions

Equipment	Number of Equipment[1]	Hours per Day[1]	Days per Year[1]	Equipment Size[2] (hp)	Equipment Size (kW)	Load Factor[2]	SCE electricity emission factor[3] (MT CO_2e/MWh)	Emissions (MT CO_2e/year)
Forklift	5	12	365	89	66.4	0.20	0.161	46.73

Notes:

[1] Project-specific data.

[2] Equipment size and load factors based on CalEEMod Appendix D, Table 3.3

[3] CO_2e intensity factor for SCE accounts for the projected RPS improvements consistent with SB 100.

Conversion Factors:

0.7457 kW/hp
1000 kW/MW

APPENDIX E

PHASE I ENVIRONMENTAL ASSESSMENT AND PERCHLORATE PLUME MAP

Prepared For

CARMENITA INVESTMENT PROPERTIES, INC.
13116 IMPERIAL HIGHWAY
SANTA FE SPRINGS, CALIFORNIA 90670

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Northwest Corner of Locust Avenue and Lowell Street Rialto, California

Date Issued: June 30, 2004
NAC Project Number 04-20311.1

Prepared By

NAC

NATIONAL ASSESSMENT CORPORATION
1320 HARBOR BAY PARKWAY, SUITE 260
ALAMEDA, CA 94502
TEL (510) 337-2855 FAX (510) 337-2865

June 30, 2004

NAC

ENGINEERING

ENVIRONMENTAL

SEISMIC

CONSTRUCTION

Mr. Armando M. Enriquez
Carmenita Investment Properties, Inc.
13116 Imperial Highway
Santa Fe Springs, CA 90670

RE: PROJECT NO. 04-20311.1
PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT
NORTHWEST CORNER OF LOCUST AVENUE AND LOWELL STREET
RIALTO, CALIFORNIA

Dear Mr. Enriquez:

National Assessment Corporation (NAC) is pleased to provide the results of our Phase I Environmental Site Assessment of the property at the northwest corner of Locust Avenue and Lowell Street located in Rialto, California. This assessment was authorized and performed in general accordance with ASTM 1527-00.

This assessment included a site reconnaissance as well as research and interviews with representatives of the public, property management, and regulatory agencies. An assessment was made, conclusions stated, and recommendations outlined.

We appreciate the opportunity to provide environmental services to Carmenita Investment Properties, Inc. If you have any questions concerning this report, or if we can assist you in any other matter, please contact Noreen Clindinning at 858.279.8588.

Very truly yours,

NATIONAL ASSESSMENT CORPORATION

Drew Kerr, REA
Professional Associate

Noreen Clindinning
National Client Manager

TABLE OF CONTENTS

EXECUTIVE SUMMARY 1

1.0 INTRODUCTION 2

1.1 Purpose 2
1.2 Scope of Services 2
1.3 Assumptions 2
1.4 Limitations and Exceptions 3
1.5 Special Terms and Conditions 3
1.6 Use Reliance 3

2.0 SITE DESCRIPTION 4

2.1 User Provided Information 4
2.2 Location and Legal Description 4
2.3 Site and Vicinity General Characteristics 4
2.4 Current Use of the Property 4
2.5 Description of Site Improvements 5
2.6 Current Use of Adjoining Properties 5

3.0 RECORDS REVIEW 6

3.1 Standard Environmental Record Sources 6
3.1.1 State and Federal Regulatory Review 6
3.1.2 Local Regulatory Review 8
3.2 Physical Setting Sources 9
3.2.1 Topography 9
3.2.2 Soils/Geology 9
3.2.3 Hydrology 9
3.2.4 Flood Zone Information 10
3.2.5 Oil and Gas Exploration 10
3.3 Historical Use Information 10
3.3.1 Aerial Photographs 10
3.3.2 Fire Insurance Maps 11
3.3.3 City Directories 11
3.3.4 Chain of Title 11
3.3.5 Additional Environmental Record Sources 12
3.3.6 Historical Use Information on Adjoining Properties 12

4.0 SITE RECONNAISSANCE 13

4.1 General Site Characteristics 13
4.1.1 Solid Waste Disposal 13
4.1.2 Surface Water Drainage 13
4.1.3 Wells and Cisterns 13
4.1.4 Wastewater 13
4.1.5 Additional Site Observations 13
4.2 Potential Environmental Conditions 13
4.2.1 Hazardous Materials and Petroleum Products Used or Stored at the Site 13
4.2.2 Evidence of Releases 14
4.2.3 Polychlorinated Biphenyls (PCBs) 14
4.2.4 Landfills 14
4.2.5 Pits, Ponds, Lagoons, Sumps, and Catch Basins 14
4.2.6 On-Site ASTs and USTs 14
4.2.7 Radiological Hazards 14

4.2.8 Drinking Water 14
4.2.9 Additional Hazard Observations 14
4.2.10 Asbestos-Containing Materials (ACM) 14
4.2.11 Radon 15
4.2.12 Lead-Based Paint 15
5.0 INTERVIEWS 16
6.0 FINDINGS AND CONCLUSIONS 17
6.1 Findings 17
6.1.1 On-Site Environmental Conditions 17
6.1.2 Off-Site Environmental Conditions 17
6.1.3 Previously Resolved Environmental Conditions 17
6.1.4 De Minimis Environmental Conditions 17
6.2 Opinion 17
6.3 Conclusions 17
6.4 Recommendations 17
6.5 Deviations 17
7.0 REFERENCES 18

FIGURES

Figure 1 Site Vicinity Map
Figure 2 Site Plan
Figure 3 Topographic Map

APPENDIX

Appendix A Site Photographs
Appendix B Historical Research Documentation
Exhibit B-1 Aerial Photographs
Exhibit B-2 Fire Insurance Maps
Exhibit B-3 City Directories
Exhibit B-4 Title Search Records
Appendix C Regulatory Records Documentation
Exhibit C-1 Mapped Database Report
Exhibit C-2 General Public Records
Appendix D Interview Records
Appendix E Client-Provided Documentation
Appendix F Laboratory Reports
Appendix G Other Supporting Documentation
Appendix H Qualifications Of Envionmental Professionals

EXECUTIVE SUMMARY

National Assessment Corporation (NAC) has performed a Phase I Environmental Site Assessment (ESA) in general accordance with the scope of work and limitations set forth by Carmenita Investment Properties, Inc. for the property at the Northwest Corner of Locust Avenue and Lowell Street located in Rialto, California (the "Property").

The Phase I ESA is designed to provide Carmenita Investment Properties, Inc. with an assessment concerning environmental conditions (limited to those issues identified in the report) as they exist at the Property. This assessment was conducted utilizing generally accepted ESA industry standards in accordance with ASTM E 1527-00, Standard Practice for ESAs: Phase I ESA Process.

The Property encompasses 5.01 acres and is currently undeveloped. The Property is situated within a suburban area in northern Rialto, California. The Property is bound to the north by a commercial warehouse; to the east by Locust Avenue with a commercial warehouse and undeveloped lot beyond; to the south by Lowell Street with an undeveloped parcel beyond and to the west by a facility involved in the manufacturing of concrete pipes. Based upon topographic map interpretation and site observations, groundwater flow beneath the site is inferred to be in a southeasterly direction toward the Lytle Creek Wash and Santa Ana River.

NAC obtained and reviewed a database report from Environmental Data Resources (EDR) for the Property and the surrounding area. Based on the database report, no sites were identified as potential concerns to the Property.

Conclusions

NAC has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-00 of for the property at the Northwest Corner of Locust Avenue and Lowell Street located in Rialto, California, the Property. Any exceptions to or deletions from this practice are described in Section 1.4 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the Property.

Recommendations

Based on the information available at the time of this assessment, NAC does not recommend further investigation of the Property at this time.

1.0 INTRODUCTION

National Assessment Corporation (NAC) was retained by Carmenita Investment Properties, Inc. to conduct a Phase I Environmental Site Assessment (ESA) of the property at the Northwest Corner of Locust Avenue and Lowell Street located in Rialto, California (the "Property"). The protocol used for this assessment is in general conformance with ASTM E 1527-00, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

On June 24, 2004, Drew Kerr, a representative of NAC, conducted a site reconnaissance to assess the possible presence of petroleum products and hazardous materials at the Property. NAC's investigation also included review of aerial photos, reconnaissance of adjacent properties, background research, and review of available local, state, and federal regulatory records regarding the presence of petroleum products and/or hazardous materials at the Property.

NAC contracted Environmental Data Resources, Inc. (EDR) of Milford Connecticut, to perform a computer database search for local, state, and Federal regulatory records pertaining to environmental concerns for the Property and properties in the vicinity of the Property (see Section 3.0).

1.1 Purpose

The purpose of this Phase I Environmental Site Assessment (ESA) was to identify existing or potential Recognized Environmental Conditions (as defined by ASTM Standard E-1527-00) in connection with the Property. NAC understands that the findings of this study will be used by Carmenita Investment Properties, Inc. to evaluate a pending financial transaction in connection with the Property.

1.2 Scope of Services

The scope of work for this ESA is in general accordance with the requirements of ASTM Standard E 1527-00. NAC warrants that the findings and conclusions contained herein were accomplished in accordance with the methodologies set forth in the Scope of Work. These methodologies are described as representing good commercial and customary practice for conducting an ESA of a property for the purpose of identifying recognized environmental conditions.

No other warranties are implied or expressed.

1.3 Assumptions

There is a possibility that even with the proper application of these methodologies there may exist on the Property conditions that could not be identified within the scope of the assessment or which were not reasonably identifiable from the available information. NAC believes that the information obtained from the record review and the interviews concerning the site is reliable. However, NAC cannot and does not warrant or guarantee that the information provided by these other sources is accurate or complete. The methodologies of this assessment are not intended to produce all inclusive or comprehensive results, but rather to provide Carmenita Investment Properties, Inc. with information relating to the Property.

1.4 Limitations and Exceptions

The findings and conclusions contain all of the limitations inherent in these methodologies that are referred to in ASTM 1527-00.

1.5 Special Terms and Conditions

The work performed is governed by NAC's proposal executed by the client.

The conclusions and findings set forth in this report are strictly limited in time and scope to the date of the evaluations. The conclusions presented in the report are based solely on the services described therein, and not on scientific tasks or procedures beyond the scope of agreed-upon services or the time and budgeting restraints imposed by the client. No subsurface exploratory drilling or sampling was done under the scope of this work. Unless specifically stated otherwise in the report, no chemical analyses have been performed during the course of this ESA.

Some of the information provided in this report is based upon personal interviews, and research of available documents, records, and maps held by the appropriate government and private agencies. This is subject to the limitations of historical documentation, availability, and accuracy of pertinent records, and the personal recollections of those persons contacted.

1.6 Use Reliance

All reports, both verbal and written, are for the benefit of Carmenita Investment Properties, Inc. This report has no other purpose and may not be relied upon by any other person or entity without the written consent of NAC.

2.0 SITE DESCRIPTION

2.1 User Provided Information

Pursuant to ASTM E 1527-00, NAC requested the following site information from Carmenita Investment Properties, Inc. (User of this report) and from the site contact.

ITEM	PROVIDED BY USER	NOT PROVIDED BY USER	DISCUSSED BELOW	DOES NOT APPLY
2.1.1 Environmental Pre-survey Questionnaire		X		
2.1.2 Title Records		X		
2.1.3 Environmental Liens or Activity and Use Limitation		X		
2.1.4 Specialized Knowledge		X		
2.1.5 Valuation Reduction for Environmental Issues		X		
2.1.6 Identification of Key Site Manager		X		
2.1.7 Reason for Performing Phase 1 ESA	YES, SEE SECTION 1.1			
2.1.8 Prior Environmental Reports		X		
2.1.9 Other				X

2.2 Location and Legal Description

The Property is located at the northwest corner of Locust Avenue and Lowell Street in Rialto, California. The Property is located in a suburban area of San Bernardino County. According to the Client, the assessor's parcel number of the Property is 0239-192-0-00. A legal description was not provided for review. NAC obtained the plat map related to the Property from the City of Rialto Planning Department.

2.3 Site and Vicinity General Characteristics

The Property is located in an industrial area that is characterized by numerous manufacturing and commercial warehouses. There is residential development to the north and east in the vicinity of the Property. The Property is zoned for manufacturing use by the City of Rialto.

The Property consists of a square–shaped parcel that is approximately 5.01 acres in size. The Property is undeveloped and contains natural vegetation.

2.4 Current Use of the Property

At the present time, the Property is undeveloped.

2.5 Description of Site Improvements

The Property is undeveloped, as such there are no improvements.

2.6 Current Use of Adjoining Properties

During the vicinity reconnaissance, NAC observed the following land use on properties in the immediate vicinity of the Property.

North: Areas immediately adjacent to the north of the Property include the following: a commercial warehouse.

South: Areas immediately adjacent to the south of the Property include the following: Lowell Street with an undeveloped parcel beyond.

East: Areas immediately adjacent to the east of the Property include the following: Locust Avenue with a commercial warehouse beyond.

West: Areas immediately adjacent to the west of the Property include the following: a concrete pipe manufacturing facility.

3.0 RECORDS REVIEW

3.1 Standard Environmental Record Sources

3.1.1 State and Federal Regulatory Review

Information from standard Federal and state environmental record sources was provided through Environmental Data Resources (EDR). Data from governmental agency lists are updated and integrated into one database, which is updated as these data are released. This integrated database also contains postal service data in order to enhance address matching. Records from one government source are compared to records from another to clarify any address ambiguities. The demographic and geographic information available provides assistance in identifying and managing risk. The accuracy of the geocoded locations is approximately +/-300 feet.

In some cases, location information supplied by the regulatory agencies is insufficient to allow the database companies to geocoded facility locations. These facilities are listed under the unmappables section within the EDR report. A review of the unmappable facilities indicated that none of these facilities are within the ASTM minimum search distance from the Property.

Regulatory information from the following database sources regarding possible recognized environmental conditions, within the ASTM minimum search distance from the Property, was reviewed. Specific facilities are discussed below if determined likely that a potential recognized environmental condition has resulted at the Property from the listed facilities. Please refer to Appendix C-1 for a complete listing.

Federal NPL

The National Priorities List (NPL) is the Environmental Protection Agency (EPA) database of uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund Program.

The Property is not listed as a NPL facility. No NPL sites are located within one mile of the Property.

Federal CERCLIS List

The Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) list is a compilation of sites that the EPA has investigated or is currently investigating for a release or threatened release of hazardous substances.

The Property is not listed as a CERCLIS facility. No CERCLIS sites are listed within one-half mile of the Property.

Federal CERCLIS NFRAP Sites List

The CERCLIS No Further Remedial Action Planned (NFRAP) List is a compilation of sites that the EPA has investigated, and has determined that the facility does not pose a threat to human health or the environment, under the CERCLA framework.

The Property is not listed as a CERCLIS-NFRAP facility. No CERCLIS-NFRAP sites are listed on or adjoining the Property.

Federal Resource Conservation and Recovery Act (RCRA) CORRACTS TSD Facilities List

The EPA Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Treatment, Storage and Disposal (TSD) database is a compilation by the EPA of reporting facilities that treat, store or dispose of hazardous waste. The CORRACTS database is the EPA's list of treatment storage or disposal facilities subject to corrective action under RCRA.

The Property is not listed as a RCRA CORRACTS TSD facility. No RCRA CORRACTS TSD facilities are listed within one mile of the Property.

Federal Resource Conservation and Recovery Act (RCRA) Non-CORRACTS TSD Facilities List

The RCRA TSD database is a compilation by the EPA of reporting facilities that treat, store or dispose of hazardous waste.

The Property is not listed as a RCRA-TSD facility. No RCRA TSD sites are listed within one-half mile of the Property.

Federal RCRA Generator List

The RCRA program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Generators database is a compilation by the EPA of reporting facilities that generate hazardous waste.

The Property is not listed as a RCRA facility. No RCRA Generator facilities are listed on the Property or on the adjacent properties.

Federal Emergency Response Notification System (ERNS)

The Emergency Response Notification System (ERNS) is a national database used to collect information or reported release of oil or hazardous substances.

No ERNS sites were listed on the Property.

State Priority List

The Department of Toxic Substances Control maintains a State Priority List (SPL) of sites considered to be actually or potentially contaminated and presenting a possible threat to human health and the environment.

The Property is not listed as a SPL facility. No SPL sites are listed within one mile of the Property.

State CERCLIS-Equivalent List

The Department of Toxic Substances Control maintains a State CERCLIS-equivalent list (SCL) of sites under investigation that could be actually or potentially contaminated and presenting a possible threat to human health and the environment.

The Property is not listed as a State CERCLIS facility. No SCL sites are listed within one-half mile of the Property.

Solid Waste/Landfill Facilities (SWLF)

A database of SWLF is prepared by the Integrated Waste Management Board.

The Property is not listed as a SWLF facility. No SWLF facilities are listed within one-half mile of the Property.

State Leaking Underground Storage Tank List (LUST)

The Regional Water Quality Control Board compiles lists of all leaks of hazardous substances from underground storage tanks.

The Property is not listed as a LUST facility. No LUST sites are listed within one-half mile of the Property.

State Underground Storage Tank List (UST)

The Regional Water Quality Control Board compiles a list of UST locations.

The Property is not listed as an UST facility. No registered UST facilities are listed adjacent to the Property.

3.1.2 Local Regulatory Review

3.1.2.1 County Recorder/ Assessor

According the San Bernardino County Recorder's Office, no environmentally-related liens or deed restrictions have been recorded against the Property in 2004.

3.1.2.2 Fire Officials

Since there are no addresses associated with the property NAC could not reviewed the index of files related to hazardous materials and USTs at the Property from the San Bernardino County Fire Department.

3.1.2.3 Building Department

Records from City of Rialto Building Department were reviewed for evidence indicating the developmental history of the Property, and for the presence of documentation relative to underground storage tanks. Due to the undeveloped nature of the Property, no permits were available for review.

3.1.2.4 Other Agencies

Because no recognized environmental conditions have been identified, additional agencies were not contacted for this assessment.

3.2 Physical Setting Sources

3.2.1 Topography

The United States Geological Survey (USGS), Devore Quadrangle 7.5 minute series topographic map was reviewed for this ESA. This map was published by the USGS in 1966 and was photorevised in 1988. According to the contour lines on the topographic map, the Property is located at approximately 1,640 feet above mean sea level (MSL). The contour lines in the area of the Property indicate the area is sloping moderately to the southeast. No surface waters are depicted as present on or adjacent to the Property, nor are production wells or other significant surface features depicted on the USGS map.

3.2.2 Soils/Geology

According to the United States Department of Agriculture (USDA) Soil Survey for San Bernardino County (USDA, 1969), the site soil, in an undisturbed condition, is classified as Hanford coarse sandy loam with 2 to 5 percent slopes, good natural drainage and very rapid subsoil permeability, and/or Chino silt or clay loam with somewhat poor natural drainage and moderately slow permeability. Site-specific soil or engineering reports were not available for our review.

Based on a review of documents published by the State of California Department of Conservation, Division of Mines and Geology, the site lies near the boundary between the Peninsular Ranges and Transverse Ranges geomorphic provinces. The site is underlain by Holocene sediments consisting of fan deposits (primarily sand and gravel). The estimated depth to bedrock is 750 feet.

3.2.3 Hydrology

The Property is within the Chino II Groundwater Subbasin of the Upper Santa Ana River Basin. Existing beneficial uses of groundwater in this subbasin, as designated by the California Regional Water Quality Control Board (RWQCB), are municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply. Mr. Kamron Saremi of the RWQCB reported to NAC that groundwater is typically encountered at depths of between 250 and 400 feet below surface grade (bsg) in the site vicinity. Perched groundwater is occasionally encountered at depths of approximately 100 feet bsg. Mr. Saremi indicated the groundwater flow direction is toward the southeast in the site vicinity.

The nearest surface water in the vicinity of the Property is the Lytle Creek Wash located approximately one-quarter of a mile to the northeast of the Property. No settling ponds, lagoons, surface impoundments, wetlands or natural catchbasins were observed at the Property during this investigation.

3.2.4 Flood Zone Information

A review of the Flood Insurance Rate Maps, published by the Federal Emergency Management Agency, was performed. According to Panel Number 06071C8635, dated March 18, 1996, the Property is located in Flood Zone X. Flood Zone X regions consist of areas outside the 500-year floodplain.

3.2.5 Oil and Gas Exploration

The on-site reconnaissance addressed oil and gas exploration at the Property. According to the State of California, Department of Conservation, Division of Oil, Gas and Geothermal Resources, Regional Wildcat Map number W1-6, no operating or abandoned oil or gas wells are on or adjacent to the Property.

3.3 Historical Use Information

According to historical sources, the Property has been undeveloped since at least 1938.

3.3.1 Aerial Photographs

Available aerial photographs dated 1938, 1955, 1970, 1978, 1986, 1991, 1996 and 2001, from the San Bernardino County Flood Control District were reviewed for this Phase I ESA. Additionally, one aerial photograph, dated 1995, was obtained via the internet at www.terraserver.com. A copy of the 1994 photograph is included in the appendices. The photographs are discussed below:

Date:	1938
Scale:	1" = 1000'
Photo I.D. No.:	W-17, E-2-5
Description:	The 1938 photo shows the Property and surrounding properties to be undeveloped.

Date:	1955
Scale:	1" = 1,200'
Photo I.D. No.:	F-34, 4-100
Description:	The 1955 photo shows the Property and surrounding properties to be approximately the same as appeared in the 1938 photograph.

Date:	1970
Scale:	1" = 2,000'
Photo I.D. No.:	C-297, 44
Description:	The 1970 photo shows the Property and surrounding properties to be approximately the same as appeared in the 1955 photograph.

Date:	1978
Scale:	1" = 2,000'
Photo I.D. No.:	C-279, 133
Description:	The 1978 photo shows the Property and surrounding properties to be approximately the same as the 1970 photograph.

Date:	1986
Scale:	1" = 2,000'
Photo I.D. No.:	C-450, 134
Description:	The 1986 photo shows the Property and surrounding properties to be approximately the same as the 1978 photograph.

Date:	1991
Scale:	1" = 2,000'
Photo I.D. No.:	C487, 150
Description:	The 1991 photo shows the Property and surrounding properties to contain the current improvements and/or undeveloped parcels.

Date:	1995
Scale:	1" = 700'
Photo I.D. No.:	None
Description:	The 1995 photo appears approximately the same as the 1991 photograph.

Date:	1996
Scale:	1" = 2,000'
Photo I.D. No.:	C-528, 142
Description:	The 1996 photo appears approximately the same as the 1995 photograph.

Date:	2001
Scale:	1" = 2,000'
Photo I.D. No.:	C-541, 155
Description:	The 2001 photo appears approximately the same as the 1996 photograph.

3.3.2 Fire Insurance Maps

NAC requested historical Sanborn Fire Insurance maps for the Property from Environmental Data Resources (EDR), and was subsequently informed that no such maps for the Property or immediate vicinity are maintained in EDR's collection, which ranges from 1887-1994. A copy of the "no coverage" notification is included in Appendix B, herein.

3.3.3 City Directories

NAC attempted to review historical city directories at the City of Ontario Main Library and the San Bernardino State University Library. City directories were unavailable for review at these two libraries.

3.3.4 Chain of Title

A 50-year chain-of-title was not requested for this study. Historical use of the Property was researched using other standard historical sources.

3.3.5 Additional Environmental Record Sources

Previous environmental reports were not provided to NAC for review.

3.3.6 Historical Use Information on Adjoining Properties

By review of the standard historical sources referenced above, the historical uses of the adjoining properties are summarized below:

North: Prior to the current use as a commercial warehouse, the property to the north was undeveloped.

South: The adjoining property to the south has been undeveloped since at least 1938.

East: Prior to the current use as a commercial warehouse, the property to the east was undeveloped.

West: Prior to the current use as a pipe manufacturing facility, the property to the west was undeveloped.

4.0 SITE RECONNAISSANCE

The Property was inspected by Drew Kerr on June 24, 2004. The weather at the time of the site visit was sunny and clear. Due to the undeveloped nature of the Property, NAC was instructed to conduct the site reconnaissance without the benefit of an escort.

4.1 General Site Characteristics

4.1.1 Solid Waste Disposal

Solid waste is not generated at the Property. However, the Property was observed to contain scattered areas of construction debris. No hazardous materials or petroleum products was observed within the piles of debris.

4.1.2 Surface Water Drainage

Surface water drainage from the Property is via sheet flow to the curb and gutter systems located along the surrounding streets.

4.1.3 Wells and Cisterns

No aboveground evidence of wells or cisterns was observed during the site reconnaissance.

4.1.4 Wastewater

No indications of industrial wastewater disposal or treatment facilities were observed during the on-site reconnaissance.

4.1.5 Additional Site Observations

No additional relevant general site characteristics were observed.

4.2 Potential Environmental Conditions

4.2.1 Hazardous Materials and Petroleum Products Used or Stored at the Site

No evidence of the use of hazardous materials or wastes was observed on the Property.

4.2.1.1 Unlabeled Containers and Drums

No unlabeled containers or drums were observed during the site reconnaissance.

4.2.1.2 Disposal Locations of Regulated/ Hazardous Waste

No obvious indications of hazardous waste generation, storage or disposal were observed on the Property or were indicated during interviews.

4.2.2 Evidence of Releases

No obvious indications of hazardous material or petroleum product releases, such as stained areas or stressed vegetation, was observed during the site reconnaissance or reported during interviews.

4.2.3 Polychlorinated Biphenyls (PCBs)

No potential PCB-containing equipment (oil-filled switches, hoists, lifts, dock levelers, hydraulic elevators, etc), was observed during the site reconnaissance.

4.2.4 Landfills

No evidence of on-site landfilling was observed or reported during the site reconnaissance. However, the Property was observed to contain scattered areas of construction debris. No hazardous materials or petroleum products was observed within the piles of debris. Given the surficial nature of the construction debris and the absence of hazardous materials observed within the construction debris, the presence of construction debris at the Property does not represent a recognized environmental condition at the Property.

4.2.5 Pits, Ponds, Lagoons, Sumps, and Catch Basins

No evidence of on-site pits, ponds or lagoons was observed or reported during the site reconnaissance. No evidence of sumps or catch basins, other than used for stormwater removal, was observed or reported during the site reconnaissance.

4.2.6 On-Site ASTs and USTs

No evidence of aboveground or underground storage tanks was observed during the site reconnaissance or reported during interviews.

4.2.7 Radiological Hazards

No radiological substances or equipment was observed or reported stored on the Property.

4.2.8 Drinking Water

No utilities are provided to the Property.

4.2.9 Additional Hazard Observations

No additional hazards were observed on the Property.

4.2.10 Asbestos-Containing Materials (ACM)

An asbestos evaluation was not required by the scope of services.

4.2.11 Radon

The US EPA has prepared a map to assist National, State, and local organizations to target their resources and to implement radon-resistant building codes. The map divides the country into three Radon Zones, Zone 1 being those areas with the average predicted indoor radon concentration in residential dwellings exceeding the EPA Action limit of 4.0 picoCuries per Liter (pCi/L). It is important to note that the EPA has found homes with elevated levels of radon in all three zones, and the EPA recommends site specific testing in order to determine radon levels at a specific location. However, the map does give a valuable indication of the propensity of radon gas accumulation in structures. Review of the EPA Map of Radon Zones places the Property in Zone 3, where average predicted radon levels are less than 2.0 pCi/L.

4.2.12 Lead-Based Paint

A lead-based paint screening was not conducted in conjunction with this assessment.

5.0 INTERVIEWS

Interviews were conducted with the following individuals. Findings from these interviews are discussed in the appropriate sections in this report.

Site

- M. Story, Rialto Planning Department, (909) 820-2535

Surrounding Area

- M. Story, Rialto Planning Department, (909) 820-2535

Regulatory Officials

- Elizabeth King, San Bernardino County Fire Department, (909) 884-4056

6.0 FINDINGS AND CONCLUSIONS

6.1 Findings

6.1.1 On-Site Environmental Conditions

No on-site environmental conditions were identified during the course of this assessment.

6.1.2 Off-Site Environmental Conditions

No off-site environmental conditions were identified that were considered likely to impact the Property.

6.1.3 Previously Resolved Environmental Conditions

No historical recognized environmental conditions were identified in connection with the Property during the course of this assessment.

6.1.4 De Minimis Environmental Conditions

No *de minimis* environmental conditions were identified in connection with the Property during the course of this assessment.

6.2 Opinion

Based upon the methodologies described herein, no RECs were identified during the course of this Phase I ESA.

6.3 Conclusions

NAC has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-00 of the Property at the Northwest Corner of Locust Avenue and Lowell Street, Rialto, California, the Property. Any exceptions to or deletions from this practice are described in Section 1.4 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the Property.

6.4 Recommendations

Based on the conclusions of this assessment, NAC does not recommend further investigation of the Property at this time.

6.5 Deviations

This Phase I ESA substantially complies with the scope of services and ASTM 1527-00, as amended, except for exceptions and/or limiting conditions as discussed in Section 1.4.

7.0 REFERENCES

Reports, Plans, and Other Documents Reviewed:

The EDR Radius Map Report, Barrington Place, NW Corner of Locust and Lowell, Rialto, California, Environmental Data Resources, Inc., June 29, 2004.

State of California, Department of Conservation, Geologic Map of the Santa Ana Sheet, 1969.

State of California, Department of Conservation, Division of Oil and Gas, Map W1-7, October 1993.

Federal Emergency Management Agency, Federal Insurance Administration, National Flood Insurance Program, Flood Insurance Map, Community Panel Number 06071C8635F Map March 18, 1986.

USGS - 7.5 Minute Topographic Quadrangle of Devore, CA, 1966, photorevised 1981.

Agencies Contacted:

City of Rialto

Building Department

Planning Department

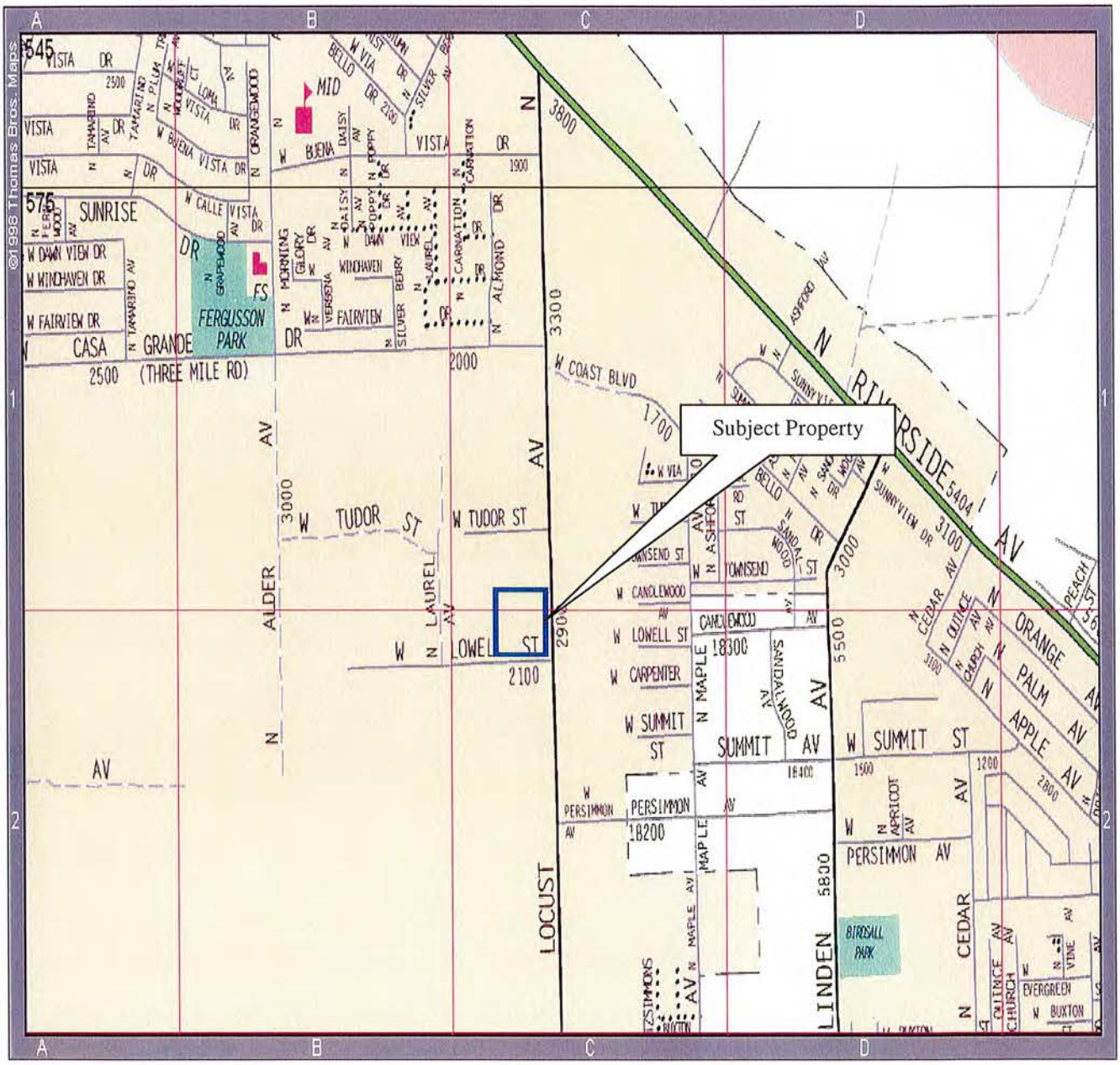
County of San Bernardino

Fire Department

NAC

FIGURES

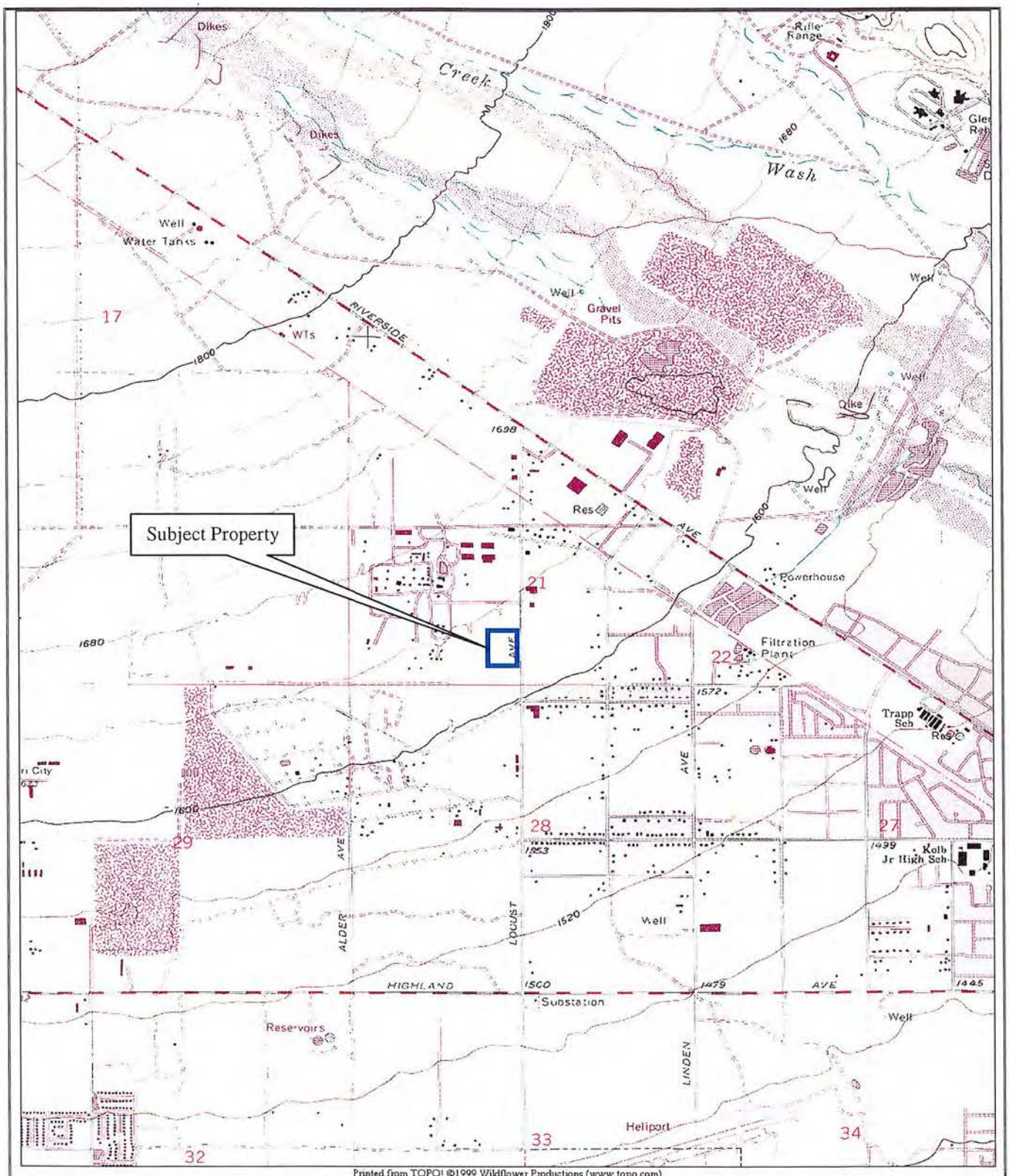
SITE VICINITY MAP
SITE PLAN
SITE TOPOGRAPHIC MAP



NATIONAL ASSESSMENT CORPORATION 1320 HARBOR BAY PARKWAY, SUITE 260 ALAMEDA, CA 94502 (510) 337-2855	**SITE VICINITY MAP**	N↑
NAC PROJECT NO. 04-20311.1	SITE NAME: Northwest Corner of Locust and Lowell	



NATIONAL ASSESSMENT CORPORATION 1320 HARBOR BAY PARKWAY, SUITE 260 ALAMEDA, CA 94502 (510) 337-2855	**SITE PLAN**	N↑
NAC PROJECT NO. 04-20311.1	SITE NAME: Northwest Corner of Locust and Lowell Legend: Drawing NOT to SCALE	



Printed from TOPO! ©1999 Wildflower Productions (www.topo.com)

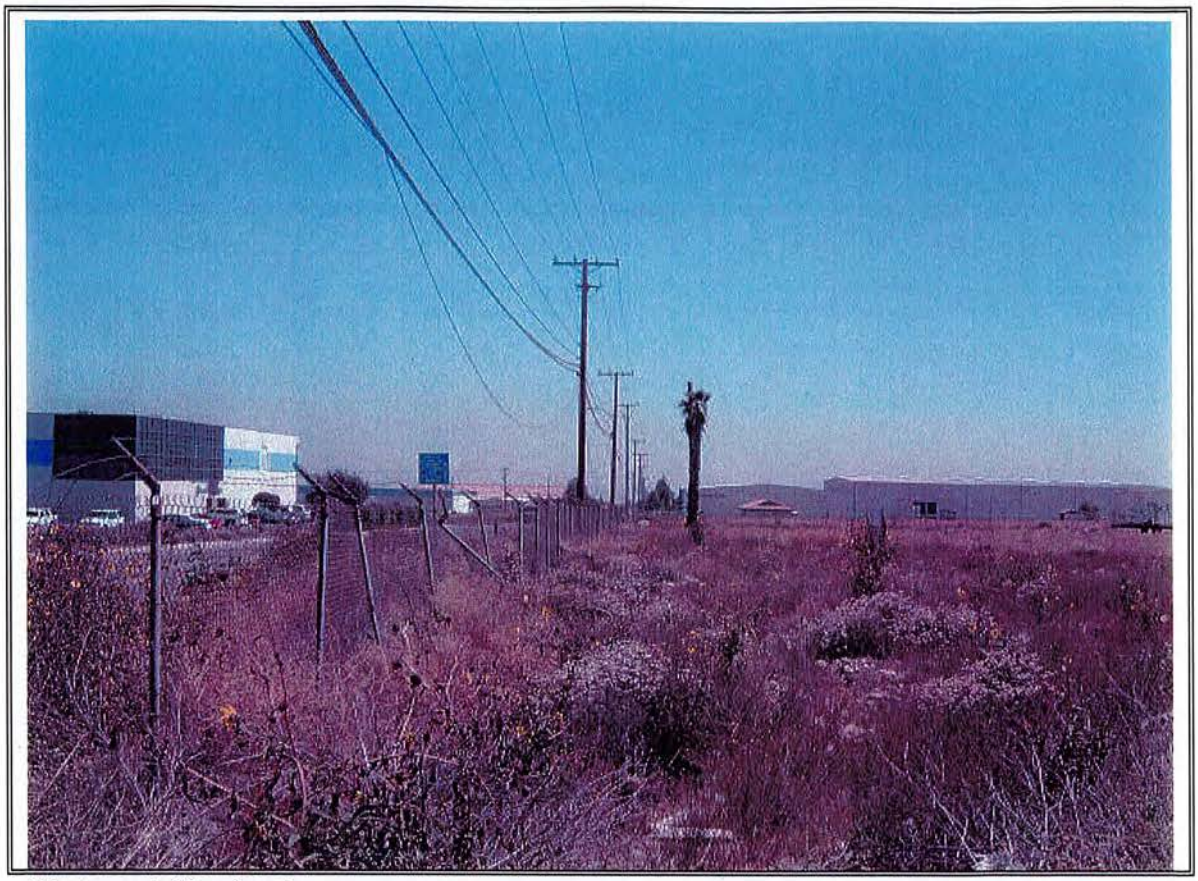
NATIONAL ASSESSMENT CORPORATION 1320 HARBOR BAY PARKWAY, SUITE 260 ALAMEDA, CA, 94502 (512) 337-2855	**TOPOGRAPHIC MAP**	↑N
NAC PROJECT NO. 04-20311.1	Source: U.S.G.S. 7.5 Minute Topographic Map Devore, Quadrangle, 1966 and 1988	

NAC

APPENDIX A

SITE PHOTOGRAPHS

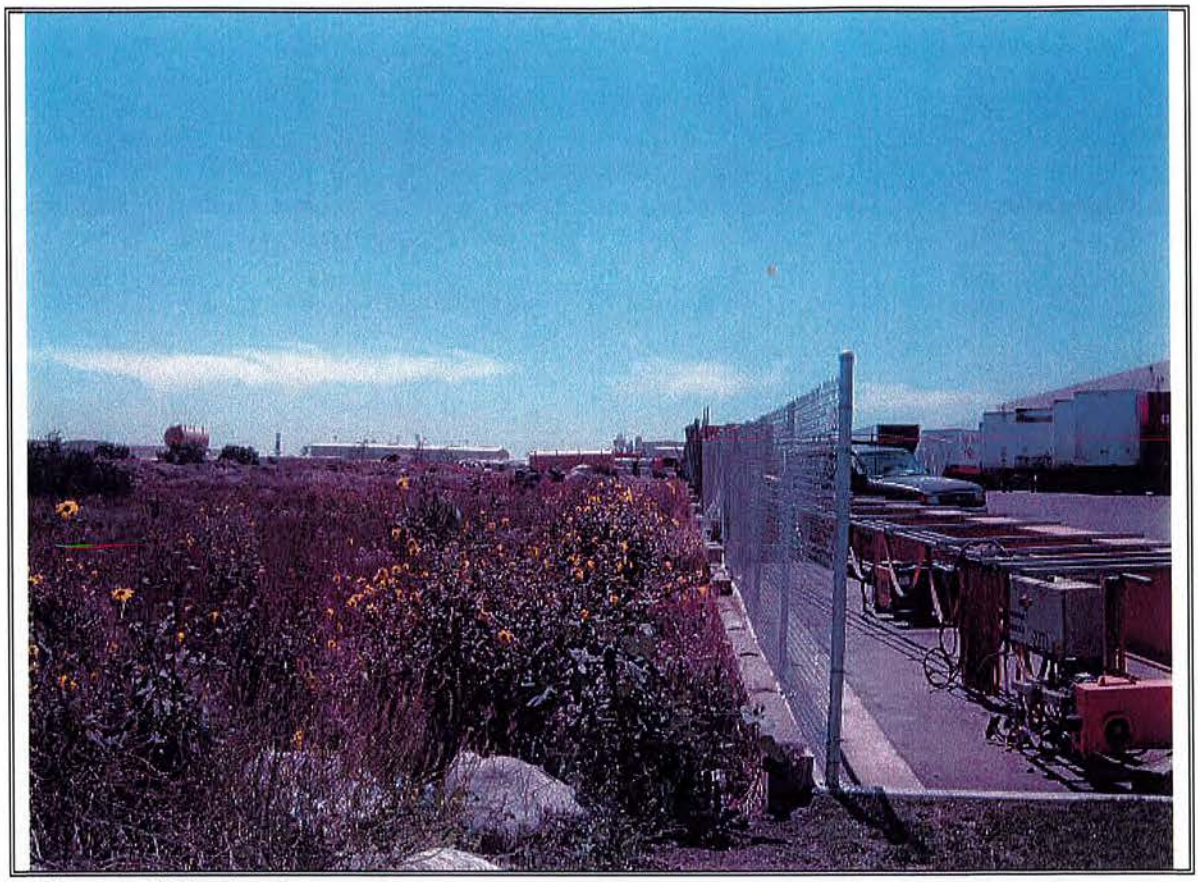
PHOTOGRAPH LOG	
PHOTOGRAPH NUMBER	**PHOTOGRAPH REVIEW AND COMMENTS**
1	View facing south along the eastern property line.
2	View facing southwest from the northeastern corner of the Property.
3	View facing west along the northern property line.
4	View showing the central portion of the Property.
5	View showing the central portion of the Property.
6	View facing north from the southern portion of the Property.
7	View facing north from the southern portion of the Property.
8	View along the western portion of the Property facing north.
9	View along Lowell Street facing west.
10	View along Lowell Street facing east.
11	View showing the adjoining property to the south.
12	View showing the adjoining property to the north.



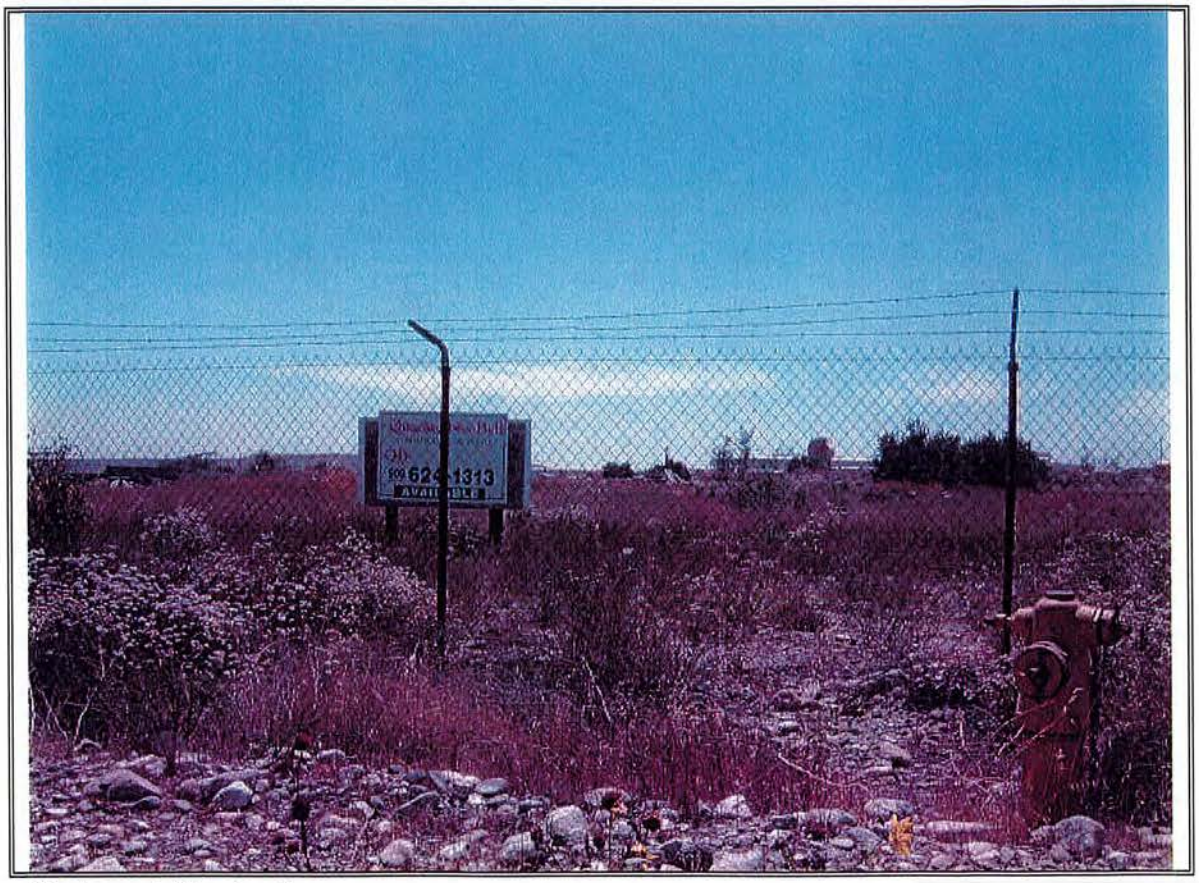
Photograph Number 1



Photograph Number 2



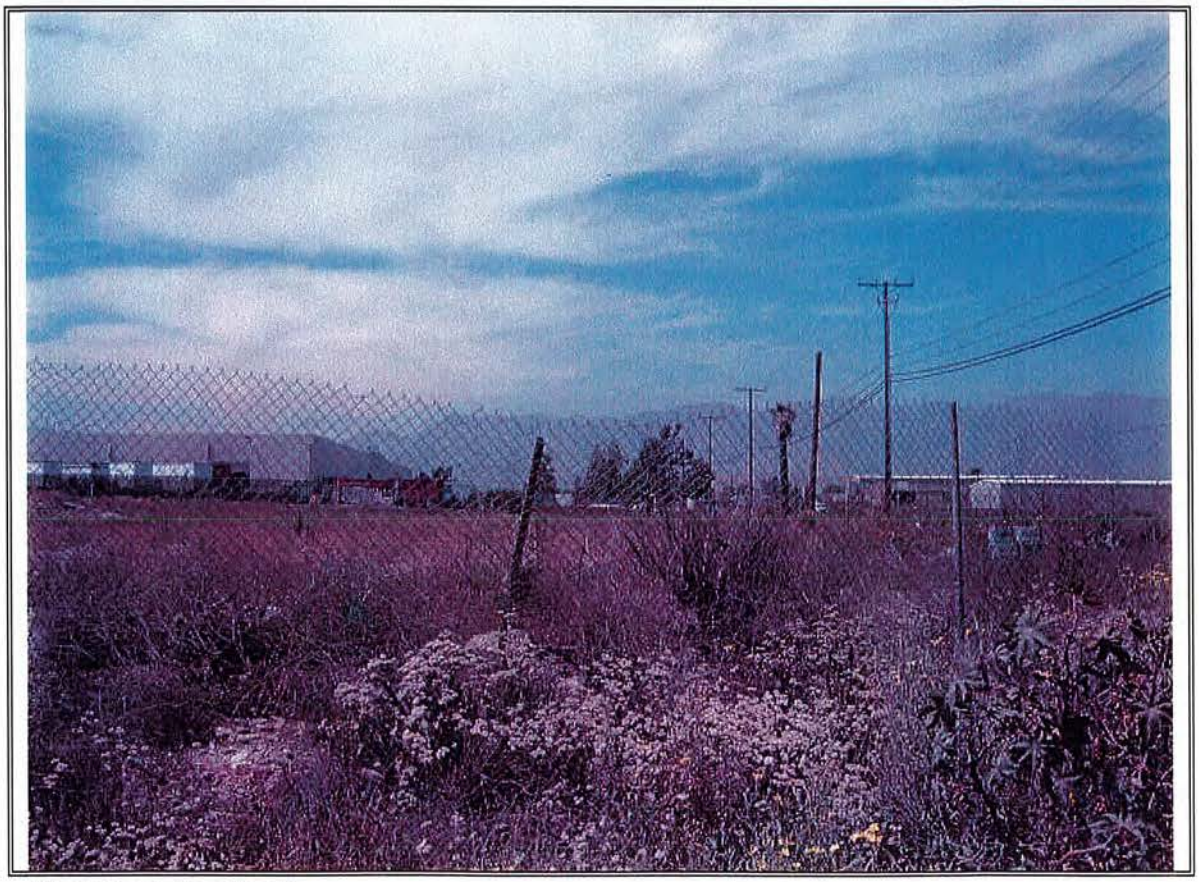
Photograph Number 3



Photograph Number 4



Photograph Number 5



Photograph Number 6



Photograph Number 7



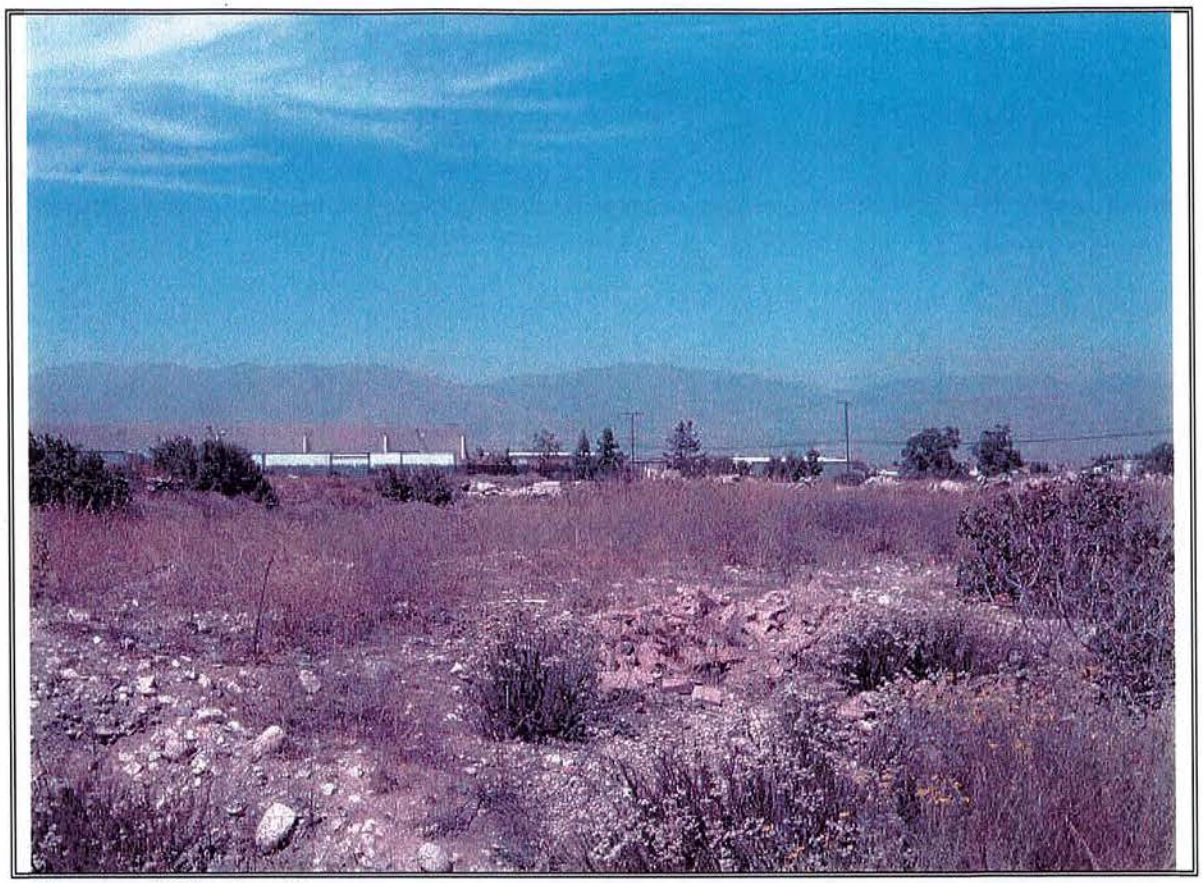
Photograph Number 8



Photograph Number 9



Photograph Number 10



Photograph Number 11



Photograph Number 12

NAC

APPENDIX B

HISTORICAL RESEARCH DOCUMENTATION

NAC

EXHIBIT B-1

AERIAL PHOTOGRAPHS



NATIONAL ASSESSMENT CORPORATION 1320 HARBOR BAY PARKWAY, SUITE 260 ALAMEDA, CALIFORNIA 94502 (510) 337-2855	**AERIAL PHOTOGRAPH**	↑ N
NAC Project No. 04-20311.1	Scale: 1" = 700' Date: 1995 Photo ID No.: None Source: www.terraserver.com	

NAC

EXHIBIT B-2

FIRE INSURANCE MAPS

EDR™ Environmental Data Resources Inc

"Linking Technology with Tradition"

Sanborn® Map Report

Ship To: Tamara Synigal
LandAmerica Assessment
4348 Mt. Putman Avenue
San Diego, CA 92117

Order Date: 6/29/2004 **Completion Date:** 6/30/2004
Inquiry #: 1221475.2s
P.O. #: NW Corner of Locust
Site Name: NW Corner of Locust and Lowell
Address: NW Corner of Locust and Lowell
City/State: Rialto, CA 92377
Cross Streets:

Customer Project: 04-20311
6075643TMM 858-279-8588

This document reports that the largest and most complete collection of Sanborn fire insurance maps has been reviewed based on client supplied information, and fire insurance maps depicting the target property at the specified address were not identified.

NO COVERAGE

This report contains information obtained from a variety of public and other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL EDR BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. It can not be concluded from this report that coverage information for the target and surrounding properties does not exist from other sources. Any analyses, estimates, ratings or risk codes provided in this report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Any liability on the part of EDR is strictly limited to a refund of the amount paid for this report.

Copyright 2004 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc. or its affiliates, is prohibited without prior written permission. EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

NAC

EXHIBIT B-3

CITY DIRECTORIES

NOT APPLICABLE FOR THIS REPORT

NAC

EXHIBIT B-4

TITLE SEARCH RECORDS

NOT APPLICABLE FOR THIS REPORT

NAC

APPENDIX C

REGULATORY RECORDS DOCUMENTATION

NAC

EXHIBIT C-1

MAPPED DATABASE REPORT

The EDR Radius Map™ Report

Project: 04-20311

NW Corner of Locust and Lowell
NW Corner of Locust and Lowell
Rialto, CA 92377

Inquiry Number: 01221475.1r

June 29, 2004



EDR™ Environmental
Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06460

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

FORM-TMM

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	6
Orphan Summary	14
Government Records Searched/Data Currency Tracking	GR-1
Topographic Map	TM-1

GEOCHECK ADDENDUM

GeoCheck - Not Requested

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This report contains information obtained from a variety of public and other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL EDR BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES.** It can not be concluded from this report that coverage information for the target and surrounding properties does not exist from other sources. Any analyses, estimates, ratings or risk codes provided in this report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Any liability on the part of EDR is strictly limited to a refund of the amount paid for this report.

Copyright 2004 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. Search distances are per ASTM standard or custom distances requested by the user.

TARGET PROPERTY INFORMATION

ADDRESS

NW CORNER OF LOCUST AND LOWELL
RIALTO, CA 92377

COORDINATES

Latitude (North):	34.152200 - 34° 9' 7.9"
Longitude (West):	117.409600 - 117° 24' 34.6"
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	462240.9
UTM Y (Meters):	3778912.8
Elevation:	1624 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property:	34117-B4 DEVORE, CA
Source:	USGS 7.5 min quad index

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the ASTM E 1527-00 search radius around the target property for the following databases:

FEDERAL ASTM STANDARD

NPL ---------- National Priority List
CERCLIS ---------- Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP ---------- CERCLIS No Further Remedial Action Planned
CORRACTS ---------- Corrective Action Report
RCRIS-TSD ---------- Resource Conservation and Recovery Information System
RCRIS-LQG ---------- Resource Conservation and Recovery Information System
RCRIS-SQG ---------- Resource Conservation and Recovery Information System
ERNS ---------- Emergency Response Notification System

STATE ASTM STANDARD

AWP ---------- Annual Workplan Sites

Cal-Sites..... Calsites Database
Notify 65..... Proposition 65 Records
Toxic Pits..... Toxic Pits Cleanup Act Sites
SWF/LF..... Solid Waste Information System
WMUDS/SWAT..... Waste Management Unit Database
LUST..... Leaking Underground Storage Tank Information System
CA BOND EXP. PLAN..... Bond Expenditure Plan
UST..... List of Underground Storage Tank Facilities
VCP..... Voluntary Cleanup Program Properties
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land
INDIAN UST..... Underground Storage Tanks on Indian Land
HIST UST..... Hazardous Substance Storage Container Database

FEDERAL ASTM SUPPLEMENTAL

DOD..... Department of Defense Sites
US BROWNFIELDS..... A Listing of Brownfields Sites
FUDS..... Formerly Used Defense Sites
INDIAN RESERV..... Indian Reservations
SSTS..... Section 7 Tracking Systems

STATE OR LOCAL ASTM SUPPLEMENTAL

DEED..... List of Deed Restrictions
SCH..... School Property Evaluation Program
REF..... Unconfirmed Properties Referred to Another Agency
NFA..... No Further Action Determination
NFE..... Properties Needing Further Evaluation

BROWNFIELDS DATABASES

US BROWNFIELDS..... A Listing of Brownfields Sites
VCP..... Voluntary Cleanup Program Properties

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STATE ASTM STANDARD

CHMIRS: The California Hazardous Material Incident Report System contains information on reported hazardous material incidents, i.e., accidental releases or spills. The source is the California Office of Emergency Services.

A review of the CHMIRS list, as provided by EDR, and dated 12/31/2003 has revealed that there are 2 CHMIRS sites within approximately 1 mile of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
Not reported	NEAR 3221 NORTH RIVERSI	1/2 - 1 ENE	A3	8
Not reported	2824 N LOCUST ST	1/2 - 1 S	4	9

CORTESE: This database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release and all solid waste disposal facilities from which there is known migration. The source is the California Environmental Protection Agency/Office of Emergency Information.

A review of the Cortese list, as provided by EDR, has revealed that there are 2 Cortese sites within approximately 1 mile of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
OWL ROCK PRODUCTS	***3221 RIVERSIDE AVE***	***1/2 - 1 ENE***	***A2***	***6***
RIB ROOF	***2745 LOCUST AVE***	***1/2 - 1 S***	***5***	***11***

CA FID: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

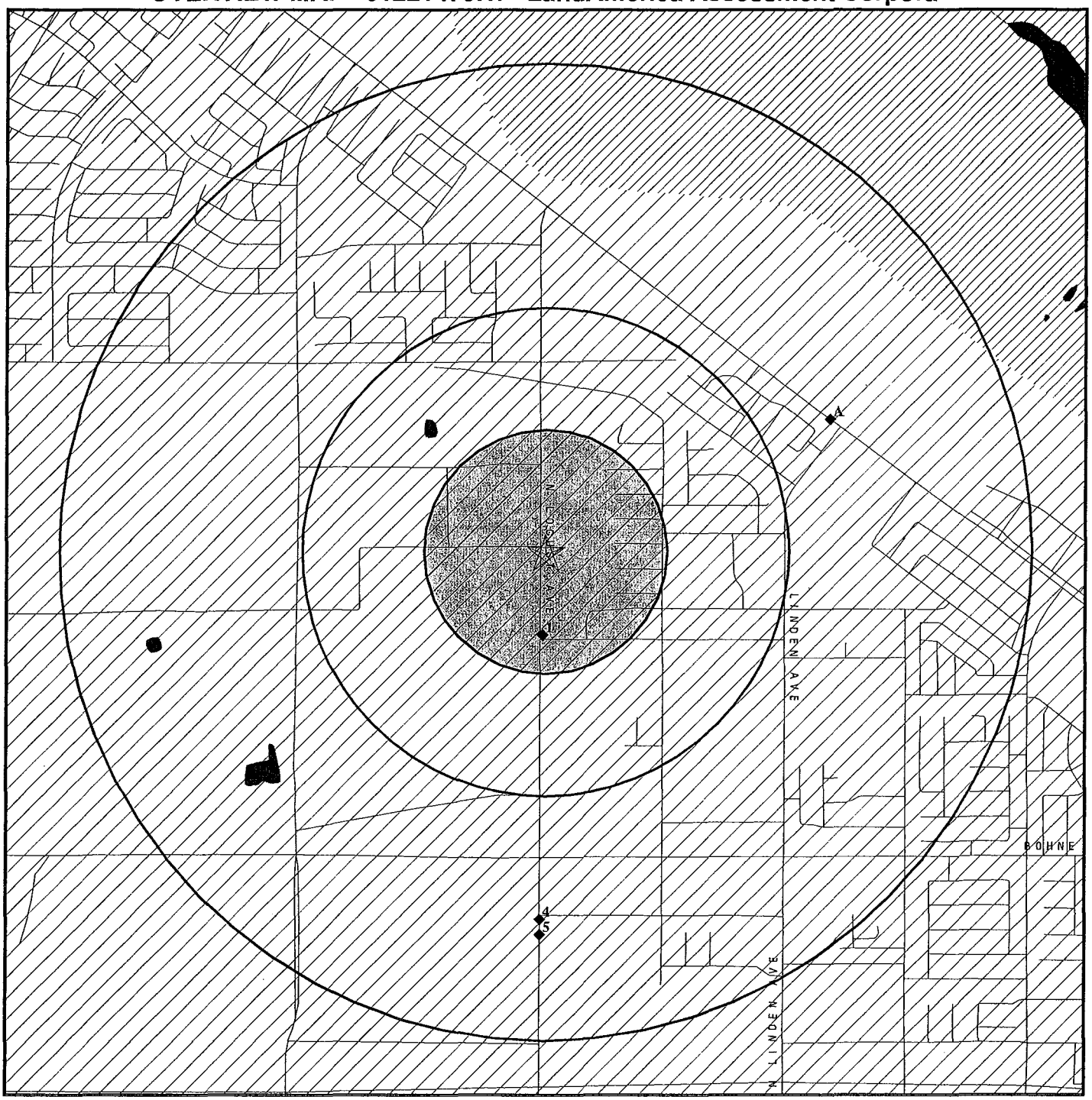
A review of the CA FID UST list, as provided by EDR, has revealed that there is 1 CA FID UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
MARCH PIPE COMPANY	2750 N LOCUST ST	1/8 - 1/4 S	1	6

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
CACTUS DUMP (RIALTO)	SWF/LF
MID-VALLEY SANITARY LANDFILL	SWF/LF

OVERVIEW MAP - 01221475.1r - LandAmerica Assessment Corpora

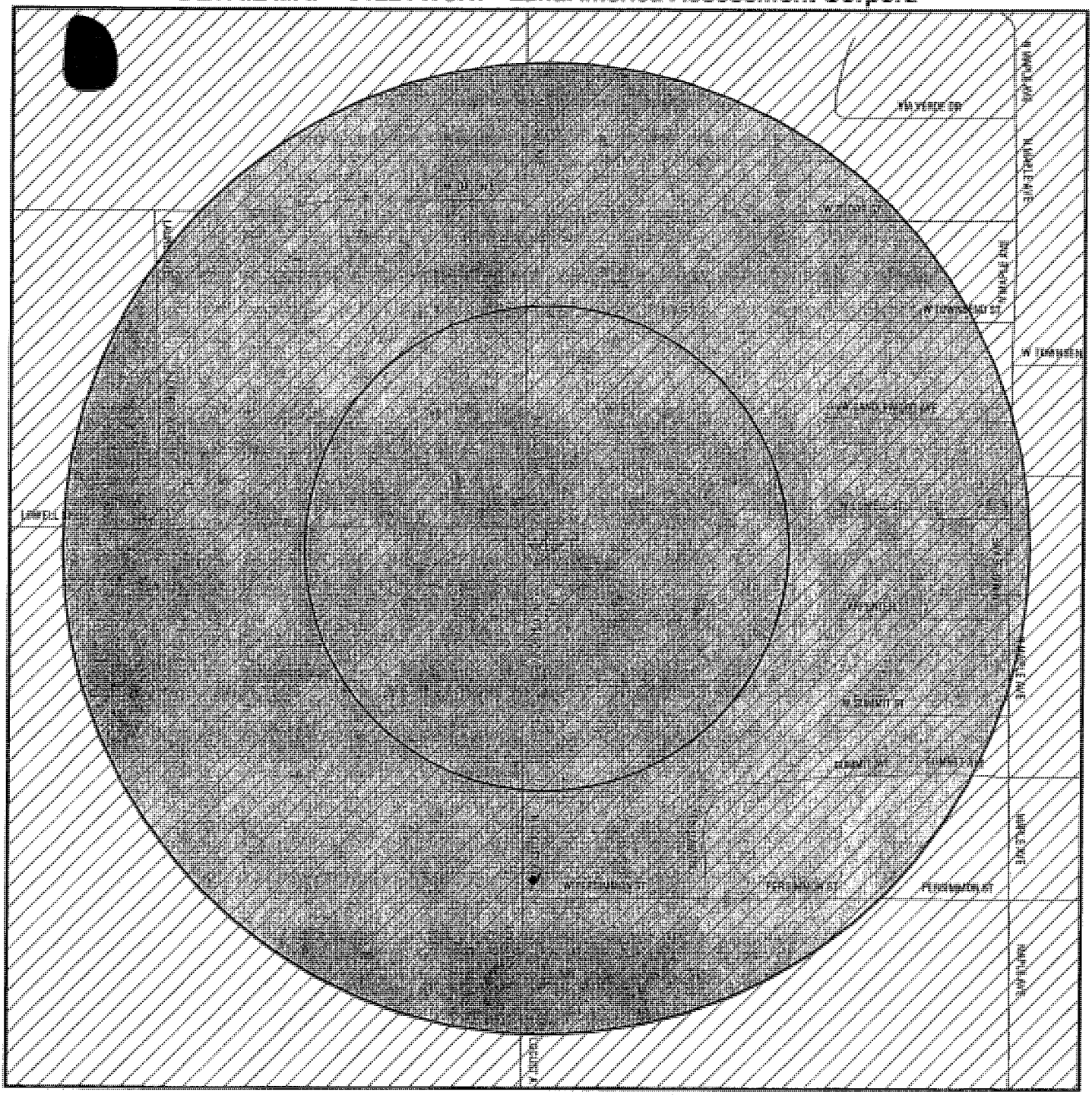


- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- Coal Gasification Sites
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Areas of Concern

TARGET PROPERTY:	NW Corner of Locust and Lowell	CUSTOMER:	LandAmerica Assessment Corpora
ADDRESS:	NW Corner of Locust and Lowell	CONTACT:	Tamara Synigal
CITY/STATE/ZIP:	Rialto CA 92377	INQUIRY #:	01221475.1r
LAT/LONG:	34.1522 / 117.4096	DATE:	June 29, 2004 1:00 pm

Copyright © 2004 EDR, Inc. © 2003 GDT, Inc. Rel. 07/2003. All Rights Reserved.

DETAIL MAP - 01221475.1r - LandAmerica Assessment Corpora



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- Coal Gasification Sites
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites

0 1/16 1/8 1/4 Miles

- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Areas of Concern

TARGET PROPERTY:	NW Corner of Locust and Lowell	CUSTOMER:	LandAmerica Assessment Corpora
ADDRESS:	NW Corner of Locust and Lowell	CONTACT:	Tamara Synigal
CITY/STATE/ZIP:	Rialto CA 92377	INQUIRY #:	01221475.1r
LAT/LONG:	34.1522 / 117.4096	DATE:	June 29, 2004 1:00 pm

Copyright © 2004 EDR, Inc. © 2003 GDT, Inc. Rel. 07/2003. All Rights Reserved.

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL ASTM STANDARD								
NPL		1.000	0	0	0	0	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		0.250	0	0	NR	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRIS-TSD		0.500	0	0	0	NR	NR	0
RCRIS Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		0.250	0	0	NR	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
STATE ASTM STANDARD								
AWP		1.000	0	0	0	0	NR	0
Cal-Sites		1.000	0	0	0	0	NR	0
CHMIRS		1.000	0	0	0	2	NR	2
Cortese		1.000	0	0	0	2	NR	2
Notify 65		1.000	0	0	0	0	NR	0
Toxic Pits		TP	NR	NR	NR	NR	NR	0
State Landfill		0.500	0	0	0	NR	NR	0
WMUDS/SWAT		0.500	0	0	0	NR	NR	0
LUST		0.500	0	0	0	NR	NR	0
CA Bond Exp. Plan		1.000	0	0	0	0	NR	0
UST		0.250	0	0	NR	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
INDIAN LUST		0.500	0	0	0	NR	NR	0
INDIAN UST		TP	NR	NR	NR	NR	NR	0
CA FID UST		0.250	0	1	NR	NR	NR	1
HIST UST		0.250	0	0	NR	NR	NR	0
FEDERAL ASTM SUPPLEMENTAL								
DOD		TP	NR	NR	NR	NR	NR	0
US BROWNFIELDS		TP	NR	NR	NR	NR	NR	0
FUDS		1.000	0	0	0	0	NR	0
INDIAN RESERV		1.000	0	0	0	0	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
STATE OR LOCAL ASTM SUPPLEMENTAL								
DEED		TP	NR	NR	NR	NR	NR	0
SCH		TP	NR	NR	NR	NR	NR	0
REF		TP	NR	NR	NR	NR	NR	0
NFA		TP	NR	NR	NR	NR	NR	0
NFE		TP	NR	NR	NR	NR	NR	0
BROWNFIELDS DATABASES								
US BROWNFIELDS		TP	NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
VCP		0.500	0	0	0	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID
Direction
Distance
Distance (ft.)
Elevation | Site | Database(s) | EDR ID Number / EPA ID Number

1
South
1/8-1/4
903 ft.

MARCH PIPE COMPANY
2750 N LOCUST ST
RIALTO, CA 92376

CA FID UST | **S101591515** / **N/A**

Relative:
Lower

Actual:
1603 ft.

FID:

Facility ID:	36008292	Regulate ID:	Not reported
Reg By:	Active Underground Storage Tank Location		
Cortese Code:	Not reported	SIC Code:	Not reported
Status:	Active	Facility Tel:	Not reported
Mail To:	Not reported 5800 S EASTERN AVE RIALTO, CA 92376		
Contact:	Not reported	Contact Tel:	Not reported
DUNs No:	Not reported	NPDES No:	Not reported
Creation:	10/22/93	Modified:	00/00/00
EPA ID:	Not reported		
Comments:	Not reported		

A2
ENE
1/2-1
3402 ft.

OWL ROCK PRODUCTS
3221 RIVERSIDE AVE
RIALTO, CA 92392

LUST **Cortese** | **S105025768** / **N/A**

Site 1 of 2 in cluster A

Relative:
Lower

Actual:
1603 ft.

State LUST:

Cross Street:	SIERRA		
Qty Leaked:	0		
Case Number	083602346T		
Reg Board:	8		
Chemical:	Diesel		
Lead Agency:	Local Agency		
Local Agency :	36000L		
Case Type:	Soil only		
Status:	Case Closed		
Abate Method:	Excavate and Dispose - remove contaminated soil and dispose in approved site		
Review Date:	Not reported	Confirm Leak:	Not reported
Workplan:	7/23/93 0:00	Prelim Assess:	7/23/93 0:00
Pollution Char:	Not reported	Remed Plan:	Not reported
Remed Action:	Not reported		
Monitoring:	Not reported		
Close Date:	1/24/94 0:00		
Release Date:	07/28/1993		
Cleanup Fund Id :	Not reported		
Discover Date :	07/09/1993		
Enforcement Dt :	Not reported		
Enf Type:	Not reported		
Enter Date :	12/22/93 0:00		
Funding:	Not reported		
Staff Initials:	CR2		
How Discovered:	Tank Closure		
How Stopped:	Not reported		
Interim :	Yes		
Leak Cause:	UNK		
Leak Source:	UNK		
MTBE Date :	Not reported		
Max MTBE GW :	Not reported		
MTBE Tested:	Not Required to be Tested.		
Priority:	Not reported		
Local Case # :	93035		

OWL ROCK PRODUCTS (Continued) **S105025768**

Beneficial: Not reported
Staff : NOM
GW Qualifier : Not reported
Max MTBE Soil : Not reported
Soil Qualifier : Not reported
Hydr Basin #: UPPER SANTA ANA VALL
Operator : Not reported
Oversight Prgm: LUST
Review Date : 4/13/94 0:00
Stop Date : 07/09/1993
Work Suspended : Not reported
Responsible Party OWL ROCK PRODUCTS
RP Address: P.O. BOX 330, ARCADIA CA 91006
Global Id: T0607100299
Org Name: Not reported
Contact Person: Not reported
MTBE Conc: Not reported
Mtbe Fuel: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported

LUST Region 8:
Cross Street: SIERRA
Region: 8
Regional Board: 08
Local Case Num: 93035
Facility Status: Case Closed
Staff: NOM
Lead Agency: Local Agency
Local Agency: 36000L
Abate Method: Excavate and Dispose - remove contaminated soil and dispose in approved site
Qty Leaked: Not reported
County: San Bernardino
Review Date: Not reported
Workplan: 7/23/1993
Pollution Char: Not reported
Remed Action: Not reported
Close Date: 1/24/94
Cleanup Fund Id : Not reported
Discover Date : 7/9/1993
Enforcement Dt : Not reported
Enf Type: Not reported
Enter Date : 12/22/1993
Funding: Not reported
Staff Initials: CR2
How Discovered: Tank Closure
How Stopped: Not reported
Interim : Yes
Lat/Lon : 34.1561044 / -117.3995145
Leak Cause: UNK
Leak Source: UNK
Beneficial: Not reported
MTBE Date : Not reported
MTBE Tested : NRQ
Confirm Leak: Not reported
Prelim Assess: 7/23/1993
Remed Plan: Not reported
Monitoring: Not reported

OWL ROCK PRODUCTS (Continued) **S105025768**

Max MTBE GW : Not reported
GW Qualifies : Not reported
Max MTBE Soil : Not reported
Soil Qualifies : Not reported
Hydr Basin #: UPPER SANTA ANA VALL
Oversight Prgm : LUST
Priority : Not reported
Work Suspended : Not reported
Waste Disch Global Id: T0607100299
MTBE Class: *
Case Type: S
How Stopped Date: 7/9/1993
Organization Name: Not reported
Contact Person: Not reported
MTBE Concentration: 0
MTBE Fuel: 0
Case Number: 083602346T
Substance: 12034
Staff: NOM

CORTESE:
Region: CORTESE
Fac Address 2: 3221 RIVERSIDE AVE

A3 **CHMIRS** **S105629607**
ENE **NEAR 3221 NORTH RIVERSIDE AVE** **N/A**
1/2-1 **RIALTO, CA**
3406 ft.

Site 2 of 2 in cluster A

Relative:
Lower

Actual:
1603 ft.

CHMIRS:
OES Control Number: 61000
Chemical Name: jet a fuel
Extent of Release: Not reported
Property Use: Not reported
Incident Date: Not reported
Date Completed: Not reported
Time Completed : Not reported
Agency Id Number : Not reported
Agency Incident Number : Not reported
OES Incident Number : 61000
Time Notified : Not reported
Surrounding Area : Not reported
Estimated Temperature : Not reported
Property Management : Not reported
More Than Two Substances Involved? : Not reported
Special Studies 1 : Not reported
Special Studies 2 : Not reported
Special Studies 3 : Not reported
Special Studies 4 : Not reported
Special Studies 5 : Not reported
Special Studies 6 : Not reported
Responding Agency Personel # Of Injuries : Not reported
Responding Agency Personel # Of Fatalities : NO
Resp Agncy Personel # Of Decontaminated : Not reported
Others Number Of Decontaminated : Not reported
Others Number Of Injuries : Not reported
Others Number Of Fatalities : Not reported
Vehicle Make/year : Not reported

(Continued) **S105629607**

Vehicle License Number :	Not reported
Vehicle State :	Not reported
Vehicle Id Number :	Not reported
CA/DOT/PUC/ICC Number :	Not reported
Company Name :	Not reported
Reporting Officer Name/ID :	Not reported
Report Date :	Not reported
Comments :	Not reported
Facility Telephone Number :	Not reported
Waterway Involved :	Not reported
Waterway :	Not reported
Spill Site :	PL
Cleanup By :	reporting party
Containment :	NO
What Happened :	Not reported
Type :	PETROLEUM
Other :	Not reported
Chemical 1 :	Not Reported
Chemical 2 :	Not Reported
Chemical 3 :	Not Reported
Date/Time :	Not reported
Evacuations :	NO
True date :	12/31/03
Year :	1993
Agency :	calned pipeline
BBLS :	Not reported
Cups :	Not reported
CUFT :	Not reported
Gallons :	Not reported
Grams :	Not reported
Pounds :	Not reported
Liters :	Not reported
Ounces :	Not reported
Pints :	Not reported
Quarts :	Not reported
Sheen :	Not reported
Tons :	Not reported
Unknown :	Not reported
Description :	unknown, pipeline failure possibly due to vandalism, small leak is soaking into the ground sfm chuck samo notified by R/P and is responding
Incident date :	1030/11-21-93
Admin Agency :	Not reported
OES date :	11/21/1993
OES time :	12:15:28 PM
Amount :	60 bbls

4
South
1/2-1
3971 ft.

2824 N LOCUST ST
RIALTO, CA 92376

CHMIRS **S104764393**
N/A

Relative:
Lower

Actual:
1543 ft.

CHMIRS:

OES Control Number:	01-1486
Chemical Name:	Multiple Chemicals;;;
Extent of Release:	Not reported
Property Use:	Not reported
Incident Date:	Not reported
Date Completed:	Not reported
Time Completed :	Not reported

(Continued) **S104764393**

Agency Id Number :	Not reported
Agency Incident Number :	Not reported
OES Incident Number :	01-1486
Time Notified :	Not reported
Surrounding Area :	Not reported
Estimated Temperature :	Not reported
Property Management :	Not reported
More Than Two Substances Involved? :	Not reported
Special Studies 1 :	Not reported
Special Studies 2 :	Not reported
Special Studies 3 :	Not reported
Special Studies 4 :	Not reported
Special Studies 5 :	Not reported
Special Studies 6 :	Not reported
Responding Agency Personel # Of Injuries :	Not reported
Responding Agency Personel # Of Fatalities :	0
Resp Agncy Personel # Of Decontaminated :	Not reported
Others Number Of Decontaminated :	Not reported
Others Number Of Injuries :	Not reported
Others Number Of Fatalities :	Not reported
Vehicle Make/year :	Not reported
Vehicle License Number :	Not reported
Vehicle State :	Not reported
Vehicle Id Number :	Not reported
CA/DOT/PUC/ICC Number :	Not reported
Company Name :	Not reported
Reporting Officer Name/ID :	Not reported
Report Date :	Not reported
Comments :	Not reported
Facility Telephone Number :	Not reported
Waterway Involved :	No
Waterway :	Not reported
Spill Site :	Industrial Plant
Cleanup By :	Responsible Party
Containment :	Yes
What Happened :	Not reported
Type :	Not reported
Other :	Not reported
Chemical 1 :	Not Reported
Chemical 2 :	Not Reported
Chemical 3 :	Not Reported
Date/Time :	3/12/200109:04:19 AM
Evacuations :	0
True date :	12/31/03
Year :	2001
Agency :	San Bernadino County Fire Department
BBLS :	0
Cups :	0
CUFT :	0
Gallons :	700
Grams :	0
Pounds :	0
Liters :	0
Ounces :	0
Pints :	0
Quarts :	0
Sheen :	0

(Continued) **S104764393**

Tons :	0
Unknown :	0.000000
Description :	Mixing of incompatible chemicals in a trailer caused a fire. Fire department responded. Chemicals were Thermally degraded. The fire department let the fire burn out. No water was used to put out fire.
Incident date :	2/16/200112:00:00 AM
Admin Agency :	San Bernardino County Health Department
OES date :	Not reported
OES time :	Not reported
Amount :	Not reported

5 **RIB ROOF** **LUST S102041481**
South **2745 LOCUST AVE** **Cortese N/A**
1/2-1 **RIALTO, CA 92376**
4132 ft.

Relative: **Lower**

Actual: **1540 ft.**

State LUST:

Cross Street:	RIVERSIDE		
Qty Leaked:	0		
Case Number	083601271T		
Reg Board:	8		
Chemical:	Diesel		
Lead Agency:	Local Agency		
Local Agency :	36000L		
Case Type:	Soil only		
Status:	Case Closed		
Review Date:	4/5/89 0:00	Confirm Leak:	4/5/89 0:00
Workplan:	8/1/89 0:00	Prelim Assess:	8/1/89 0:00
Pollution Char:	Not reported	Remed Plan:	Not reported
Remed Action:	Not reported		
Monitoring:	Not reported		
Close Date:	11/23/92 0:00		
Release Date:	05/10/1989		
Cleanup Fund Id :	Not reported		
Discover Date :	04/05/1989		
Enforcement Dt :	1/1/65 0:00		
Enf Type:	None Taken		
Enter Date :	9/7/89 0:00		
Funding:	Not reported		
Staff Initials:	CR2		
How Discovered:	Tank Closure		
How Stopped:	Not reported		
Interim :	Yes		
Leak Cause:	UNK		
Leak Source:	UNK		
MTBE Date :	Not reported		
Max MTBE GW :	Not reported		
MTBE Tested:	Not Required to be Tested.		
Priority:	Not reported		
Local Case # :	90091		
Beneficial:	Not reported		
Staff :	VJJ		
GW Qualifier :	Not reported		
Max MTBE Soil :	Not reported		
Soil Qualifier :	Not reported		
Hydr Basin #:	UPPER SANTA ANA VALL		
Operator :	Not reported		
Oversight Prgm:	LUST		
Review Date :	8/1/89 0:00		

RIB ROOF (Continued) **S102041481**

Stop Date : 04/05/1989
Work Suspended : Not reported
Responsible Party RIB ROOF
RP Address: 2745 LOCUST, RIALTO, CA 92376
Global Id: T0607100145
Org Name: Not reported
Contact Person: Not reported
MTBE Conc: Not reported
Mtbe Fuel: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported

LUST Region 8:
Cross Street: RIVERSIDE
Region: 8
Regional Board: 08
Local Case Num: 90091
Facility Status: Case Closed
Staff: VJJ
Lead Agency: Local Agency
Local Agency: 36000L
Qty Leaked: Not reported
County: San Bernardino
Review Date: 4/5/1989
Confirm Leak: 4/5/1989
Workplan: 8/1/1989
Prelim Assess: 8/1/1989
Pollution Char: Not reported
Remed Plan: Not reported
Remed Action: Not reported
Monitoring: Not reported
Close Date: 11/23/92
Cleanup Fund Id : Not reported
Discover Date : 4/5/1989
Enforcement Dt : 1/1/1965
Enf Type: None Taken
Enter Date : 9/7/1989
Funding: Not reported
Staff Initials: CR2
How Discovered: Tank Closure
How Stopped: Not reported
Interim : Yes
Lat/Lon : 34.1487066 / -117.4095167
Leak Cause: UNK
Leak Source: UNK
Beneficial: Not reported
MTBE Date : Not reported
MTBE Tested : NRQ
Max MTBE GW : Not reported
GW Qualifies : Not reported
Max MTBE Soil : Not reported
Soil Qualifies : Not reported
Hydr Basin #: UPPER SANTA ANA VALL
Oversight Prgm : LUST
Priority : Not reported
Work Suspended : Not reported
Waste Disch Global Id: T0607100145
MTBE Class: *
Case Type: S

RIB ROOF (Continued) **S102041481**

How Stopped Date: 4/5/1989
Organization Name: Not reported
Contact Person: Not reported
MTBE Concentration: 0
MTBE Fuel: 0
Case Number: 083601271T
Substance: 12034
Staff: VJJ

CORTESE:
Region: CORTESE
Fac Address 2: 2745 LOCUST AVE

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
RIALTO	S105678208	CACTUS DUMP (RIALTO)	E 1/2,NE 1/4 OF S3, T1S, R5W, SBBM.		SWF/LF
RIALTO	S105678206	MID-VALLEY SANITARY LANDFILL	2390 N. ALDER AVENUE		SWF/LF

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Elapsed ASTM days: Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

FEDERAL ASTM STANDARD RECORDS

NPL: National Priority List
Source: EPA
Telephone: N/A
National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/27/04
Date Made Active at EDR: 05/21/04
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 05/04/04
Elapsed ASTM days: 17
Date of Last EDR Contact: 05/04/04

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 8
Telephone: 303-312-6774

EPA Region 4
Telephone 404-562-8033

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
Source: EPA
Telephone: 703-413-0223
CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/26/04
Date Made Active at EDR: 04/02/04
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 03/22/04
Elapsed ASTM days: 11
Date of Last EDR Contact: 03/22/04

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned
Source: EPA
Telephone: 703-413-0223
As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

Date of Government Version: 02/26/04
Date Made Active at EDR: 04/02/04
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 03/22/04
Elapsed ASTM days: 11
Date of Last EDR Contact: 03/22/04

CORRACTS: Corrective Action Report
Source: EPA
Telephone: 800-424-9346
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/15/04
Date Made Active at EDR: 04/15/04
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 03/25/04
Elapsed ASTM days: 21
Date of Last EDR Contact: 03/08/04

RCRIS: Resource Conservation and Recovery Information System
Source: EPA
Telephone: 800-424-9346
Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs): generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs): generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs): generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 04/13/04
Date Made Active at EDR: 05/13/04
Database Release Frequency: Varies

Date of Data Arrival at EDR: 04/20/04
Elapsed ASTM days: 23
Date of Last EDR Contact: 04/20/04

ERNS: Emergency Response Notification System
Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/03
Date Made Active at EDR: 03/12/04
Database Release Frequency: Annually

Date of Data Arrival at EDR: 01/26/04
Elapsed ASTM days: 46
Date of Last EDR Contact: 04/26/04

FEDERAL ASTM SUPPLEMENTAL RECORDS

BRS: Biennial Reporting System
Source: EPA/NTIS
Telephone: 800-424-9346
The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/01/01
Database Release Frequency: Biennially

Date of Last EDR Contact: 03/16/04
Date of Next Scheduled EDR Contact: 06/14/04

DOD: Department of Defense Sites
Source: USGS
Telephone: 703-692-8801
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 10/01/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/02/04
Date of Next Scheduled EDR Contact: 05/10/04

STORMWATER: Storm Water General Permits
Source: Environmental Protection Agency
Telephone: 202 564-0746
A listing of all facilities with Storm Water General Permits.

Date of Government Version: N/A
Database Release Frequency: Quarterly

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

INDIAN RESERV: Indian Reservations
Source: USGS
Telephone: 202-208-3710
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 10/01/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/02/04
Date of Next Scheduled EDR Contact: 05/10/04

US BROWNFIELDS: A Listing of Brownfields Sites
Source: Environmental Protection Agency
Telephone: 202-566-2777
Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become BCRLF cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 04/14/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 03/15/04
Date of Next Scheduled EDR Contact: 06/14/04

RMP: Risk Management Plans
Source: Environmental Protection Agency
Telephone: 202-564-8600
When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: N/A
Database Release Frequency: N/A

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

FUDS: Formerly Used Defense Sites
Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 10/01/03
Database Release Frequency: Varies

Date of Last EDR Contact: 04/26/04
Date of Next Scheduled EDR Contact: 07/05/04

SSTS: Section 7 Tracking Systems
Source: EPA
Telephone: 202-564-5008
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/01
Database Release Frequency: Annually
Date of Last EDR Contact: 04/19/04
Date of Next Scheduled EDR Contact: 07/19/04

STATE OF CALIFORNIA ASTM STANDARD RECORDS

AWP: Annual Workplan Sites
Source: California Environmental Protection Agency
Telephone: 916-323-3400
Known Hazardous Waste Sites. California DTSC's Annual Workplan (AWP), formerly BEP, identifies known hazardous substance sites targeted for cleanup.

Date of Government Version: 06/01/04
Date Made Active at EDR: 06/25/04
Database Release Frequency: Annually
Date of Data Arrival at EDR: 06/04/04
Elapsed ASTM days: 21
Date of Last EDR Contact: 06/04/04

CAL-SITES: Calsites Database
Source: Department of Toxic Substance Control
Telephone: 916-323-3400
The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database.

Date of Government Version: 06/01/04
Date Made Active at EDR: 06/25/04
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 06/04/04
Elapsed ASTM days: 21
Date of Last EDR Contact: 06/04/04

CHMIRS: California Hazardous Material Incident Report System
Source: Office of Emergency Services
Telephone: 916-845-8400
California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/03
Date Made Active at EDR: 06/25/04
Database Release Frequency: Varies
Date of Data Arrival at EDR: 05/18/04
Elapsed ASTM days: 38
Date of Last EDR Contact: 05/13/04

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-9100
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 04/01/01
Date Made Active at EDR: 07/26/01
Database Release Frequency: No Update Planned
Date of Data Arrival at EDR: 05/29/01
Elapsed ASTM days: 58
Date of Last EDR Contact: 04/28/04

NOTIFY 65: Proposition 65 Records
Source: State Water Resources Control Board
Telephone: 916-445-3846
Proposition 65 Notification Records. NOTIFY 65 contains facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk.

Date of Government Version: 10/21/93
Date Made Active at EDR: 11/19/93
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 11/01/93
Elapsed ASTM days: 18
Date of Last EDR Contact: 04/19/04

TOXIC PITS: Toxic Pits Cleanup Act Sites
Source: State Water Resources Control Board
Telephone: 916-227-4364
Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/95
Date Made Active at EDR: 09/26/95
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 08/30/95
Elapsed ASTM days: 27
Date of Last EDR Contact: 05/03/04

SWF/LF (SWIS): Solid Waste Information System
Source: Integrated Waste Management Board
Telephone: 916-341-6320
Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 03/15/04
Date Made Active at EDR: 04/14/04
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 03/17/04
Elapsed ASTM days: 28
Date of Last EDR Contact: 03/16/04

WMUDS/SWAT: Waste Management Unit Database
Source: State Water Resources Control Board
Telephone: 916-227-4448
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/00
Date Made Active at EDR: 05/10/00
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 04/10/00
Elapsed ASTM days: 30
Date of Last EDR Contact: 03/11/04

LUST: Leaking Underground Storage Tank Information System
Source: State Water Resources Control Board
Telephone: 916-341-5740
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 04/13/04
Date Made Active at EDR: 04/29/04
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 04/13/04
Elapsed ASTM days: 16
Date of Last EDR Contact: 04/13/04

CA BOND EXP. PLAN: Bond Expenditure Plan
Source: Department of Health Services
Telephone: 916-255-2118
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/89
Date Made Active at EDR: 08/02/94
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 07/27/94
Elapsed ASTM days: 6
Date of Last EDR Contact: 05/31/94

CA UST:

UST: Active UST Facilities
Source: SWRCB
Telephone: 916-341-5700
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 04/13/04
Date Made Active at EDR: 04/29/04
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 04/13/04
Elapsed ASTM days: 16
Date of Last EDR Contact: 04/13/04

VCP: Voluntary Cleanup Program Properties
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 06/01/04
Date Made Active at EDR: 06/25/04
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 06/04/04
Elapsed ASTM days: 21
Date of Last EDR Contact: 06/04/04

INDIAN LUST: Leaking Underground Storage Tanks on Indian Land
Source: Environmental Protection Agency
Telephone: 415-972-3372
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 02/09/04
Date Made Active at EDR: 03/01/04
Database Release Frequency: Varies

Date of Data Arrival at EDR: 02/10/04
Elapsed ASTM days: 20
Date of Last EDR Contact: 01/27/04

INDIAN LUST: Leaking Underground Storage Tanks on Indian Land
Source: EPA Region 10
Telephone: 206-553-2857
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 03/11/04
Date Made Active at EDR: 03/31/04
Database Release Frequency: Varies

Date of Data Arrival at EDR: 03/12/04
Elapsed ASTM days: 19
Date of Last EDR Contact: 01/27/04

INDIAN UST: Underground Storage Tanks on Indian Land
Source: EPA Region 9
Telephone: 415-972-3368

Date of Government Version: 02/25/04
Date Made Active at EDR: 03/24/04
Database Release Frequency: Varies

Date of Data Arrival at EDR: 03/01/04
Elapsed ASTM days: 23
Date of Last EDR Contact: 02/23/04

CA FID UST: Facility Inventory Database
Source: California Environmental Protection Agency
Telephone: 916-445-6532
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/94
Date Made Active at EDR: 09/29/95
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 09/05/95
Elapsed ASTM days: 24
Date of Last EDR Contact: 12/28/98

HIST UST: Hazardous Substance Storage Container Database
Source: State Water Resources Control Board
Telephone: 916-341-5700
The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/90
Date Made Active at EDR: 02/12/91
Database Release Frequency: No Update Planned
Date of Data Arrival at EDR: 01/25/91
Elapsed ASTM days: 18
Date of Last EDR Contact: 07/26/01

STATE OF CALIFORNIA ASTM SUPPLEMENTAL RECORDS

DEED: List of Deed Restrictions
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
The use of recorded land use restrictions is one of the methods the DTSC uses to protect the public from unsafe exposures to hazardous substances and wastes.

Date of Government Version: 04/06/04
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 04/06/04
Date of Next Scheduled EDR Contact: 07/05/04

NFA: No Further Action Determination
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
This category contains properties at which DTSC has made a clear determination that the property does not pose a problem to the environment or to public health.

Date of Government Version: 06/01/04
Database Release Frequency: Quarterly
Date of Last EDR Contact: 06/04/04
Date of Next Scheduled EDR Contact: 08/30/04

REF: Unconfirmed Properties Referred to Another Agency
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
This category contains properties where contamination has not been confirmed and which were determined as not requiring direct DTSC Site Mitigation Program action or oversight. Accordingly, these sites have been referred to another state or local regulatory agency.

Date of Government Version: 06/01/04
Database Release Frequency: Quarterly
Date of Last EDR Contact: 06/04/04
Date of Next Scheduled EDR Contact: 08/30/04

SCH: School Property Evaluation Program
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 06/01/04
Database Release Frequency: Quarterly
Date of Last EDR Contact: 06/04/04
Date of Next Scheduled EDR Contact: 08/30/04

NFE: Properties Needing Further Evaluation
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
This category contains properties that are suspected of being contaminated. These are unconfirmed contaminated properties that need to be assessed using the PEA process. PEA in Progress indicates properties where DTSC is currently conducting a PEA. PEA Required indicates properties where DTSC has determined a PEA is required, but not currently underway.

Date of Government Version: 06/01/04
Database Release Frequency: Quarterly
Date of Last EDR Contact: 06/04/04
Date of Next Scheduled EDR Contact: 08/30/04

LOCAL RECORDS

ALAMEDA COUNTY:

Local Oversight Program Listing of UGT Cleanup Sites
Source: Alameda County Environmental Health Services
Telephone: 510-567-6700

Date of Government Version: 12/09/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 04/26/04
Date of Next Scheduled EDR Contact: 07/26/04

Underground Tanks
Source: Alameda County Environmental Health Services
Telephone: 510-567-6700

Date of Government Version: 12/09/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 04/26/04
Date of Next Scheduled EDR Contact: 07/26/04

FRESNO COUNTY:

CUPA Resources List
Source: Dept. of Community Health
Telephone: 559-445-3271
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 05/11/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 05/10/04
Date of Next Scheduled EDR Contact: 08/09/04

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Kern County Sites and Tanks Listing.

Date of Government Version: 01/27/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/08/04
Date of Next Scheduled EDR Contact: 06/07/04

LOS ANGELES COUNTY:

List of Solid Waste Facilities
Source: La County Department of Public Works
Telephone: 818-458-5185

Date of Government Version: 06/03/03
Database Release Frequency: Varies

Date of Last EDR Contact: 02/20/04
Date of Next Scheduled EDR Contact: 05/17/04

City of El Segundo Underground Storage Tank
Source: City of El Segundo Fire Department
Telephone: 310-524-2236

Date of Government Version: 03/01/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/16/04
Date of Next Scheduled EDR Contact: 05/17/04

City of Long Beach Underground Storage Tank
Source: City of Long Beach Fire Department
Telephone: 562-570-2543

Date of Government Version: 03/28/03
Database Release Frequency: Annually

Date of Last EDR Contact: 02/23/04
Date of Next Scheduled EDR Contact: 05/24/04

City of Torrance Underground Storage Tank
Source: City of Torrance Fire Department
Telephone: 310-618-2973

Date of Government Version: 02/17/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/16/04
Date of Next Scheduled EDR Contact: 05/17/04

City of Los Angeles Landfills
Source: Engineering & Construction Division
Telephone: 213-473-7869

Date of Government Version: 03/01/04
Database Release Frequency: Varies

Date of Last EDR Contact: 03/16/04
Date of Next Scheduled EDR Contact: 06/14/04

San Gabriel Valley Areas of Concern
Source: EPA Region 9
Telephone: 415-972-3178
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 12/31/98
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 07/06/99
Date of Next Scheduled EDR Contact: N/A

MARIN COUNTY:

Underground Storage Tank Sites
Source: Public Works Department Waste Management
Telephone: 415-499-6647
Currently permitted USTs in Marin County.

Date of Government Version: 02/10/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 05/03/04
Date of Next Scheduled EDR Contact: 08/02/04

NAPA COUNTY:

Sites With Reported Contamination
Source: Napa County Department of Environmental Management
Telephone: 707-253-4269

Date of Government Version: 03/29/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 03/29/04
Date of Next Scheduled EDR Contact: 06/28/04

Closed and Operating Underground Storage Tank Sites
Source: Napa County Department of Environmental Management
Telephone: 707-253-4269

Date of Government Version: 03/29/04
Database Release Frequency: Annually

Date of Last EDR Contact: 03/29/04
Date of Next Scheduled EDR Contact: 06/28/04

ORANGE COUNTY:

List of Underground Storage Tank Cleanups
Source: Health Care Agency
Telephone: 714-834-3446
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 03/01/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/08/04
Date of Next Scheduled EDR Contact: 06/07/04

List of Underground Storage Tank Facilities
Source: Health Care Agency
Telephone: 714-834-3446
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 03/01/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/08/04
Date of Next Scheduled EDR Contact: 06/07/04

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Source: Department of Public Health
Telephone: 909-358-5055
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 12/23/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 04/19/04
Date of Next Scheduled EDR Contact: 07/19/04

Underground Storage Tank Tank List
Source: Health Services Agency
Telephone: 909-358-5055

Date of Government Version: 12/01/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 04/19/04
Date of Next Scheduled EDR Contact: 07/19/04

SACRAMENTO COUNTY:

CS - Contaminated Sites
Source: Sacramento County Environmental Management
Telephone: 916-875-8406

Date of Government Version: 04/16/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 05/07/04
Date of Next Scheduled EDR Contact: 08/02/04

SAN DIEGO COUNTY:

Solid Waste Facilities
Source: Department of Health Services
Telephone: 619-338-2209
San Diego County Solid Waste Facilities.

Date of Government Version: 08/01/00
Database Release Frequency: Varies

Date of Last EDR Contact: 02/23/04
Date of Next Scheduled EDR Contact: 05/24/04

SAN FRANCISCO COUNTY:

Local Oversite Facilities
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920

Date of Government Version: 06/07/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 06/07/04
Date of Next Scheduled EDR Contact: 09/06/04

Underground Storage Tank Information
Source: Department of Public Health
Telephone: 415-252-3920

Date of Government Version: 03/08/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/08/04
Date of Next Scheduled EDR Contact: 06/07/04

SAN MATEO COUNTY:

Fuel Leak List
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921

Date of Government Version: 01/29/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 04/12/04
Date of Next Scheduled EDR Contact: 07/12/04

SANTA CLARA COUNTY:

Fuel Leak Site Activity Report
Source: Santa Clara Valley Water District
Telephone: 408-265-2600

Date of Government Version: 12/31/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 03/30/04
Date of Next Scheduled EDR Contact: 06/28/04

SOLANO COUNTY:

Leaking Underground Storage Tanks
Source: Solano County Department of Environmental Management
Telephone: 707-421-6770

Date of Government Version: 03/18/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/15/04
Date of Next Scheduled EDR Contact: 06/14/04

Underground Storage Tanks
Source: Solano County Department of Environmental Management
Telephone: 707-421-6770

Date of Government Version: 03/18/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/15/04
Date of Next Scheduled EDR Contact: 06/14/04

SONOMA COUNTY:

Leaking Underground Storage Tank Sites
Source: Department of Health Services
Telephone: 707-565-6565

Date of Government Version: 04/26/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 04/26/04
Date of Next Scheduled EDR Contact: 07/26/04

SUTTER COUNTY:

Underground Storage Tanks
Source: Sutter County Department of Agriculture
Telephone: 530-822-7500

Date of Government Version: 01/29/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 04/05/04
Date of Next Scheduled EDR Contact: 07/05/04

VENTURA COUNTY:

Inventory of Illegal Abandoned and Inactive Sites
Source: Environmental Health Division
Telephone: 805-654-2813
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 09/01/02
Database Release Frequency: Annually

Date of Last EDR Contact: 02/23/04
Date of Next Scheduled EDR Contact: 05/24/04

Listing of Underground Tank Cleanup Sites
Source: Environmental Health Division
Telephone: 805-654-2813
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 02/26/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/16/04
Date of Next Scheduled EDR Contact: 06/14/04

Underground Tank Closed Sites List
Source: Environmental Health Division
Telephone: 805-654-2813
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 12/01/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 04/15/04
Date of Next Scheduled EDR Contact: 07/12/04

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Source: Yolo County Department of Health
Telephone: 530-666-8646

Date of Government Version: 01/27/04
Database Release Frequency: Annually

Date of Last EDR Contact: 04/19/04
Date of Next Scheduled EDR Contact: 07/19/04

California Regional Water Quality Control Board (RWQCB) LUST Records

LUST REG 1: Active Toxic Site Investigation
Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-576-2220
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/01
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 02/23/04
Date of Next Scheduled EDR Contact: 05/24/04

LUST REG 2: Fuel Leak List
Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457

Date of Government Version: 03/31/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 04/12/04
Date of Next Scheduled EDR Contact: 07/12/04

LUST REG 3: Leaking Underground Storage Tank Database
Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147

Date of Government Version: 05/19/03
Database Release Frequency: Varies

Date of Last EDR Contact: 02/16/04
Date of Next Scheduled EDR Contact: 05/17/04

LUST REG 4: Underground Storage Tank Leak List
Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/10/04
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 03/08/04
Date of Next Scheduled EDR Contact: 06/07/04

LUST REG 5: Leaking Underground Storage Tank Database
Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291

Date of Government Version: 04/01/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 04/08/04
Date of Next Scheduled EDR Contact: 07/05/04

LUST REG 6L: Leaking Underground Storage Tank Case Listing
Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 916-542-5424
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/03
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 03/08/04
Date of Next Scheduled EDR Contact: 06/07/04

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-346-7491

Date of Government Version: 05/27/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 04/05/04
Date of Next Scheduled EDR Contact: 07/05/04

LUST REG 7: Leaking Underground Storage Tank Case Listing
Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-346-7491

Date of Government Version: 02/26/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/26/04
Date of Next Scheduled EDR Contact: 06/28/04

LUST REG 8: Leaking Underground Storage Tanks
Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4498
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 04/01/04
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 05/12/04
Date of Next Scheduled EDR Contact: 08/09/04

LUST REG 9: Leaking Underground Storage Tank Report
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/01
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 04/19/04
Date of Next Scheduled EDR Contact: 07/19/04

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

STREET AND ADDRESS INFORMATION

© 2003 Geographic Data Technology, Inc., Rel. 07/2003. This product contains proprietary and confidential property of Geographic Data Technology, Inc. Unauthorized use, including copying for other than testing and standard backup procedures, of this product is expressly prohibited.

TOPOGRAPHIC MAP - 01221475.1r



- County Boundary
- Major Roads
- Contour Lines
- Waterways
- Railroads
- Airports

TARGET PROPERTY:	NW Corner of Locust and Lowell	CUSTOMER:	LandAmerica Assessment Corpora
ADDRESS:	NW Corner of Locust and Lowell	CONTACT:	Tamara Synigal
CITY/STATE/ZIP:	Rialto CA 92377	INQUIRY #:	01221475.1r
LAT/LONG:	34.1522 / 117.4096	DATE:	June 29, 2004 1:01 pm

Copyright © 2004 EDR, Inc. © 2003 GDT, Inc. Rel. 07/2003. All Rights Reserved.

NAC

EXHIBIT C-2

GENERAL PUBLIC RECORDS

NOT APPLICABLE FOR THIS REPORT

NAC

APPENDIX D

INTERVIEW RECORDS

RECORD OF COMMUNICATION						
Site Name: NW Corner of Locust and Lowell			Location (city): Rialto, CA			
Communication with: M. Story						
Of: Rialto Planning Department						
Location: Rialto, CA			Phone:			
Communication via		Telephone		Letter	X	In Person
Recorded By: Drew Kerr			Of: NAC			
At: (time): 2:00 PM			On (date): June 24, 2004			
Re: Site History						
Summary of Communication: Property has been undeveloped.						
Conclusions/Required Action/Follow-up: None						
ROC 1 of 1						

NAC

APPENDIX E

CLIENT PROVIDED DOCUMENTATION

NOT APPLICABLE FOR THIS REPORT

NAC

APPENDIX F

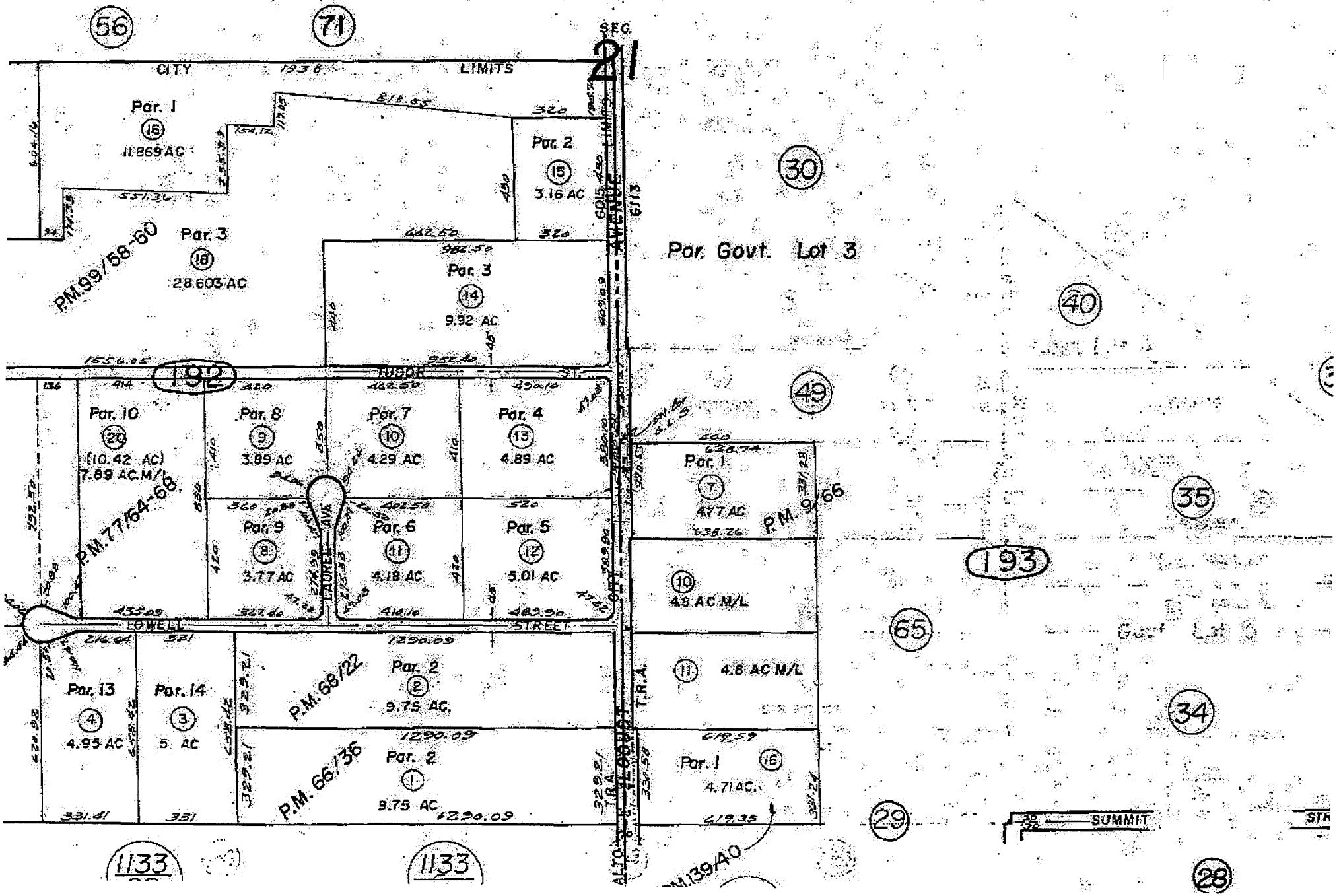
LABORATORY REPORTS

NOT APPLICABLE FOR THIS REPORT

NAC

APPENDIX G

OTHER SUPPORTING DOCUMENTATION


56
71
SEC. 21
CITY LIMITS
Par. 1
16
11.869 AC
Par. 2
15
3.16 AC
Par. 3
18
28.603 AC
P.M. 99/58-60
Par. 3
14
9.92 AC
Por. Govt. Lot 3
30
40
49
192
TUDOR ST.
Par. 10
20
(10.42 AC)
7.89 AC M/L
Par. 8
9
3.89 AC
Par. 7
10
4.29 AC
Par. 4
13
4.89 AC
Par. 9
8
3.77 AC
Par. 6
11
4.18 AC
Par. 5
12
5.01 AC
P.M. 77/64-68
LAUREL AVE.
LOWELL STREET
Par. 1
7
4.77 AC
P.M. 9/66
10
4.8 AC M/L
193
35
65
11
4.8 AC M/L
Par. 13
4
4.95 AC
Par. 14
3
5 AC
P.M. 68/22
Par. 2
2
9.75 AC.
P.M. 66/36
Par. 2
1
9.75 AC
T.R.A.
Par. 1
16
4.71 AC.
34
29
SUMMIT
28
1133
1133
P.M. 39/40

NAC

APPENDIX H

QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

NAC

Andrew (Drew) Kerr

Professional Associate

Education:	B.S. Environmental Science, UC Riverside
Licenses/Affiliations:	DHS Lead Inspector/Assessor
Years of Experience:	6

Summary of Professional Experience

Mr. Kerr has over 6 years of extensive experience in providing environmental consulting services to real estate lenders, investors and owners. Services provided include EPA/CERCLA Investigations, Phase I and II Environmental Site Assessments, Groundwater Well Installation/Monitoring, Asbestos Surveys, Asbestos Removal Specifications, Asbestos Operations & Maintenance Programs and Lead Inspection/Assessment.

Mr. Kerr has served in several capacities in the environmental consulting arena ranging from Staff Professional to Project Manager to Department Manager. His experience has allowed him to be involved with every aspect of a project from the initial stages through to completion. His experience has also allowed him familiarity with regulatory agency requirements relating to environmental issues. Project work has included residential, commercial, industrial and special use properties.

Finally, Mr. Kerr's diversity across public and private industrial environments is a major contribution to National Assessment Corporation's Professional Associate team in the Western United States.

Noreen L. Clindinning, AICP
Regional Principal

Education:	B.A. Urban Development, University of Western Ontario, London, 1987
Registration(s):	American Institute of Certified Planners
Years of Experience:	13

Summary

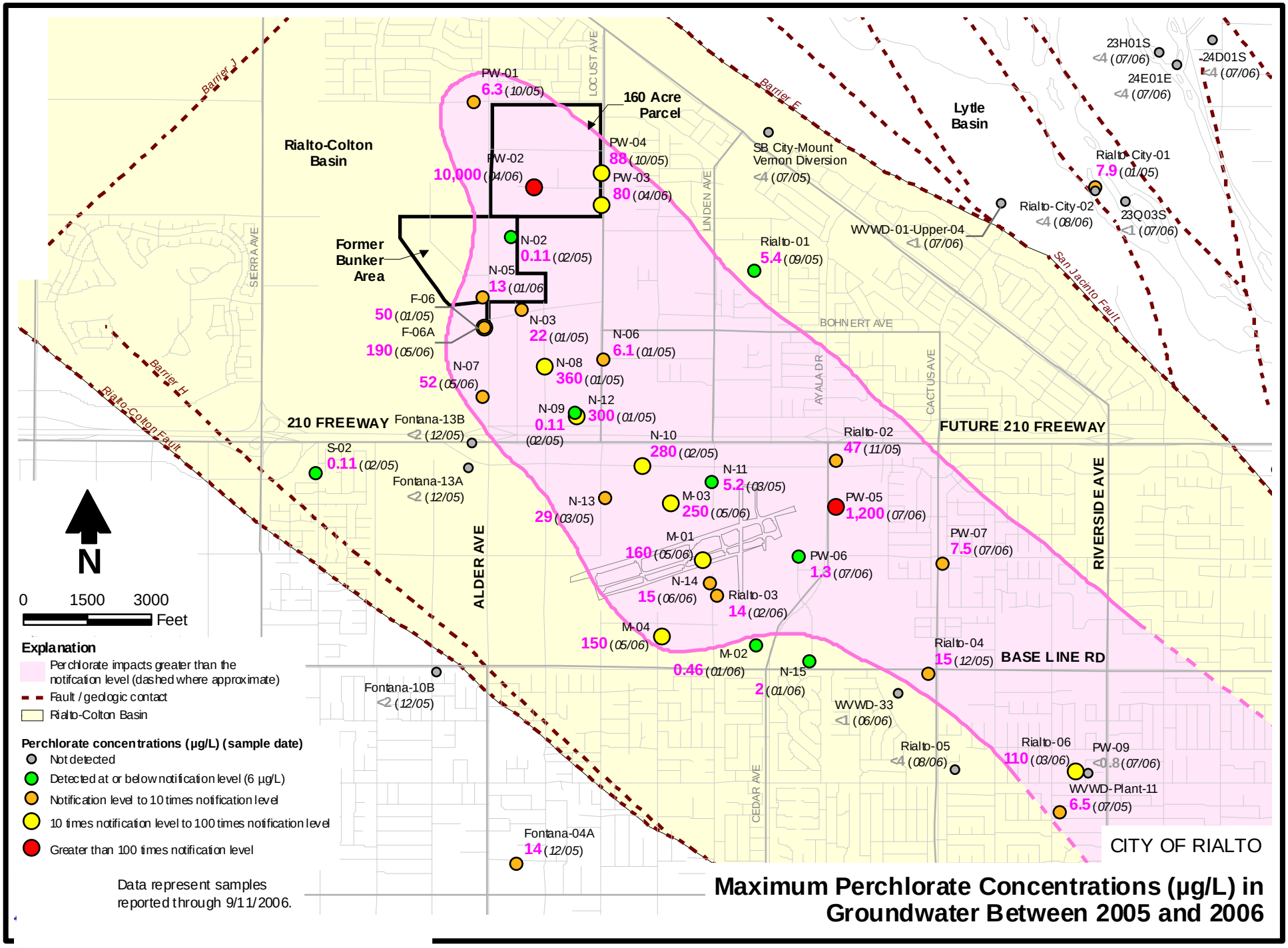
Ms. Clindinning, a Regional Principal with NAC, has 13 years experience in the real estate due diligence field. She has extensive experience in providing environmental, engineering and seismic due diligence for all types of real estate throughout the United States including multifamily, office, retail, and industrial properties. Her primary responsibilities at NAC include providing all aspects of project management and coordination of services for several national clients. As a Principal with NAC, her work involves extensive client contact, including state and nationwide project management; QA/QC; and liaison with leaders in the area of multifamily financing such as Fannie Mae and Freddie Mac.

From 1995 to 2000, Ms. Clindinning was the Managing Director for a major national due diligence consulting firm. In this position, she was responsible for profit and loss, business development, client maintenance, and program development. Ms. Clindinning managed thousands of Phase I Environmental Site Assessment, Property Condition Surveys, and Seismic Risk Assessments and established a reputation for seeking new approaches to old problems.

From 1992 to 1994, Ms. Clindinning served as the Technical Services Manager for the same national consulting firm. Prior to joining that firm, she provided in-house consulting land use and environmental consulting services to one of Canada's largest law firms, Fasken, Campbell, Godfrey.

Project and Client Experience

- *100+ site Portfolio of Skilled Nursing Facilities* – Managed the production of over 100 Property Condition Surveys for skilled nursing facilities located across the county. The assessments were completed on time (within six weeks) and within budget. Provided QA/QC for all reports.
- *Bankers Mutual* – Client Point of Contact for ongoing performance of Phase I Environmental Site Assessments, Property Condition Surveys, and Seismic Risk Assessments. **Annual project volume in excess of 100 sites located throughout the U.S.**
- *ARCS Commercial Mortgage* - Client Point Contact for nationwide multi-site services. Managed Phase I Environmental Site Assessments and Property Condition Surveys. Performed in house QA/QC on all reports issued to the client. **Participated in ARCS annual training sessions for their underwriting team.**
- *Los Angeles* – Completed a Property Condition Survey and Phase I Environmental Assessment for a site comprised of over 4,500 apartment units in Los Angeles. Identified the presence of inactive underground storage tanks and provided oversight for tank removal and remediation. Provided ongoing consulting regarding seismic risk at this site to the prospective lender and Fannie Mae.
- *Fannie Mae* – **Drafted a seismic risk policy and set of guidelines for Fannie Mae's DUS program.** In addition, drafted guidelines for Fannie Mae's pilot small loan program.
- *Freddie Mac* – **Managed the assessment of 50+ damaged properties in the Los Angeles area following the 1994 Northridge earthquake.** Worked with Freddie Mac representatives on designing a scalable scope of work which could be tailored to the specifics of the property.


Rialto-Colton Basin
Lytle Basin
160 Acre Parcel
Former Bunker Area
PW-01 6.3 (10/05)
PW-02 10,000 (04/06)
PW-03 80 (04/06)
PW-04 88 (10/05)
N-02 0.11 (02/05)
N-03 22 (01/05)
N-05 13 (01/06)
F-06 50 (01/05)
F-06A 190 (05/06)
N-06 6.1 (01/05)
N-07 52 (05/06)
N-08 360 (01/05)
N-09 0.11 (02/05)
N-10 280 (02/05)
N-11 5.2 (03/05)
N-12 300 (01/05)
N-13 29 (03/05)
M-01 160 (05/06)
M-02 0.46 (01/06)
M-03 250 (05/06)
M-04 150 (05/06)
N-14 15 (06/06)
N-15 2 (01/06)
PW-05 1,200 (07/06)
PW-06 1.3 (07/06)
PW-07 7.5 (07/06)
Rialto-01 5.4 (09/05)
Rialto-02 47 (11/05)
Rialto-03 14 (02/06)
Rialto-04 15 (12/05)
Rialto-05 <4 (08/06)
Rialto-06 110 (03/06)
Rialto-City-01 7.9 (01/05)
Rialto-City-02 <4 (08/06)
WVWD-01-Upper-04 <1 (07/06)
WVWD-33 <1 (06/06)
WVWD-Plant-11 6.5 (07/05)
PW-09 <0.8 (07/06)
SB City-Mount Vernon Diversion <4 (07/05)
23H01S <4 (07/06)
24D01S <4 (07/06)
24E01E <4 (07/06)
23Q03S <1 (07/06)
Fontana-13B <2 (12/05)
Fontana-13A <2 (12/05)
Fontana-10B <2 (12/05)
Fontana-04A 14 (12/05)
S-02 0.11 (02/05)
210 FREEWAY
FUTURE 210 FREEWAY
BASE LINE RD
CITY OF RIALTO
ALDER AVE
RIVERSIDE AVE
LOCUST AVE
LINDEN AVE
SIERRA AVE
BOHNERT AVE
AYALA DR
CACTUS AVE
CEDAR AVE
Barrier J
Barrier E
Barrier H
Rialto-Colton Fault
San Jacinto Fault
N
0 1500 3000
Feet
Explanation
Perchlorate impacts greater than the notifcation level (dashed where approximate)
Fault / geologic contact
Rialto-Colton Basin
Perchlorate concentrations (µg/L) (sample date)
Not detected
Detected at or below notification level (6 µg/L)
Notification level to 10 times notification level
10 times notification level to 100 times notification level
Greater than 100 times notification level
Data represent samples reported through 9/11/2006.
Maximum Perchlorate Concentrations (µg/L) in Groundwater Between 2005 and 2006

APPENDIX F

DRAINAGE REPORT

DRAFT

Preliminary Drainage Report

Thrifty Locust and Lowell Warehouse
Rialto, California

PPD# 2021-0055

Prepared for:

Thrifty Oil Co.

THRIFTY LOCUST AND LOWELL WAREHOUSE

Preliminary Drainage Report

PPD# 2021-0055

APRIL 2022 | PRELIMINARY

Prepared By:

Kimley»Horn

This Preliminary Drainage Report has been prepared by Kimley-Horn and Associates, Inc. under the direct supervision of the following Registered Civil engineer. The undersigned attests to the technical data contained in this study, and to the qualifications of technical specialists providing engineering computations upon which the recommendations and conclusions are based.



_____	4/11/2022
Registered Civil Engineer	Date

Table of Contents

1 Introduction....1-1

1.1 Project Description and Purpose....1-1

2 Project Setting....2-1

2.1 Topography....2-1

2.2 Precipitation....2-1

2.3 Watershed Description....2-1

2.4 Soil Types....2-1

2.5 Land Use....2-2

2.6 Groundwater....2-2

2.7 FEMA Mapping....2-2

3 Site Conditions....3-1

3.1 Existing Site Conditions....3-1

3.2 Proposed Site conditions....3-1

3.3 Existing Offsite Conditions....3-1

4 Hydrologic Analysis....4-1

4.1 Methodology....4-1

4.1.1 Geometry 4-1

4.1.2 Intensity and Time of Concentration 4-1

4.1.3 Curve Numbers and Loss Rates 4-2

4.2 Hydrologic Results....4-2

5 Water Quality and Low Impact Development Requirements....5-4

5.1 Stormwater Mitigation....5-4

5.1.1 Stormwater Treatment 5-4

5.1.2 Stormwater Maintenance 5-4

5.2 Underground Chamber....5-4

5.2.1 Underground Chamber Standards 5-4

5.2.2 Underground Chamber Analysis 5-4

5.2.3 Underground Chamber Results 5-5

6 Hydraulics Analysis 6-6
6.1 Hydraulic Analysis 6-6
6.1.1 Emergency Spillway 6-6
7 Conclusion 7-6

Figures

Figure 1–1 Project Location Map..... 1-1

Tables

Table 4–1 Existing Conditions Modified Rational Method Hydrology Results Summary 4-2
Table 4–2 Proposed Conditions Modified Rational Method Hydrology Results Summary 4-3
Table 4–3 Proposed Mitigated Outflow Summary 4-4
Table 4–4 Proposed Unit Hydrograph Method Loss Rate Estimation Summary.....4-3
Table 5–1 Underground Chamber BMP 1 Results Summary (PondPack).....5-5
Table 5–2 Underground Chamber BMP 2 Results Summary (PondPack).....5-5

Appendices

Appendix A NOAA Atlas 14 Precipitation Estimates
Appendix B Hydrologic Soil Type Classification
Appendix C FEMA FIRMette
Appendix D Drainage Exhibits
Appendix E Existing Conditions Hydrology AES Rational Method Results
Appendix F Proposed Conditions Hydrology AES Rational Method Results
Appendix G Proposed Conditions Hydrology AES Hydrograph Results
Appendix H Underground Chamber Analysis, PondPack Hydrographs Results
Appendix I Results of Infiltration Testing

1 INTRODUCTION

1.1 PROJECT DESCRIPTION AND PURPOSE

This Drainage Report is provided in support of the PPD submittal for the proposed Thrifty Locust and Lowell Warehouse in Rialto, California.

The project site is approximately 5.01 acres and is located at the northwest corner of N Locust Avenue and W Lowell Street. After a proposed right of way dedication off Locust Ave and a pedestrian easement off Lowell Ave, the proposed site is 4.78 acres and encompasses one proposed building with a total of ±100,880 square feet of building footprint. The building will include office and warehouse space.

The project site is currently undeveloped with a paved road that connects to N Locust Avenue and W Lowell Street. See **Figure 1-1** for Project Location Map.

This drainage report includes the hydrologic analysis for the existing and proposed conditions as well as the analysis of the onsite underground chambers used to detain peak flows and infiltrate the water quality design capture volume.

Figure 1–1 Project Location Map



2 PROJECT SETTING

TOPOGRAPHY

The existing topography generally drains from the northwest corner (elevation 1638.4') to the southeast corner (elevation 1621.5), with approximately 17' of fall across the site. The drainage in the southwest portion of the project site exits the site through the south paved driveway or through weep holes in the existing south concrete block wall into existing landscaping. This water flows to the existing curb and gutter on the north side of W Lowell Street to an existing inlet with an elevation of 1622.3.

A majority of the drainage of from northeast portion of the site is confined by the existing concrete block wall on the east side of the site. Water drains along this wall and exits the site through the east paved driveway or through weep holes in the existing south concrete block wall into existing landscaping. Water exiting through the driveway flows into the existing curb and gutter on the west side of N Locust Avenue and water exiting through the weep holes drain to the existing curb and gutter on the north side of W Lowell Street flowing towards the cross gutter on N Locust Avenue.

PRECIPITATION

Precipitation values for the hydrologic analysis were determined from site specific precipitation frequency estimates published online in the NOAA Atlas 14. For this site (Rialto, California) the 100-year, 1-hour storm precipitation depth equal to 1.80 inches was used in both the storm water flow and volume calculations. The 100-year 6-hour and 100-year 24-hour depths equal to 4.73 inches and 9.02 inches respectively were used in the volume calculations. **Appendix A** contains the site specific tabular output from NOAA Atlas 14.

WATERSHED DESCRIPTION

The project is relatively flat, and the regional topography generally slopes to the southeast. The project site is part of a larger drainage area tributary to the San Bernardino County Flood Control District Cactus Basin System. The Cactus Basin System is a network of five detention basins that are located between Cactus Avenue and Ayala Drive. Runoff from this project will eventually flow into Cactus Basin #3.

SOIL TYPES

The type of soil and soil conditions are major factors affecting infiltration and resultant storm water runoff. The Natural Resources Conservation Service (NRCS) has classified soils into four general hydrologic soil groups for comparing infiltration and runoff rates. The groups are based on properties that influence runoff, such as water infiltration rate, texture, natural discharge and moisture condition. The runoff potential is based on the amount of runoff at the end of a long duration storm that occurs after wetting and swelling of the soil not protected by vegetation.

Using the NRCS GIS soil data, this site was identified as predominately Soboba stony loamy sand (SpC). Correlating this soil type name to the hydrologic classifications per San Bernardino Hydrology Manual Page C-47 the soil is classified as Type A soil. Group A soils typically have low runoff potential with high infiltration rates when thoroughly wetted and consist chiefly of deep, well drained sands or gravels. **See Appendix B** for soil type classifications.

LAND USE

The project site is located within the City of Rialto's Airport Specific Plan and is designated as General Manufacturing land use I-GM, which includes uses for most intensive industrial uses.

GROUNDWATER

According to “Geotechnical Investigation Proposed Industrial Development” performed by Geocon West, Inc., Project No. W1393-99-01, dated August 2021, groundwater is estimated at a depth between 439.06 and 423.34 feet below ground surface, and is not expected to be a concern for this project.

FEMA MAPPING

The project site is covered by Map Number 06071C7920H of the FEMA Flood Insurance Rate Map (FIRM) for San Bernardino County, California and Incorporated Areas. The City of Rialto, community number 060280, is included in this FIRM. None of the project area is within a FEMA–mapped special flood hazard area. The site is classified as Zone X, which is an area of minimal flooding. The effective FEMA map is dated August 28, 2008 and is provided in **Appendix C.**

3 SITE CONDITIONS

EXISTING SITE CONDITIONS

The site is located at the northwest corner of the intersection of N Locust Avenue and W Lowell Street. Based upon survey and field observation, the site's drainage generally flows from the northwest to the southeast and into existing curb and gutter of both cross streets. The southwest portion of the site primarily drains to an existing curb inlet on the north side of W Lowell Street and the northeast portion of the site primarily flows to existing curb and gutter and cross gutter on the west side of N Locust Avenue. Please refer to the existing conditions hydrology exhibit, included in **Appendix D.**

PROPOSED SITE CONDITIONS

Stormwater generated by the proposed development will be captured and conveyed to two on-site underground infiltration basins through a network of underground piping. The proposed basin will serve as both a water quality BMP as well as an underground storage facility to detain and mitigate the peak flow rate. The project proposes to discharge project 100-year overflows into the existing 102" RCP storm drain in Locust Avenue. For all water quality calculations and documentation refer to the Preliminary Water Quality Management Plan. The site hydrologic basins were delineated based on the proposed grading. Refer to the Proposed Drainage Exhibit, included within **Appendix D**.

EXISTING OFFSITE CONDITIONS

There are existing screen walls/retaining walls along the western and northern property lines of the project, that the project is proposing to maintain. The project proposes to construct swales between existing and proposed walls to convey any ancillary offsite stormwater run-on from the adjacent properties to Locust Ave and Lowell St, matching existing conditions.

4 HYDROLOGIC ANALYSIS

METHODOLOGY

Runoff calculations were prepared using the Modified Rational Method and the methodology described in Section D of the San Bernardino County Hydrology Manual (August 1986). AES HydroWin software (San Bernardino module) was used to estimate time of concentrations and 100 & 2-year peak flow rates generated from the existing and proposed conditions (see **Appendix E** and **Appendix F**).

Unit hydrographs were prepared using the methodology described in Section E of the San Bernardino County Hydrology Manual for determining the 100 & 2-year storm water volumes. AES HydroWin software (San Bernardino module) was used to estimate the 100 & 2-year peak flow rates and volumes over a 24-hour period for the proposed condition (see **Appendix G**).

A stage-storage analysis in conjunction with the peak flow rates and volumes from AES was prepared for the purposes of sizing and analyzing the proposed underground chamber characteristics. The stage-storage analysis and the hydrographs from AES were imported into PondPack to determine the 100-year mitigated flow rate.

4.1.1 GEOMETRY

Drainage Basin Areas were delineated for the project site's existing and proposed drainage conditions. Existing elevations, slopes and flow paths were established from the topography available at the time of this drainage study. Proposed elevations, slopes and flow paths were based on the proposed site grading plan. These hydrologic parameters are shown for existing and proposed conditions on Hydrology Exhibits in **Appendix D**.

4.1.2 INTENSITY AND TIME OF CONCENTRATION

Rainfall depths were gathered from the NOAA Atlas 14 precipitation frequency table for the project site location. The existing conditions and proposed conditions time of concentrations were calculated within AES given the drainage areas characteristics. The time of concentration for proposed conditions with small drainage areas were assumed to be 5 minutes as a conservative approach which is a valid assumption given that the basins travel relatively short distances.

The time of concentration calculated from the Modified Rational Method was used to calculate the lag time necessary to develop the unit hydrographs within the AES software.

4.1.3 CURVE NUMBERS AND LOSS RATES

The Antecedent Moisture Condition (AMC) is a common index used to describe how saturated a soil is before the design storm occurs. AMC III, which assumes the watershed is already saturated, was used for the 100-year storm analysis. AMC II was used for the 2-year analysis. The San Bernardino County Hydrology Manual provides Curve Numbers of Hydrologic Soil-Cover for AMC II. These AMC II Curve Numbers can be converted to AMC III Curve Numbers manually by use of Table C.1 from the San Bernardino County Hydrology Manual. However, AES automatically does this conversion within the program analysis. The existing condition's land use consists of natural barren ground cover. The proposed condition's land use is predominantly impervious with some commercial landscaping.

Loss Rates were calculated by using the methodology presented in Section C.6 of the San Bernardino County Hydrology Manual. The Loss Rate calculation is a function of the Curve Number, Initial Abstraction and 24-hour rainfall depth, and was used to develop the unit hydrographs.

[redacted] HYDROLOGIC RESULTS

Rational Method hydrologic results are summarized below for the existing conditions and proposed conditions in **Table 4-1** and **Table 4-2**. Refer to **Appendix E** and **Appendix F** for the existing and proposed conditions hydrology analysis respectively.

Table 4–1 Existing Conditions Modified Rational Method Hydrology Results Summary

Existing Conditions Rational Method Onsite Flow Rates			
DMA ID	Area (acre)	Q_2 (cfs)	Q_{100} (cfs)
DA1	2.21	1.41	5.65
DA2	2.79	2.55	8.85
TOTAL	5.00	3.96	14.50

Table 4–2 Proposed Conditions Modified Rational Method Hydrology Results Summary

Proposed Conditions Rational Method Onsite Flow Rates			
DMA ID	Area (acre)	Q_2 (cfs)	Q_{100} (cfs)
DA1	2.03	2.69	7.66
DA2	0.29	0.52	1.36
DA3.1	1.07	1.59	4.27
DA3.2	0.94	1.53	4.05
DA 4*	0.42	0.56	1.86
DA 5*	0.27	0.38	1.20
TOTAL	5.02	7.27	20.40

**The Rational Method was performed to analyze the 2-year and 100-year peak flows for DAs 4 – 5. The Rational Method Equation is as follows:*

Q=CiA, where
Q = the peak discharge in cubic feet per second (cfs)
i = the time-averaged rainfall intensity for a storm duration equal to the Tc (inches/hr)
A = drainage area (acres)

Runoff coefficients (C-values) were calculated for each drainage area with C-value of 0.4 for pervious areas, and 0.9 for impervious areas. For these small drainage management areas, a conservative time of concentration of 5 minutes was used in the analysis.

Below, results shown in **Table 4-3** are the proposed loss rate estimation from the unit hydrograph method. Refer to **Appendix G** for the proposed conditions hydrology hydrograph method analysis. The AES computer program was used to develop these hydrographs based on the Rational Method analysis results, which was inputted into PondPack for detention routing. **Table 4-3** summarizes the total mitigated outflow for the project. Refer to Section 5.2 of this report for further information on the PondPack results.

Table 4–3 Proposed Unit Hydrograph Method Loss Rate Estimation Summary

Proposed Unit Hydrograph Method Loss Rate Estimation		
Storm Event	Average Loss Rate, $F\bar{m}$ (in/hr)	Average Low Loss Fraction, $\bar{Y}$
2 Year	0.10	0.16
100 Year	0.07	0.09

Table 4–3 Proposed Mitigated Outflow Summary

Proposed Mitigated Outflow				
DMA ID	Proposed Peak Unmitigated Flow (cfs)	Proposed Peak Mitigated Flow (cfs)	Allowable Flow (cfs)	Less than allowable?
2 year	7.18	0.94	3.96	yes
100 year	14.02	14.20	14.50	yes

5 WATER QUALITY AND LOW IMPACT DEVELOPMENT REQUIREMENTS

STORMWATER MITIGATION

5.1.1 STORMWATER TREATMENT

The proposed project will provide water quality by means of infiltration. Sediment bays are located within the underground chamber system for pretreatment of larger sediments and pollutants. The underground chambers will treat the remaining pollutants of concerns by means of infiltration. The site's 100-year peak volume will be detained by means of underground storage.

5.1.2 STORMWATER MAINTENANCE

Stormwater facilities require routine maintenance to operate efficiently. It is recommended that facilities be inspected prior to the rainy season (fall) and after each runoff producing storm event. Sediment and debris shall be removed from the pre-treatment system to maintain the systems effectiveness. The underground chambers shall be routinely inspected and sediment/debris build up removed to maintain efficient operation of the basin.

UNDERGROUND CHAMBER

5.2.1 UNDERGROUND CHAMBER STANDARDS

The proposed underground chambers were designed using the methodology described in San Bernardino County's Technical Guidance Document for Water Quality Management Plans. This document states that:

- The Water Quality Design Capture Volume (DCV) must be drawn down within 48 hours after the basin is filled.
- An energy dissipating inlet must be provided.
- An emergency overflow pipe to control excess flows must be provided.
- A forebay settling basin or separate treatment control measure must be provided as pretreatment.

5.2.2 UNDERGROUND CHAMBER ANALYSIS

Basin Inflow Hydrographs were created using AES computer software for the 100-year and 2-year storm events. The resulting hydrographs were manually imported into the PondPack computer software to be

used for the underground chamber routing calculations. The underground chambers were sized taking underground infiltration into account in the 2-year storm event. Infiltration is considered negligible in the 100-year storm event.

5.2.3 UNDERGROUND CHAMBER RESULTS

The proposed underground chambers will provide the entire infiltration volume required to retain the Design Capture Volume and detain the 100-year volume as discussed in **Section 5.2.1** above. See underground chamber routing calculations in **Appendix H** prepared with the PondPack Computer program. **Table 5-1** and **Table 5-2** below summarizes the two underground chambers proposed 100-year and 2-year discharges. These underground chambers have been sized to fully infiltrate the 2-year volume. The project assumes no infiltration in the 100-year condition, due to fully saturated soils. The underground chamber will be optimized during final design.

Table 5–1 Underground Chamber BMP 1 Results Summary (PondPack)

BMP 1 Results Summary					
Storm Event	Proposed Basin Inflow (cfs)	Proposed Basin Outflow (cfs)	Max Water Surface Elevation (ft)	Max Storage (cf)	Total Storage (cf)
2 Year	1.98	0	1622.21	2,547	9,966
100 Year	6.10	4.95	1623.45	5,700	

Table 5–2 Underground Chamber BMP 2 Results Summary (PondPack)

BMP 2 Results Summary					
Storm Event	Proposed Basin Inflow (cfs)	Proposed Basin Outflow (cfs)	Max Water Surface Elevation (ft)	Max Storage (cf)	Total Storage (cf)
2 Year	2.66	0	1619.46	3,237	10,032
100 Year	7.22	6.19	1620.85	6,688	

The tested infiltration rate on site is 16.9 in/hr per Geotechnical Report prepared by Geocon West, Inc., dated August 31, 2021, see **Appendix J** for results of infiltration testing on site. For design purposes, a factor of safety of 2.0 is used to size the underground chamber. With favorable constant infiltration rate on the site, the project proposes to fully infiltrate the 2-year storm event for water quality via an underground infiltration basin. Refer to **Appendix H** for all chamber design details and analysis results from PondPack.

6 HYDRAULICS ANALYSIS

[redacted] HYDRAULIC ANALYSIS

Pipe hydraulics and inlet sizing will be performed during final design.

6.1.1 EMERGENCY SPILLWAY

The underground chambers provide storage for flow attenuation in the 100-year storm event. The system will be designed to provide overland relief via a gravity overflow system or a stormwater pump. For storm events greater than the 100-year peak storm, the proposed driveways will serve as spillways and convey runoff into W Lowell Street and N Locust Avenue, preserving the existing drainage pattern.

7 CONCLUSION

Per the analysis, the project proposes to capture and detain the 100-year peak volume and mitigate project outflows into the existing storm drain in Locust Avenue. The project is consistent with the allowable discharge compared to the existing condition.

APPENDICES

APPENDIX A

NOAA ALTAS 14 PRECIPITATION ESTIMATES

NOAA Atlas 14, Volume 6, Version 2
Location name: Rialto, California, USA*
Latitude: 34.1528°, Longitude: -117.4105°
Elevation: 1631.63 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.138** (0.115-0.168)	**0.183** (0.152-0.223)	**0.242** (0.200-0.295)	**0.289** (0.238-0.355)	**0.353** (0.281-0.450)	**0.403** (0.313-0.523)	**0.453** (0.343-0.603)	**0.504** (0.371-0.692)	**0.574** (0.405-0.822)	**0.629** (0.428-0.933)
10-min	**0.198** (0.165-0.240)	**0.262** (0.218-0.319)	**0.346** (0.287-0.422)	**0.414** (0.341-0.510)	**0.506** (0.402-0.644)	**0.577** (0.448-0.750)	**0.649** (0.492-0.865)	**0.723** (0.532-0.992)	**0.823** (0.581-1.18)	**0.901** (0.614-1.34)
15-min	**0.239** (0.199-0.290)	**0.317** (0.264-0.386)	**0.419** (0.347-0.511)	**0.501** (0.412-0.616)	**0.612** (0.486-0.779)	**0.698** (0.542-0.907)	**0.785** (0.595-1.05)	**0.874** (0.644-1.20)	**0.996** (0.702-1.43)	**1.09** (0.742-1.62)
30-min	**0.361** (0.300-0.438)	**0.479** (0.398-0.582)	**0.632** (0.524-0.771)	**0.757** (0.622-0.930)	**0.925** (0.734-1.18)	**1.05** (0.819-1.37)	**1.19** (0.898-1.58)	**1.32** (0.972-1.81)	**1.50** (1.06-2.15)	**1.65** (1.12-2.44)
60-min	**0.550** (0.458-0.668)	**0.730** (0.606-0.887)	**0.963** (0.798-1.17)	**1.15** (0.947-1.42)	**1.41** (1.12-1.79)	**1.61** (1.25-2.09)	**1.80** (1.37-2.40)	**2.01** (1.48-2.76)	**2.29** (1.62-3.28)	**2.51** (1.71-3.72)
2-hr	**0.832** (0.692-1.01)	**1.09** (0.905-1.32)	**1.42** (1.18-1.73)	**1.69** (1.39-2.08)	**2.05** (1.63-2.61)	**2.32** (1.81-3.02)	**2.60** (1.97-3.47)	**2.88** (2.12-3.96)	**3.27** (2.30-4.68)	**3.56** (2.42-5.28)
3-hr	**1.06** (0.885-1.29)	**1.39** (1.15-1.68)	**1.80** (1.49-2.19)	**2.13** (1.75-2.62)	**2.58** (2.05-3.28)	**2.92** (2.27-3.79)	**3.26** (2.47-4.34)	**3.61** (2.65-4.95)	**4.07** (2.87-5.83)	**4.43** (3.02-6.57)
6-hr	**1.58** (1.31-1.91)	**2.05** (1.70-2.49)	**2.65** (2.19-3.23)	**3.13** (2.57-3.85)	**3.77** (2.99-4.79)	**4.25** (3.30-5.52)	**4.73** (3.58-6.31)	**5.22** (3.84-7.16)	**5.87** (4.14-8.40)	**6.36** (4.33-9.44)
12-hr	**2.16** (1.79-2.62)	**2.81** (2.34-3.42)	**3.64** (3.02-4.44)	**4.30** (3.54-5.29)	**5.17** (4.11-6.58)	**5.82** (4.52-7.57)	**6.46** (4.90-8.62)	**7.11** (5.24-9.76)	**7.96** (5.62-11.4)	**8.61** (5.86-12.8)
24-hr	**2.94** (2.60-3.38)	**3.87** (3.42-4.47)	**5.05** (4.46-5.85)	**5.99** (5.24-6.98)	**7.21** (6.11-8.69)	**8.13** (6.74-9.99)	**9.02** (7.31-11.4)	**9.93** (7.82-12.9)	**11.1** (8.40-15.0)	**12.0** (8.77-16.7)
2-day	**3.60** (3.19-4.15)	**4.85** (4.29-5.59)	**6.45** (5.69-7.46)	**7.74** (6.77-9.02)	**9.47** (8.02-11.4)	**10.8** (8.94-13.3)	**12.1** (9.80-15.2)	**13.4** (10.6-17.4)	**15.3** (11.5-20.6)	**16.6** (12.2-23.2)
3-day	**3.86** (3.42-4.45)	**5.28** (4.67-6.09)	**7.16** (6.32-8.28)	**8.71** (7.62-10.2)	**10.8** (9.18-13.1)	**12.5** (10.4-15.4)	**14.2** (11.5-17.9)	**16.0** (12.6-20.7)	**18.4** (13.9-24.8)	**20.4** (14.9-28.4)
4-day	**4.12** (3.65-4.75)	**5.70** (5.04-6.58)	**7.82** (6.89-9.04)	**9.58** (8.38-11.2)	**12.0** (10.2-14.5)	**14.0** (11.6-17.2)	**16.0** (12.9-20.1)	**18.1** (14.3-23.4)	**21.1** (15.9-28.4)	**23.4** (17.1-32.7)
7-day	**4.72** (4.18-5.43)	**6.60** (5.83-7.61)	**9.13** (8.05-10.6)	**11.2** (9.84-13.1)	**14.2** (12.0-17.1)	**16.6** (13.7-20.4)	**19.0** (15.4-23.9)	**21.6** (17.0-28.0)	**25.2** (19.1-34.0)	**28.2** (20.6-39.3)
10-day	**5.09** (4.51-5.86)	**7.16** (6.34-8.27)	**9.97** (8.80-11.5)	**12.3** (10.8-14.4)	**15.6** (13.2-18.8)	**18.3** (15.2-22.5)	**21.0** (17.0-26.5)	**24.0** (18.9-31.0)	**28.1** (21.2-37.9)	**31.4** (22.9-43.8)
20-day	**6.09** (5.39-7.01)	**8.65** (7.65-9.98)	**12.2** (10.7-14.1)	**15.2** (13.3-17.7)	**19.4** (16.4-23.4)	**22.8** (18.9-28.0)	**26.4** (21.4-33.3)	**30.3** (23.8-39.2)	**35.7** (27.0-48.2)	**40.2** (29.4-56.1)
30-day	**7.10** (6.29-8.19)	**10.1** (8.94-11.7)	**14.3** (12.6-16.5)	**17.8** (15.6-20.8)	**22.9** (19.4-27.6)	**27.0** (22.4-33.3)	**31.4** (25.5-39.6)	**36.2** (28.5-46.8)	**42.9** (32.5-57.9)	**48.5** (35.4-67.6)
45-day	**8.49** (7.52-9.79)	**12.0** (10.6-13.9)	**16.9** (14.9-19.6)	**21.2** (18.5-24.7)	**27.3** (23.1-32.9)	**32.3** (26.8-39.7)	**37.7** (30.5-47.4)	**43.5** (34.3-56.3)	**51.8** (39.2-69.9)	**58.7** (43.0-82.0)
60-day	**9.88** (8.74-11.4)	**13.9** (12.3-16.0)	**19.4** (17.1-22.5)	**24.3** (21.2-28.3)	**31.3** (26.5-37.7)	**37.0** (30.7-45.6)	**43.2** (35.0-54.5)	**50.0** (39.4-64.7)	**59.8** (45.2-80.6)	**67.9** (49.6-94.7)

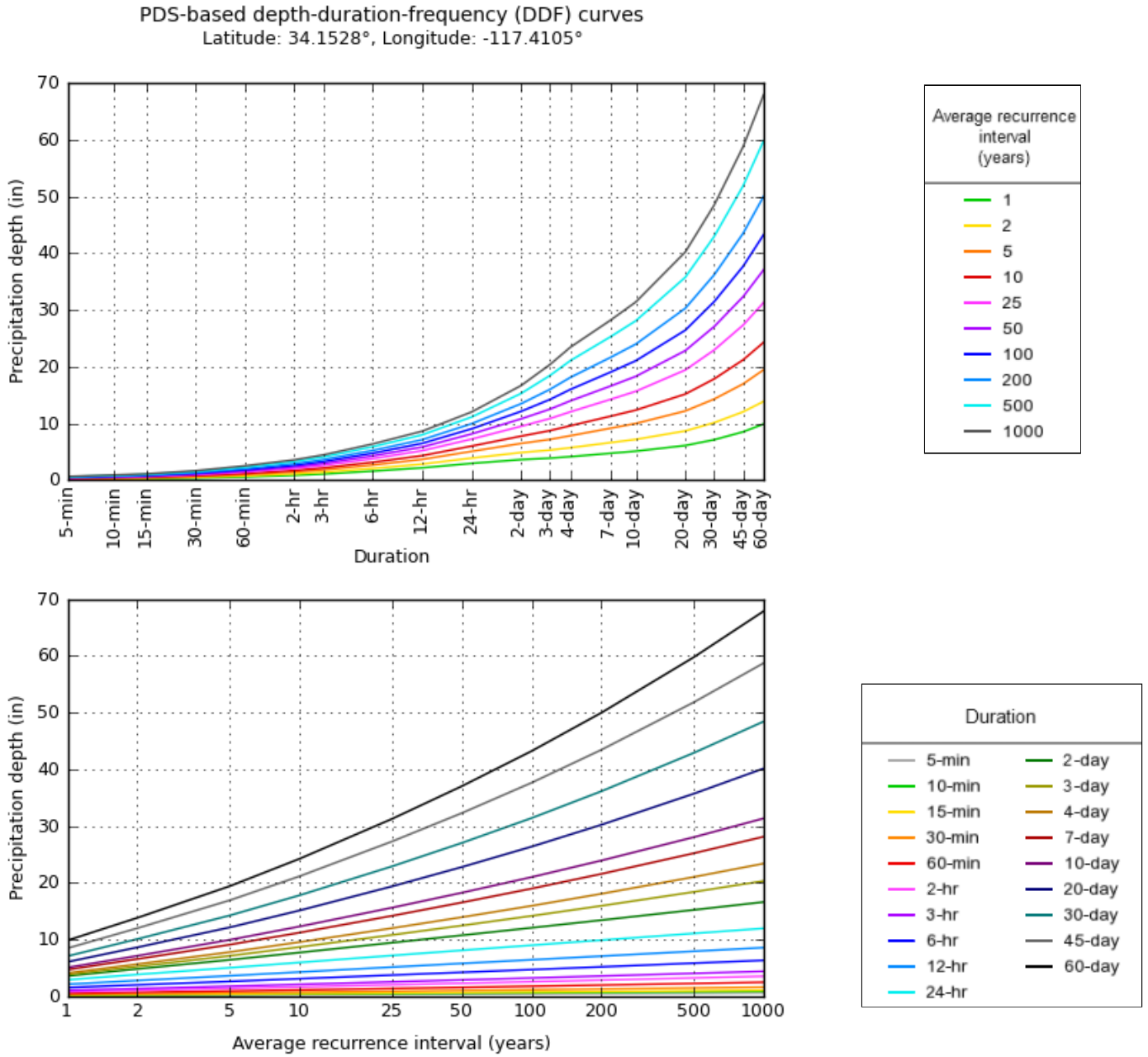
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

PF graphical



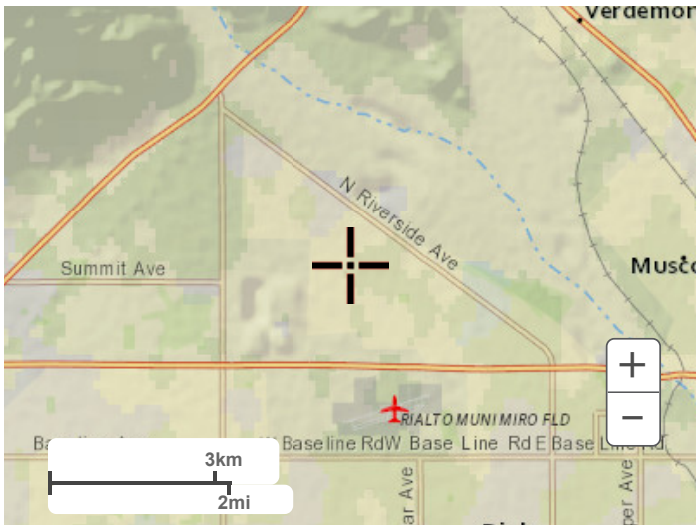
NOAA Atlas 14, Volume 6, Version 2

Created (GMT): Tue Aug 31 23:16:15 2021

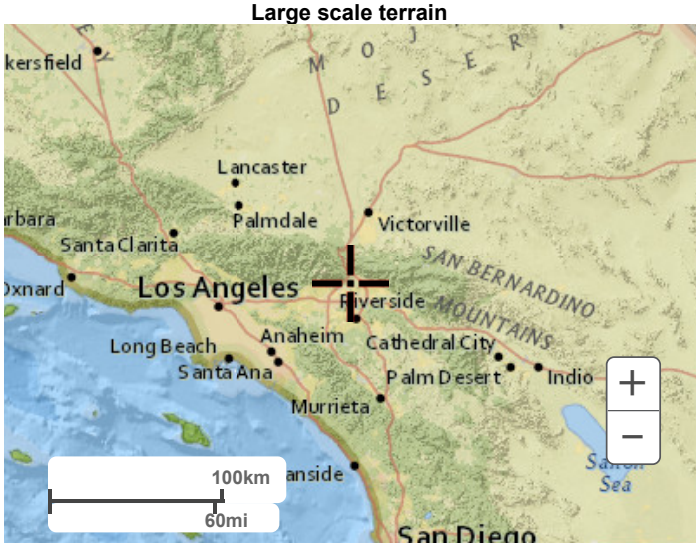
Back to Top

Maps & aerials

Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



Back to Top

US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

NOAA Atlas 14, Volume 6, Version 2
Location name: Rialto, California, USA*
Latitude: 34.1528°, Longitude: -117.4105°
Elevation: 1631.63 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**1.66** (1.38-2.02)	**2.20** (1.82-2.68)	**2.90** (2.40-3.54)	**3.47** (2.86-4.26)	**4.24** (3.37-5.40)	**4.84** (3.76-6.28)	**5.44** (4.12-7.24)	**6.05** (4.45-8.30)	**6.89** (4.86-9.86)	**7.55** (5.14-11.2)
10-min	**1.19** (0.990-1.44)	**1.57** (1.31-1.91)	**2.08** (1.72-2.53)	**2.48** (2.05-3.06)	**3.04** (2.41-3.86)	**3.46** (2.69-4.50)	**3.89** (2.95-5.19)	**4.34** (3.19-5.95)	**4.94** (3.49-7.07)	**5.41** (3.68-8.02)
15-min	**0.956** (0.796-1.16)	**1.27** (1.06-1.54)	**1.68** (1.39-2.04)	**2.00** (1.65-2.46)	**2.45** (1.94-3.12)	**2.79** (2.17-3.63)	**3.14** (2.38-4.18)	**3.50** (2.58-4.80)	**3.98** (2.81-5.70)	**4.36** (2.97-6.47)
30-min	**0.722** (0.600-0.876)	**0.958** (0.796-1.16)	**1.26** (1.05-1.54)	**1.51** (1.24-1.86)	**1.85** (1.47-2.35)	**2.11** (1.64-2.74)	**2.37** (1.80-3.16)	**2.64** (1.94-3.62)	**3.01** (2.12-4.30)	**3.29** (2.24-4.88)
60-min	**0.550** (0.458-0.668)	**0.730** (0.606-0.887)	**0.963** (0.798-1.17)	**1.15** (0.947-1.42)	**1.41** (1.12-1.79)	**1.61** (1.25-2.09)	**1.80** (1.37-2.40)	**2.01** (1.48-2.76)	**2.29** (1.62-3.28)	**2.51** (1.71-3.72)
2-hr	**0.416** (0.346-0.505)	**0.544** (0.452-0.662)	**0.711** (0.589-0.866)	**0.844** (0.694-1.04)	**1.02** (0.814-1.30)	**1.16** (0.903-1.51)	**1.30** (0.986-1.73)	**1.44** (1.06-1.98)	**1.63** (1.15-2.34)	**1.78** (1.21-2.64)
3-hr	**0.354** (0.295-0.430)	**0.461** (0.383-0.561)	**0.599** (0.497-0.731)	**0.710** (0.583-0.873)	**0.858** (0.682-1.09)	**0.971** (0.755-1.26)	**1.09** (0.822-1.45)	**1.20** (0.884-1.65)	**1.36** (0.956-1.94)	**1.48** (1.00-2.19)
6-hr	**0.263** (0.219-0.320)	**0.342** (0.284-0.415)	**0.442** (0.366-0.539)	**0.522** (0.429-0.642)	**0.629** (0.499-0.800)	**0.710** (0.551-0.922)	**0.790** (0.599-1.05)	**0.871** (0.642-1.20)	**0.980** (0.691-1.40)	**1.06** (0.724-1.58)
12-hr	**0.179** (0.149-0.217)	**0.233** (0.194-0.284)	**0.302** (0.251-0.369)	**0.357** (0.293-0.439)	**0.429** (0.341-0.546)	**0.483** (0.375-0.628)	**0.537** (0.407-0.715)	**0.590** (0.435-0.810)	**0.661** (0.466-0.946)	**0.714** (0.486-1.06)
24-hr	**0.122** (0.108-0.141)	**0.161** (0.143-0.186)	**0.211** (0.186-0.244)	**0.250** (0.218-0.291)	**0.301** (0.255-0.362)	**0.339** (0.281-0.416)	**0.376** (0.305-0.474)	**0.414** (0.326-0.536)	**0.463** (0.350-0.624)	**0.500** (0.366-0.698)
2-day	**0.075** (0.066-0.087)	**0.101** (0.089-0.116)	**0.134** (0.119-0.155)	**0.161** (0.141-0.188)	**0.197** (0.167-0.238)	**0.225** (0.186-0.276)	**0.252** (0.204-0.317)	**0.280** (0.221-0.363)	**0.318** (0.240-0.429)	**0.347** (0.254-0.484)
3-day	**0.054** (0.047-0.062)	**0.073** (0.065-0.085)	**0.099** (0.088-0.115)	**0.121** (0.106-0.141)	**0.151** (0.127-0.181)	**0.174** (0.144-0.213)	**0.197** (0.160-0.248)	**0.222** (0.175-0.287)	**0.256** (0.194-0.345)	**0.283** (0.207-0.394)
4-day	**0.043** (0.038-0.049)	**0.059** (0.053-0.069)	**0.081** (0.072-0.094)	**0.100** (0.087-0.116)	**0.125** (0.106-0.151)	**0.145** (0.121-0.179)	**0.166** (0.135-0.210)	**0.188** (0.149-0.244)	**0.219** (0.166-0.296)	**0.244** (0.178-0.340)
7-day	**0.028** (0.025-0.032)	**0.039** (0.035-0.045)	**0.054** (0.048-0.063)	**0.067** (0.059-0.078)	**0.085** (0.072-0.102)	**0.099** (0.082-0.121)	**0.113** (0.092-0.143)	**0.129** (0.101-0.166)	**0.150** (0.114-0.203)	**0.168** (0.123-0.234)
10-day	**0.021** (0.019-0.024)	**0.030** (0.026-0.034)	**0.042** (0.037-0.048)	**0.051** (0.045-0.060)	**0.065** (0.055-0.079)	**0.076** (0.063-0.094)	**0.088** (0.071-0.110)	**0.100** (0.079-0.129)	**0.117** (0.088-0.158)	**0.131** (0.096-0.182)
20-day	**0.013** (0.011-0.015)	**0.018** (0.016-0.021)	**0.025** (0.022-0.029)	**0.032** (0.028-0.037)	**0.040** (0.034-0.049)	**0.047** (0.039-0.058)	**0.055** (0.045-0.069)	**0.063** (0.050-0.082)	**0.074** (0.056-0.100)	**0.084** (0.061-0.117)
30-day	**0.010** (0.009-0.011)	**0.014** (0.012-0.016)	**0.020** (0.017-0.023)	**0.025** (0.022-0.029)	**0.032** (0.027-0.038)	**0.038** (0.031-0.046)	**0.044** (0.035-0.055)	**0.050** (0.040-0.065)	**0.060** (0.045-0.080)	**0.067** (0.049-0.094)
45-day	**0.008** (0.007-0.009)	**0.011** (0.010-0.013)	**0.016** (0.014-0.018)	**0.020** (0.017-0.023)	**0.025** (0.021-0.030)	**0.030** (0.025-0.037)	**0.035** (0.028-0.044)	**0.040** (0.032-0.052)	**0.048** (0.036-0.065)	**0.054** (0.040-0.076)
60-day	**0.007** (0.006-0.008)	**0.010** (0.009-0.011)	**0.013** (0.012-0.016)	**0.017** (0.015-0.020)	**0.022** (0.018-0.026)	**0.026** (0.021-0.032)	**0.030** (0.024-0.038)	**0.035** (0.027-0.045)	**0.042** (0.031-0.056)	**0.047** (0.034-0.066)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

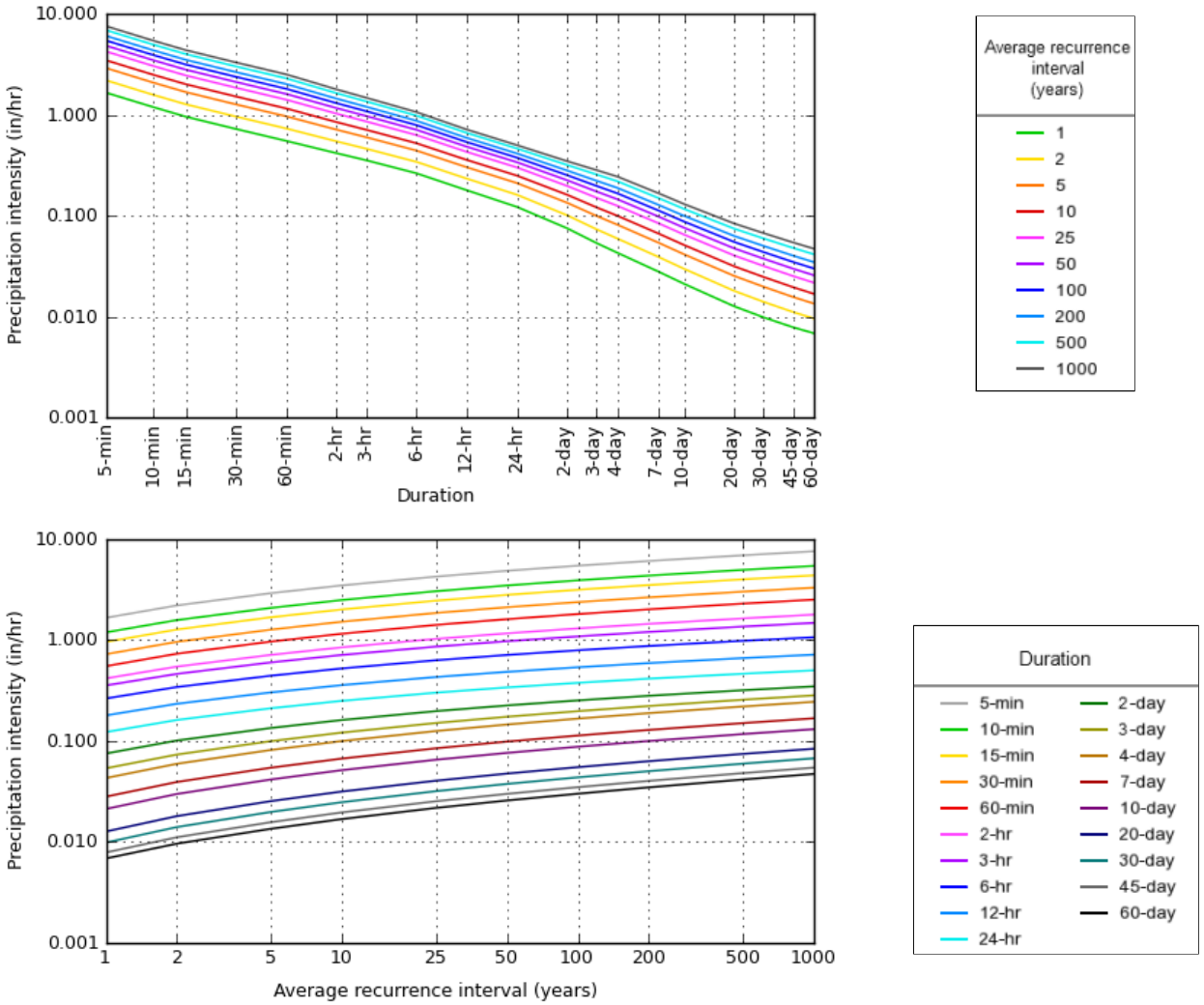
Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

PF graphical

PDS-based intensity-duration-frequency (IDF) curves
Latitude: 34.1528°, Longitude: -117.4105°



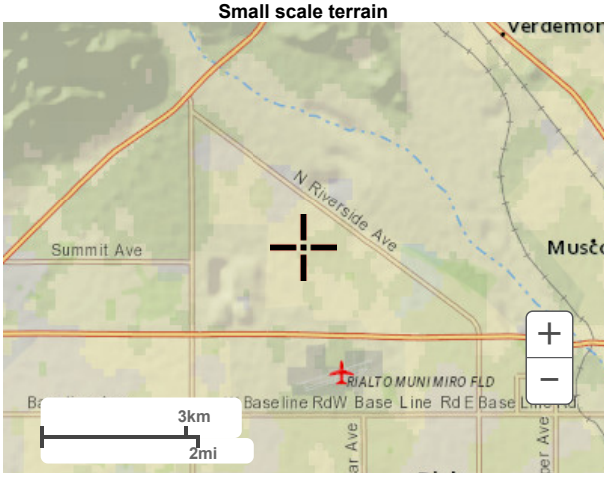
NOAA Atlas 14, Volume 6, Version 2

Created (GMT): Thu Sep 23 23:34:22 2021

Back to Top

Maps & aerials

Small scale terrain



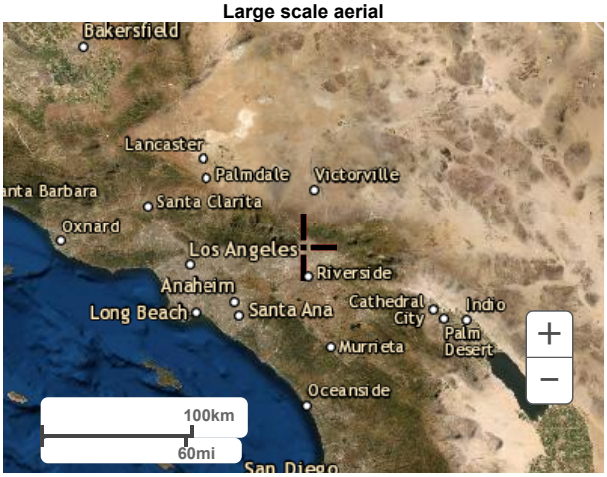
Large scale terrain



Large scale map



Large scale aerial



Back to Top

US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

APPENDIX B

HYDROLOGIC SOIL TYPE CLASSIFICATION

Search

Map Unit Legend

San Bernardino County Southwestern Part, California (CA677)

San Bernardino County Southwestern Part, California (CA677)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
SpC	Soboba stony loamy sand, 2 to 9 percent slopes	5.3	100.0%
Totals for Area of Interest		**5.3**	**100.0%**

Soil Map



Warning: Soil Map may not be valid at this scale.

You have zoomed in beyond the scale at which the soil map for this area is intended to be used. Mapping of soils is done at a particular scale. The soil surveys that comprise your AOI were mapped at 1:24,000. The design of map units and the level of detail shown in the resulting soil map are dependent on that map scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Soil Data Available

To see a description of the soil data available for a specific point on the map:

1. Click anywhere in the map. The soil data availability for that point will be shown here.
2. The point you clicked is marked with the identified point icon:
3. To see a map showing soil data availability for all locations in the U.S. and territories, click the **Soil Survey Status** link in the Navigation Bar above.

SIMEON	A	SNOW	B	SQUALICUM	B	STISSING	C	SURGH	B						
SIMMLER	D	SNOWDEN	C	SQUAM	B	STIVERSVILLE	B	SURPRISE	B						
SIMMONT	C	SNOWLIN	B	SQUILLCHUCK	B	STOCKBRIDGE	B	SURRENCY	B/D						
SIMNER	A	SNOWVILLE	D	SQUIMER	B	STOCKLAND	B	SURVYA	C						
SIMON	C	SNOWY	A	SQUIRES	B	STOCKPEN	D	SUSIE CREEK	D						
SIMONA	D	SOAKPAK	B	ST. ALBANS	B	STOCKTON	D	SUSITNA	B						
SIMOTE	C	SOAP LAKE	B	ST. CHARLES	B	STODICK	D	SUSQUEHANNA	D						
SIMPERS	B	SOBOBA	A	ST. CLAIR	D	STOKES	D	SUTHER	C						
SIMPSON	C	SOBRANTE	C	ST. ELMO	A	STOMAR	C	SUTHERLIN	C						
SIMS	D	SODA LAKE	B	ST. GEORGE	C	STONER	B	SUTLEW	B/C						
SINAI	C	SODHOUSE	D	ST. HELENS	A	STONEWALL	A	SUTPHEN	D						
SINCLAIR	C	SODUS	C	ST. IGNACE	C	STONO	B/D	SUTTLER	B						
SINE	C	SOELBERG	B	ST. JOE	B/D	STONYFORD	D	SUTTON	B						
SINGLETREE	C	SOFIA	B	ST. JOHNS	B/D	STOOKEY	B	SVEA	B						
SINGSAAS	B	SOGN	D	ST. LUCIE	A	STORDEN	B	SVERDRUP	B						
SINNIGAM	C	SOGZIE	B	ST. MARTIN	C	STORLA	B	SVOLD	C						
SINOMAX	B	SOKOLOF	B	ST. MARYS	B	STORMITT	B	SWAGER	C						
SINTON	B	SOLAND	D	ST. NICHOLAS	D	STORM KING	D	SWAKANE	C						
SINUK	D	SOLDATNA	B	ST. PAUL	B	STORY	C	SWAN	C						
SION	B	SOLDIER	C	ST. THOMAS	D	STOSSEL	C	SWANBOY	D						
SIOUX	A	SOL DUC	B	STAATSBURG		STOUGH	C	SWANNER	D						
SIPPLE	A	SOLDUC	B	STABLER	B	STOWELL	D	SWANSON	B						
SIRI	B	SOLLEKS	C	STACY	B	STOY	B	SWANTON	B/D						
SISKIYOU	B	SOLLER	D	STADY	B	STRAIGHT	C	SWANTOWN	C						
SISSETON	B	SOLOMON	D	STAFFORD	C	STRAIN	B	SWAPPS	C						
SISSON	B	SOLONA	B	STAGECOACH	B	STRASBURG	C	SWARTSWOOD	C						
SITES	C	SOMBRERO	D	STAHL	C	STRATFORD	B	SWARTZ	D						
SITKA	B	SOMERS	B	STALEY	C	STRAUSS	C	SWASEY	D						
SIXMILE	B	SOMERSET	D	STAMBAUGH	B	STRAW	B	SWASTIKA	C						
SIZEMORE	B	SOMERVELL	B	STAMFORD	D	STRAWN	B	SWATARA	A						
SIZER	B	SOMSEN	C	STAMPEDE	D	STREATOR	C	SWAUK	C						
SKAGGS	B	SONOITA	B	STAN	B	STROLE	B	SWAWILLIA	A						
SKAGIT	B/C	SONOMA	D	STANDISH	C/D	STRONGHURST	B	SWEATMAN	C						
SKAHA	A	SONTAG	D	STANEY	D	STRONTIA	B	SWEDE	B						
SKALAN	C	SOPER	B/C	STANFIELD	C	STROUPE	C	SWEDEN	B						
SKAMANIA	B	SOQUEL	B	STANLEY	C	STRYKER	B	SWEEN	C						
SKAMOKAWA	B	SORDO	C	STANSBURY	D	STUBBS	C	SWEENEY	B						
SKANEE	C	SORF	C	STANTON	D	STUCKCREEK	B	SWEET	C						
SKELLOCK	B	SORRENTO	B	STAPLETON	B	STUKEL	D	SWEETGRASS	B						
SKERRY	C	SORTER	B/D	STARBUCK	D	STUKEY	B	SWEETWATER	D						
SKIDMORE	B	SOSA	C	STARGO	B	STUMBLE	A	SWENODA	B						
SKIFLET	C	SOTELLA	C	STARICHKOF	D	STUMPP	D	SWIFTCREEK	B						
SKINNER	C	SOTIN	B	STARKS	C	STUMP SPRINGS	B	SWIFTON	A						
SKIYOU	C	SOUTHFORK	D	STARLEY	D	STUNNER	B	SWIMS	A						
SKOKOMISH	B/C	SOUTHGATE	D	STARR	B	STUTTGART	D	SWINGLER	C						
SKOOKUMCHUCK	B	SOUTHWICK	C	STASER	B	STUTZMAN	C	SWINK	D						
SKOWHEGAN	B	SPAA	D	STATE	B	STUTZVILLE	B/C	SWISBOO	D						
SKULL CREEK	D	SPACE CITY	A	STATEN	D	SUBLETTE	B	SWITCHBACK	C						
SKUMPAH	D	SPAGE	B	STATLER	B	SUDBURY	B	SWITZERLAND	B						
SKUTUM	C	SPALDING	D	STAVE	D	SUDDUTH	C	SWOPE	C						
SKYBERG	C	SPAN	D	STAYTON	D	SUFFIELD	C	SWYGERT	C						
SKYHAVEN	D	SPANAWAY	B	STEAMBOAT	D	SUGARLOAF	B	SYCAMORE	B/C						
SKYKOMISH	B	SPANEL	D	STEARNS	D	SUISUN	D	SYCAN	A						
SKYLICK	C	SPARTA	A	STECUM	A	SULA	B	SYLACAUGA	B/D						
SKYLINE	D	SPEARFISH	B	STEED	A	SULLY	B	SYLVAN	B						
SKYWAY	B	SPEARMAN	C	STEEDMAN	D	SULPHURA	D	SYMERTON	B						
SLAB	D	SPEARVILLE	C	STEEKEE	C	SULTAN	B	SYNAREP	B						
SLATE CREEK	C	SPECK	D	STEELE	B	SUMAS	B/C	SYRACUSE	B						
SLAUGHTER	C	SPECTER	D	STEESE	C	SUMDUM	D	SYRENE	D						
SLAVEN	D	SPEELYAI	C	STEFF	C	SUMMA	B	SYRETT	C						
SLAWSON	B	SPEIGLE	B	STEGALL	C	SUMMERFIELD	C								
SLAYTON	D	SPENARD	D	STEIGER	A	SUMMERS	B	TABERNASH	B						
SLEETH	C	SPENCER	B	STEINAUER	B	SUMMERVILLE	C	TABIONA	B						
SLETTEN	D	SPENLO	B	STEINBECK	B	SUMMIT	C	TABLE MOUNTAIN	B						
SLICKROCK	B	SPERRY	C	STEINMETZ	D	SUMMITVILLE	B	TABLER	D						
SLIGHTS	D	SPICER	C	STEINSBURG	C	SUMTER	C	TABOR	D						
SLIGO	B	SPILLVILLE	B	STEIWER	C	SUN	D	TACAN	B						
SLIKOK	D	SPINKS	A	STELLAR	C	SUNBURST	C	TACOMA	D						
SLIP	B	SPIRES	D	STEMILT	C	SUNBURY	B	TACOOSH	D						
SLIPMAN	B/C	SPIRIT	B	STENDAL	C	SUNCOCK	A	TAFT	C						
SLOAN	D	SPIRO	B	STEPHEN	C	SUND	C	TAGGERT	C						
SLOCUM	B	SPLENDORA	C	STEPHENSBURG	B	SUNDELL	C	TAHOMA	B						
SLOOUC	C	SPLITRO	D	STEPHENVILLE	B	SUNDERLAND	C/D	TAHQUAMENON	D						
SLOSS	C	SPOFFORD	C	STERLING	B	SUNDOWN	B	TAHQUATS	C						
SLUICE	B	SPOKANE	B	STERLINGTON	B	SUNFIELD	B	TAINTOR	C						
SMARTS	B	SPUNSELLER	B	STETSON	B	SUNNILAND	C	TAJO	C						
SMITH CREEK	A	SPOON BUTTE	D	STETTER	D	SUNNYHAY	D	TAKEUCHI	C						
SMITHDALE	B	SPOONER	C	STEUBEN	B	SUNNYSIDE	B	TAKILMA	B						
SMITHNECK	B	SPOTTSWOOD	B	STEVENS	B	SUNNYVALE	C	TAKOTNA	B						
SMITHTON	D	SPRAGUE	B/C	STEVENSON	B	SUNRAY	B	TALAG	D						
SMOLAN	C	SPRECKELS	C	STEWART	D	SUNRISE	D	TALANTE	C						
SMOOT	D	SPRING	C/D	STICKNEY	C	SUNSET	B	TALAPUS	B						
SNAG	B	SPRING CREEK	C	STIDHAM	A	SUNSHINE	C	TALBOTT	C						
SNAHOPISH	B	SPRINGDALE	B	STIGLER	C	SUNSWEET	C	TALCOT	C						
SNAKE	C	SPRINGER	B	STILLMAN	A	SUNUP	D	TALIHINA	D						
SNAKE HOLLOW	B	SPRINGERVILLE	D	STILLWATER	D	SUPAN	B	TALKEETNA	C						
SNAKELUM	B	SPRINGFIELD	D	STILSON	B	SUPERIOR	C	TALLAC	B						
SNEAD	D	SPRINGMEYER	C	STIMSON	B/C	SUPERSTITION	A	TALLADEGA	C						
SNELL	C	SPRINGTOWN	C	STINGAL	B	SUPERVISOR	C	TALLAPOOSA	C						
SNELLING	B	SPROUL	D	STINSON	C	SUPPLEE	B	TALLEYVILLE	B						
SNOHOMISH	D	SPUR	B	STIRK	D	SUR	B	TALLS	B						
SNOQUALMIE	B	SPURLOCK	B	STIRUM	B	SURGEM	C	TALLULA	B						

NOTES A BLANK HYDROLOGIC SOIL GROUP INDICATES THE SOIL GROUP HAS NOT BEEN DETERMINED
TWO SOIL GROUPS SUCH AS B/C INDICATES THE DRAINED/UNDRAINED SITUATION

SAN BERNARDINO COUNTY

HYDROLOGY MANUAL

S.C.S. SOIL NAMES FOR HYDROLOGIC CLASSIFICATIONS

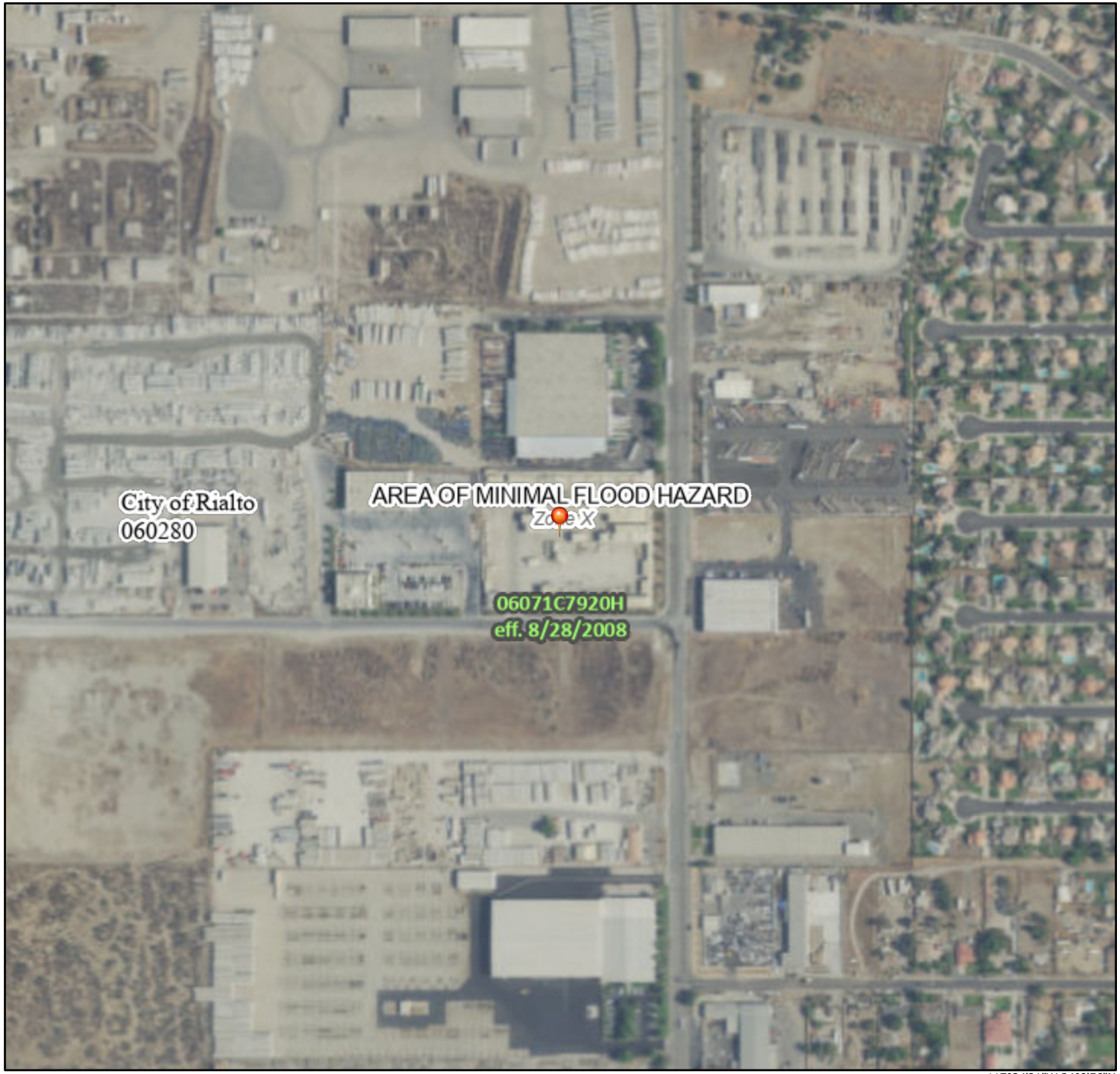
APPENDIX C

FEMA FIRMETTE

National Flood Hazard Layer FIRMette

FEMA

117°24'58"W 34°9'26"N



117°24'21"W 34°8'56"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

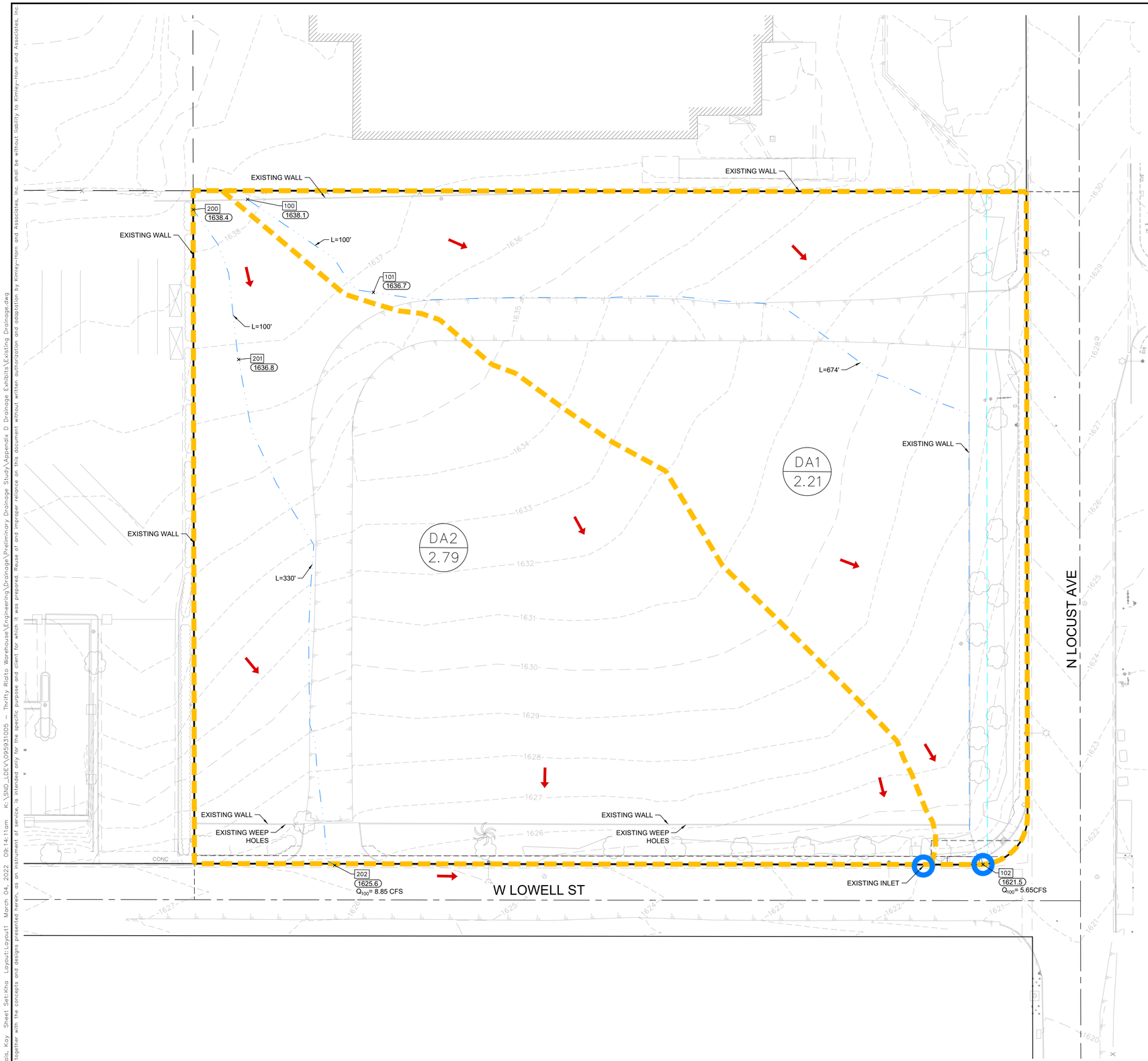
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

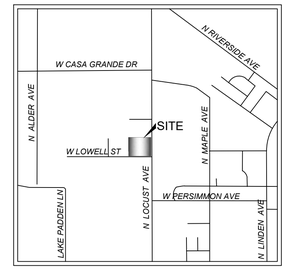
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/1/2021 at 5:17 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used f regulatory purposes.

APPENDIX D

DRAINAGE EXHIBITS





LEGEND

- DA ID / DA ACREAGE
- NODE DESIGNATION
- FLOW PATH LENGTH (FEET)
- BASIN BOUNDARY
- FLOW DIRECTION
- FLOW PATH
- NODE ELEVATION (FEET)
- PROPERTY LINE
- CENTERLINE
- POINT OF COMPLIANCE

SUMMARY TABLE

DMA ID	AREA (ACRE)	Q_2 (CFS)	Q_{100} (CFS)
DA1	2.21	1.41	5.65
DA2	2.79	2.55	8.85
TOTAL	5.00	3.96	14.50

NORTH

GRAPHIC SCALE IN FEET
0 15 30 60

NO.	REVISIONS	DATE	BY

Kimley»Horn
401 B STREET, SUITE 600, SAN DIEGO, CA
92101 PHONE: 619.234.9411
WWW.KIMLEY-HORN.COM

KHA PROJECT #095931005
DATE
SCALE AS SHOWN
DESIGNED BY EH/KA
DRAWN BY EH/KA
CHECKED BY DC

PPD #XXXX-XXXX

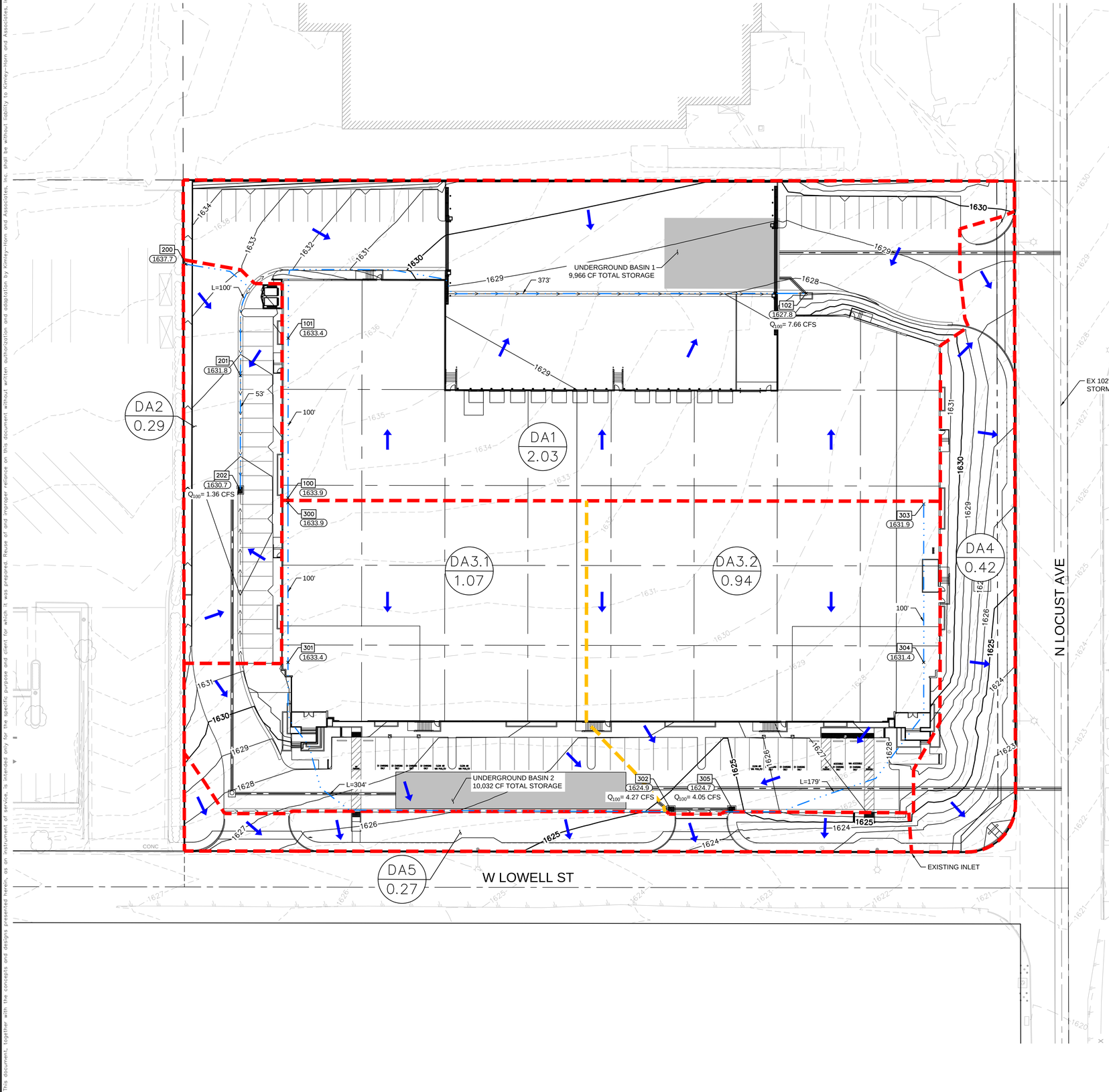
THRIFTY LOCUST AND LOWELL
CITY OF RIALTO, CA

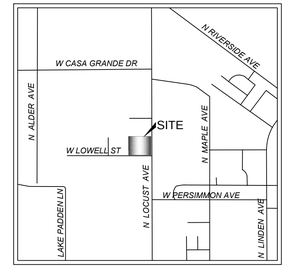
EXISTING DRAINAGE EXHIBIT

N LOCUST AVE AND W LOWELL ST
RIALTO, CA

SHEET NUMBER
1 OF 1

Plotted By:Abdis, Key Sheet Set:Kha Layout:Layout1 March 04, 2022 09:14:11am K:\SND_LDEV\095931005 - Thrifty Rialto Warehouse\Engineering\Drainage\Preliminary Drainage Study\Appendix D Drainage Exhibits\Existing Drainage.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.





LEGEND

- DA.X / XX — DA ID / DA ACREAGE
- XXX — NODE DESIGNATION
- L=XXX' — FLOW PATH LENGTH (FEET)
- BASIN SUB BOUNDARY
- BASIN BOUNDARY
- FLOW DIRECTION
- FLOW PATH
- (???) — NODE ELEVATION (FEET)
- PROP. STORM DRAIN
- PROPERTY LINE
- CENTERLINE
- PROP. STORM DRAIN GRATED INLET
- PROP. STORM DRAIN MANHOLE
- PROP. STORM DRIAN CURB INLET
- PROP. CROSS GUTTER

SUMMARY TABLE

DMA ID	AREA (ACRE)	Q_2 (CFS)	Q_{100} (CFS)
DA1	2.03	2.69	7.66
DA2	0.29	0.52	1.36
DA3.1	1.07	1.59	4.27
DA3.2	0.94	1.53	4.05
DA4	0.42	0.56	1.86
DA5	0.27	0.38	1.20
TOTAL	5.02	7.27	20.40

NORTH

GRAPHIC SCALE IN FEET
0 15 30 60

No.	REVISIONS	DATE	BY

Kimley»Horn
401 B STREET, SUITE 600, SAN DIEGO, CA
92101 PHONE: 619-234-9411
WWW.KIMLEY-HORN.COM

KHA PROJECT #095931005
DATE 4/11/2022
SCALE AS SHOWN
DESIGNED BY EH
DRAWN BY EH
CHECKED BY KA

PPD #XXXX-XXXX

PROPOSED DRAINAGE EXHIBIT

THRIFTY LOCUST AND LOWELL
CITY OF RIALTO, CA

N LOCUST AVE AND W LOWELL ST
RIALTO, CA

SHEET NUMBER
1 OF 1

Plotted By: Huun, Emma Sheet Set: Kho Layout: Layout1 April 11, 2022 09:08:13am K:\SND_LOE\V095931005 – Thrifty Rialto Warehouse\Engineering\Drainage\Preliminary Drainage Study\Appendix D Drainage Exhibits\Proposed Drainage.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

APPENDIX E

EXISITING CONDITIONS HYDROLOGY AES RATIONAL METHOD RESULTS

```
************************************************************************
          RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
       (Reference: 1986 SAN BERNARDINO CO. HYDROLOGY CRITERION)
      (c) Copyright 1983-2011 Advanced Engineering Software (aes)
          Ver. 18.0  Release Date: 07/01/2011  License ID 1499

                        Analysis prepared by:

                    Kimley-Horn and Associates, Inc.
                          765 The City Drive
                              Suite 200
                           Orange, CA 92868

 ************************* DESCRIPTION OF STUDY *************************
* THRIFTY RIALTO                                                        *
* EXISTING DA1 2 YEAR HYDROLOGY                                             *
* KA 9/16/2021                                                          *
 ************************************************************************

  FILE NAME: EXTR2.DAT
  TIME/DATE OF STUDY: 10:02 09/16/2021
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =    2.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  6
   1)    5.00;  2.200
   2)   10.00;  1.570
   3)   15.00;  1.270
   4)   30.00;  0.958
   5)   60.00;  0.730
   6)  120.00;  0.544
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    101.00 IS CODE =  21
------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
========================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  ELEVATION DATA: UPSTREAM(FEET) =   1638.10  DOWNSTREAM(FEET) =   1636.70

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    7.779
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.850
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL POOR COVER
```

```
  "BARREN"                   A        0.10      0.42     1.000    78    7.78
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.42
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA RUNOFF(CFS) =      0.13
  TOTAL AREA(ACRES) =      0.10   PEAK FLOW RATE(CFS) =      0.13

****************************************************************************
  FLOW PROCESS FROM NODE    101.00 TO NODE    102.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1636.70  DOWNSTREAM(FEET) =   1621.50
  CHANNEL LENGTH THRU SUBAREA(FEET) =   674.00   CHANNEL SLOPE =  0.0226
  CHANNEL BASE(FEET) =    0.00   "Z" FACTOR =  99.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   0.50
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.123
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A        1.06      0.42     1.000    78
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.42
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.49
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   0.79
  AVERAGE FLOW DEPTH(FEET) =   0.08   TRAVEL TIME(MIN.) =  14.31
  Tc(MIN.) =   22.09
  SUBAREA AREA(ACRES) =     1.06       SUBAREA RUNOFF(CFS) =    0.67
  EFFECTIVE AREA(ACRES) =      1.16     AREA-AVERAGED Fm(INCH/HR) =   0.42
  AREA-AVERAGED Fp(INCH/HR) =   0.42  AREA-AVERAGED Ap =   1.00
  TOTAL AREA(ACRES) =        1.2         PEAK FLOW RATE(CFS) =       0.74

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.09   FLOW VELOCITY(FEET/SEC.) =   0.95
  LONGEST FLOWPATH FROM NODE    100.00 TO NODE    102.00 =     774.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    102.00 TO NODE    102.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =   22.09
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.123
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A        1.06      0.42     1.000    78
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.42
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA AREA(ACRES) =    1.06      SUBAREA RUNOFF(CFS) =    0.67
  EFFECTIVE AREA(ACRES) =      2.22   AREA-AVERAGED Fm(INCH/HR) =  0.42
  AREA-AVERAGED Fp(INCH/HR) =  0.42  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =        2.2       PEAK FLOW RATE(CFS) =       1.41
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        2.2  TC(MIN.) =     22.09
  EFFECTIVE AREA(ACRES) =      2.22  AREA-AVERAGED Fm(INCH/HR)=  0.42
  AREA-AVERAGED Fp(INCH/HR) =  0.42  AREA-AVERAGED Ap = 1.000
  PEAK FLOW RATE(CFS)   =       1.41
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
          (Reference: 1986 SAN BERNARDINO CO. HYDROLOGY CRITERION)
         (c) Copyright 1983-2011 Advanced Engineering Software (aes)
             Ver. 18.0  Release Date: 07/01/2011  License ID 1499

                          Analysis prepared by:

                      Kimley-Horn and Associates, Inc.
                             765 The City Drive
                                 Suite 200
                              Orange, CA 92868

 ************************* DESCRIPTION OF STUDY *************************
* THRIFTY RIALTO WAREHOUSE                                              *
* EXISTING DA2 2 YEAR STORM                                             *
* EH 09/13/2021                                                         *
 **************************************************************************

  FILE NAME: EX2TR2.DAT
  TIME/DATE OF STUDY: 11:39 09/16/2021
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =    2.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  6
   1)    5.00;  2.200
   2)   10.00;  1.570
   3)   15.00;  1.270
   4)   30.00;  0.958
   5)   60.00;  0.730
   6)  120.00;  0.544
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

**************************************************************************
  FLOW PROCESS FROM NODE    200.00 TO NODE    201.00 IS CODE =  21
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==========================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  ELEVATION DATA: UPSTREAM(FEET) =   1638.40  DOWNSTREAM(FEET) =   1636.80

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    7.574
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.876
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL POOR COVER
```

```
  "BARREN"                  A        0.10      0.42     1.000    78    7.57
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.42
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA RUNOFF(CFS) =      0.13
  TOTAL AREA(ACRES) =      0.10   PEAK FLOW RATE(CFS) =      0.13

****************************************************************************
  FLOW PROCESS FROM NODE    201.00 TO NODE    202.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1636.80  DOWNSTREAM(FEET) =   1625.60
  CHANNEL LENGTH THRU SUBAREA(FEET) =   330.00   CHANNEL SLOPE =  0.0339
  CHANNEL BASE(FEET) =    0.00   "Z" FACTOR =  99.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   0.50
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.428
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                  A        1.35      0.42     1.000    78
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.42
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.75
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   1.15
  AVERAGE FLOW DEPTH(FEET) =   0.08   TRAVEL TIME(MIN.) =   4.79
  Tc(MIN.) =   12.36
  SUBAREA AREA(ACRES) =     1.35       SUBAREA RUNOFF(CFS) =    1.23
  EFFECTIVE AREA(ACRES) =      1.45     AREA-AVERAGED Fm(INCH/HR) =   0.42
  AREA-AVERAGED Fp(INCH/HR) =   0.42  AREA-AVERAGED Ap =   1.00
  TOTAL AREA(ACRES) =        1.5         PEAK FLOW RATE(CFS) =       1.32

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.10   FLOW VELOCITY(FEET/SEC.) =   1.28
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    202.00 =     430.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    202.00 TO NODE    202.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =   12.36
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.428
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                  A        1.35      0.42     1.000    78
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.42
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA AREA(ACRES) =    1.35      SUBAREA RUNOFF(CFS) =    1.23
  EFFECTIVE AREA(ACRES) =      2.80   AREA-AVERAGED Fm(INCH/HR) =  0.42
  AREA-AVERAGED Fp(INCH/HR) =  0.42  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =        2.8       PEAK FLOW RATE(CFS) =       2.55
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        2.8  TC(MIN.) =     12.36
  EFFECTIVE AREA(ACRES) =      2.80  AREA-AVERAGED Fm(INCH/HR)=  0.42
  AREA-AVERAGED Fp(INCH/HR) =  0.42  AREA-AVERAGED Ap = 1.000
  PEAK FLOW RATE(CFS)   =       2.55
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
******************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
          (Reference: 1986 SAN BERNARDINO CO. HYDROLOGY CRITERION)
         (c) Copyright 1983-2011 Advanced Engineering Software (aes)
             Ver. 18.0  Release Date: 07/01/2011  License ID 1499

                          Analysis prepared by:

                      Kimley-Horn and Associates, Inc.
                            765 The City Drive
                                Suite 200
                             Orange, CA 92868

 ************************* DESCRIPTION OF STUDY *************************
* THRIFTY RIALTO WAREHOUSE                                               *
* EXISTING DA1 100 YEAR STORM                                            *
* KA 09/16/2021                                                          *
 ************************************************************************

  FILE NAME: EXTR100.DAT
  TIME/DATE OF STUDY: 10:06 09/16/2021
==============================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==============================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  6
   1)    5.00;  5.440
   2)   10.00;  3.890
   3)   15.00;  3.140
   4)   30.00;  2.370
   5)   60.00;  1.800
   6)  120.00;  1.300
  *ANTECEDENT MOISTURE CONDITION (AMC) III ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

******************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    101.00 IS CODE =  21
------------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  ELEVATION DATA: UPSTREAM(FEET) =   1638.10  DOWNSTREAM(FEET) =   1636.70

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    7.779
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.578
  SUBAREA Tc AND LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL POOR COVER
```

```
  "BARREN"                   A        0.10      0.18     1.000    93    7.78
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.18
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA RUNOFF(CFS) =      0.40
  TOTAL AREA(ACRES) =      0.10   PEAK FLOW RATE(CFS) =      0.40

****************************************************************************
  FLOW PROCESS FROM NODE    101.00 TO NODE    102.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1636.70  DOWNSTREAM(FEET) =   1621.50
  CHANNEL LENGTH THRU SUBAREA(FEET) =   674.00   CHANNEL SLOPE =  0.0226
  CHANNEL BASE(FEET) =    0.00   "Z" FACTOR =  99.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   0.50
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.007
  SUBAREA LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A        1.06      0.18     1.000    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.18
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       1.77
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   1.15
  AVERAGE FLOW DEPTH(FEET) =   0.12   TRAVEL TIME(MIN.) =   9.81
  Tc(MIN.) =   17.59
  SUBAREA AREA(ACRES) =     1.06       SUBAREA RUNOFF(CFS) =    2.70
  EFFECTIVE AREA(ACRES) =      1.16     AREA-AVERAGED Fm(INCH/HR) =   0.18
  AREA-AVERAGED Fp(INCH/HR) =   0.18  AREA-AVERAGED Ap =   1.00
  TOTAL AREA(ACRES) =        1.2         PEAK FLOW RATE(CFS) =       2.95

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.15   FLOW VELOCITY(FEET/SEC.) =   1.33
  LONGEST FLOWPATH FROM NODE    100.00 TO NODE    102.00 =     774.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    102.00 TO NODE    102.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =   17.59
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.007
  SUBAREA LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A        1.06      0.18     1.000    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.18
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA AREA(ACRES) =    1.06      SUBAREA RUNOFF(CFS) =    2.70
  EFFECTIVE AREA(ACRES) =      2.22   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.18  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =        2.2       PEAK FLOW RATE(CFS) =       5.65
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        2.2  TC(MIN.) =     17.59
  EFFECTIVE AREA(ACRES) =      2.22  AREA-AVERAGED Fm(INCH/HR)=  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.18  AREA-AVERAGED Ap = 1.000
  PEAK FLOW RATE(CFS)   =       5.65
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
          (Reference: 1986 SAN BERNARDINO CO. HYDROLOGY CRITERION)
         (c) Copyright 1983-2011 Advanced Engineering Software (aes)
             Ver. 18.0  Release Date: 07/01/2011  License ID 1499

                          Analysis prepared by:

                      Kimley-Horn and Associates, Inc.
                             765 The City Drive
                                 Suite 200
                              Orange, CA 92868

 ************************* DESCRIPTION OF STUDY *************************
* THRIFTY RIALTO WAREHOUSE                                              *
* EXISTING DA2 100 YEAR STORM                                           *
* EH 09/13/2021                                                         *
 **************************************************************************

  FILE NAME: EX2TR100.DAT
  TIME/DATE OF STUDY: 11:55 09/16/2021
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  6
   1)    5.00;  5.440
   2)   10.00;  3.890
   3)   15.00;  3.140
   4)   30.00;  2.370
   5)   60.00;  1.800
   6)  120.00;  1.300
  *ANTECEDENT MOISTURE CONDITION (AMC) III ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

**************************************************************************
  FLOW PROCESS FROM NODE    200.00 TO NODE    201.00 IS CODE =  21
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==========================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  ELEVATION DATA: UPSTREAM(FEET) =   1638.40  DOWNSTREAM(FEET) =   1636.80

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    7.574
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.642
  SUBAREA Tc AND LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL POOR COVER
```

```
  "BARREN"                   A        0.10      0.18     1.000    93    7.57
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.18
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA RUNOFF(CFS) =      0.40
  TOTAL AREA(ACRES) =      0.10   PEAK FLOW RATE(CFS) =      0.40

****************************************************************************
  FLOW PROCESS FROM NODE    201.00 TO NODE    202.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1636.80  DOWNSTREAM(FEET) =   1625.60
  CHANNEL LENGTH THRU SUBAREA(FEET) =   330.00   CHANNEL SLOPE =  0.0339
  CHANNEL BASE(FEET) =    0.00   "Z" FACTOR =  99.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   0.50
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.692
  SUBAREA LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A        1.35      0.18     1.000    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.18
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       2.55
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   1.47
  AVERAGE FLOW DEPTH(FEET) =   0.13   TRAVEL TIME(MIN.) =   3.75
  Tc(MIN.) =   11.32
  SUBAREA AREA(ACRES) =     1.35       SUBAREA RUNOFF(CFS) =    4.27
  EFFECTIVE AREA(ACRES) =      1.45     AREA-AVERAGED Fm(INCH/HR) =   0.18
  AREA-AVERAGED Fp(INCH/HR) =   0.18  AREA-AVERAGED Ap =   1.00
  TOTAL AREA(ACRES) =        1.5         PEAK FLOW RATE(CFS) =       4.58

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.16   FLOW VELOCITY(FEET/SEC.) =   1.74
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    202.00 =     430.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    202.00 TO NODE    202.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =   11.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.692
  SUBAREA LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A        1.35      0.18     1.000    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.18
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.000
  SUBAREA AREA(ACRES) =    1.35      SUBAREA RUNOFF(CFS) =    4.27
  EFFECTIVE AREA(ACRES) =      2.80   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.18  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =        2.8       PEAK FLOW RATE(CFS) =       8.85
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        2.8  TC(MIN.) =     11.32
  EFFECTIVE AREA(ACRES) =      2.80  AREA-AVERAGED Fm(INCH/HR)=  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.18  AREA-AVERAGED Ap = 1.000
  PEAK FLOW RATE(CFS)   =       8.85
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

APPENDIX F

PROPOSED CONDITIONS HYDROLOGY AES RATIONAL METHOD RESULTS

```
******************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
          (Reference: 1986 SAN BERNARDINO CO. HYDROLOGY CRITERION)
         (c) Copyright 1983-2011 Advanced Engineering Software (aes)
            Ver. 18.0  Release Date: 07/01/2011  License ID 1499

                          Analysis prepared by:

                     Kimley-Horn and Associates, Inc.
                           765 The City Drive
                               Suite 200
                            Orange, CA 92868

 ************************ DESCRIPTION OF STUDY ************************
* THRIFTY RIALTO WAREHOUSE                                            *
* PROPOSED 2 YEAR STORM                                               *
* EH 02/16/2022                                                       *
 ******************************************************************************

  FILE NAME: TRPR2.DAT
  TIME/DATE OF STUDY: 08:39 02/16/2022
==============================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==============================================================================
                     --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =    2.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  6
   1)    5.00;  2.200
   2)   10.00;  1.570
   3)   15.00;  1.270
   4)   30.00;  0.958
   5)   60.00;  0.730
   6)  120.00;  0.544
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

******************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    101.00 IS CODE =  21
------------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  ELEVATION DATA: UPSTREAM(FEET) =   1633.90  DOWNSTREAM(FEET) =   1633.40

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    5.535
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  2.133
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                 A        0.10      0.98     0.100    32    5.53
```

```
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.97
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA RUNOFF(CFS) =      0.18
  TOTAL AREA(ACRES) =      0.10   PEAK FLOW RATE(CFS) =      0.18

****************************************************************************
  FLOW PROCESS FROM NODE    101.00 TO NODE    102.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1633.40  DOWNSTREAM(FEET) =   1627.70
  CHANNEL LENGTH THRU SUBAREA(FEET) =   373.00   CHANNEL SLOPE =  0.0153
  CHANNEL BASE(FEET) =    0.00   "Z" FACTOR =  99.000
  MANNING'S FACTOR = 0.015   MAXIMUM DEPTH(FEET) =   0.50
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.609
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        0.93      0.98     0.100    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.98
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.80
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   1.50
  AVERAGE FLOW DEPTH(FEET) =   0.07   TRAVEL TIME(MIN.) =   4.15
  Tc(MIN.) =    9.69
  SUBAREA AREA(ACRES) =     0.93       SUBAREA RUNOFF(CFS) =    1.27
  EFFECTIVE AREA(ACRES) =      1.03     AREA-AVERAGED Fm(INCH/HR) =   0.10
  AREA-AVERAGED Fp(INCH/HR) =   0.98  AREA-AVERAGED Ap =   0.10
  TOTAL AREA(ACRES) =        1.0         PEAK FLOW RATE(CFS) =       1.40

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.09   FLOW VELOCITY(FEET/SEC.) =   1.59
  LONGEST FLOWPATH FROM NODE    100.00 TO NODE    102.00 =     473.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    102.00 TO NODE    102.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    9.69
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.609
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        0.93      0.98     0.100    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.98
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA AREA(ACRES) =    0.93      SUBAREA RUNOFF(CFS) =    1.27
  EFFECTIVE AREA(ACRES) =      1.96   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.98  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =        2.0       PEAK FLOW RATE(CFS) =       2.67

****************************************************************************
  FLOW PROCESS FROM NODE    200.00 TO NODE    201.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  ELEVATION DATA: UPSTREAM(FEET) =   1636.20  DOWNSTREAM(FEET) =   1632.40

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    5.000
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  2.200
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                 A        0.10      0.98     0.100    32    5.00
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.97
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
```

```
  SUBAREA RUNOFF(CFS) =      0.19
  TOTAL AREA(ACRES) =      0.10   PEAK FLOW RATE(CFS) =      0.19

****************************************************************************
  FLOW PROCESS FROM NODE    201.00 TO NODE    202.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1632.40  DOWNSTREAM(FEET) =   1632.20
  CHANNEL LENGTH THRU SUBAREA(FEET) =    53.00   CHANNEL SLOPE =  0.0038
  CHANNEL BASE(FEET) =    0.00   "Z" FACTOR =  99.000
  MANNING'S FACTOR = 0.015   MAXIMUM DEPTH(FEET) =   0.50
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  2.027
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                A        0.10      0.98     0.100    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.97
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.28
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   0.64
  AVERAGE FLOW DEPTH(FEET) =   0.07   TRAVEL TIME(MIN.) =   1.37
  Tc(MIN.) =    6.37
  SUBAREA AREA(ACRES) =     0.10       SUBAREA RUNOFF(CFS) =    0.17
  EFFECTIVE AREA(ACRES) =      0.20     AREA-AVERAGED Fm(INCH/HR) =   0.10
  AREA-AVERAGED Fp(INCH/HR) =   0.97  AREA-AVERAGED Ap =   0.10
  TOTAL AREA(ACRES) =        0.2          PEAK FLOW RATE(CFS) =       0.35

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.07   FLOW VELOCITY(FEET/SEC.) =   0.65
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    202.00 =     153.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    202.00 TO NODE    202.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    6.37
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  2.027
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                A        0.10      0.98     0.100    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.97
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA AREA(ACRES) =    0.10      SUBAREA RUNOFF(CFS) =    0.17
  EFFECTIVE AREA(ACRES) =      0.30   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.97  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =        0.3       PEAK FLOW RATE(CFS) =       0.52

****************************************************************************
  FLOW PROCESS FROM NODE    300.00 TO NODE    301.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  ELEVATION DATA: UPSTREAM(FEET) =   1633.90  DOWNSTREAM(FEET) =   1633.40

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    5.535
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  2.133
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                A        0.10      0.98     0.100    32    5.53
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.97
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA RUNOFF(CFS) =      0.18
  TOTAL AREA(ACRES) =      0.10   PEAK FLOW RATE(CFS) =      0.18
```

```
****************************************************************************
  FLOW PROCESS FROM NODE    301.00 TO NODE    302.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1633.40  DOWNSTREAM(FEET) =   1624.90
  CHANNEL LENGTH THRU SUBAREA(FEET) =   304.00   CHANNEL SLOPE =  0.0280
  CHANNEL BASE(FEET) =    0.00   "Z" FACTOR =  99.000
  MANNING'S FACTOR = 0.015   MAXIMUM DEPTH(FEET) =   0.50
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.738
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        0.49      0.98     0.100    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.98
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.54
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   1.62
  AVERAGE FLOW DEPTH(FEET) =   0.06   TRAVEL TIME(MIN.) =   3.13
  Tc(MIN.) =    8.67
  SUBAREA AREA(ACRES) =     0.49       SUBAREA RUNOFF(CFS) =    0.72
  EFFECTIVE AREA(ACRES) =      0.59     AREA-AVERAGED Fm(INCH/HR) =   0.10
  AREA-AVERAGED Fp(INCH/HR) =   0.97  AREA-AVERAGED Ap =   0.10
  TOTAL AREA(ACRES) =        0.6         PEAK FLOW RATE(CFS) =       0.87

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.07   FLOW VELOCITY(FEET/SEC.) =   1.72
  LONGEST FLOWPATH FROM NODE    300.00 TO NODE    302.00 =     404.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    302.00 TO NODE    302.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    8.67
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.738
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        0.49      0.98     0.100    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.98
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA AREA(ACRES) =    0.49      SUBAREA RUNOFF(CFS) =    0.72
  EFFECTIVE AREA(ACRES) =      1.08   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.97  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =        1.1       PEAK FLOW RATE(CFS) =       1.59

****************************************************************************
  FLOW PROCESS FROM NODE    303.00 TO NODE    304.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  ELEVATION DATA: UPSTREAM(FEET) =   1631.90  DOWNSTREAM(FEET) =   1631.40

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    5.535
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  2.133
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                 A        0.10      0.98     0.100    32    5.53
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.97
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA RUNOFF(CFS) =      0.18
  TOTAL AREA(ACRES) =      0.10   PEAK FLOW RATE(CFS) =      0.18

****************************************************************************
```

```
  FLOW PROCESS FROM NODE    304.00 TO NODE    305.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1631.40  DOWNSTREAM(FEET) =   1624.60
  CHANNEL LENGTH THRU SUBAREA(FEET) =   179.00   CHANNEL SLOPE =  0.0380
  CHANNEL BASE(FEET) =    0.00   "Z" FACTOR =  99.000
  MANNING'S FACTOR = 0.015   MAXIMUM DEPTH(FEET) =   0.50
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.910
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        0.42      0.98     0.100    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.98
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.53
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   1.69
  AVERAGE FLOW DEPTH(FEET) =   0.06   TRAVEL TIME(MIN.) =   1.77
  Tc(MIN.) =    7.30
  SUBAREA AREA(ACRES) =     0.42       SUBAREA RUNOFF(CFS) =    0.69
  EFFECTIVE AREA(ACRES) =      0.52     AREA-AVERAGED Fm(INCH/HR) =   0.10
  AREA-AVERAGED Fp(INCH/HR) =   0.98  AREA-AVERAGED Ap =   0.10
  TOTAL AREA(ACRES) =        0.5         PEAK FLOW RATE(CFS) =       0.85

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.07   FLOW VELOCITY(FEET/SEC.) =   1.98
  LONGEST FLOWPATH FROM NODE    303.00 TO NODE    305.00 =     279.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    305.00 TO NODE    305.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    7.30
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.910
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        0.42      0.98     0.100    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.98
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA AREA(ACRES) =    0.42      SUBAREA RUNOFF(CFS) =    0.69
  EFFECTIVE AREA(ACRES) =      0.94   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.98  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =        0.9       PEAK FLOW RATE(CFS) =       1.53
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        0.9  TC(MIN.) =      7.30
  EFFECTIVE AREA(ACRES) =      0.94  AREA-AVERAGED Fm(INCH/HR)=  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.98  AREA-AVERAGED Ap = 0.100
  PEAK FLOW RATE(CFS)   =       1.53
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
          (Reference: 1986 SAN BERNARDINO CO. HYDROLOGY CRITERION)
         (c) Copyright 1983-2011 Advanced Engineering Software (aes)
             Ver. 18.0  Release Date: 07/01/2011  License ID 1499

                          Analysis prepared by:

                     Kimley-Horn and Associates, Inc.
                           765 The City Drive
                               Suite 200
                            Orange, CA 92868

 ************************* DESCRIPTION OF STUDY ************************
* THRIFTY RIALTO WAREHOUSE                                              *
* PROPOSED 100 YEAR STORM                                               *
* EH 02/16/2022                                                         *
 **************************************************************************

  FILE NAME: TRPR100.DAT
  TIME/DATE OF STUDY: 08:57 02/16/2022
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  6
   1)    5.00;  5.440
   2)   10.00;  3.890
   3)   15.00;  3.140
   4)   30.00;  2.370
   5)   60.00;  1.800
   6)  120.00;  1.300
  *ANTECEDENT MOISTURE CONDITION (AMC) III ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

**************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    101.00 IS CODE =  21
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==========================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  ELEVATION DATA: UPSTREAM(FEET) =   1633.90  DOWNSTREAM(FEET) =   1633.40

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    5.535
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.274
  SUBAREA Tc AND LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                 A        0.10      0.74     0.100    52    5.53
```

```
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.74
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA RUNOFF(CFS) =      0.47
  TOTAL AREA(ACRES) =      0.10   PEAK FLOW RATE(CFS) =      0.47

****************************************************************************
  FLOW PROCESS FROM NODE    101.00 TO NODE    102.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1633.40  DOWNSTREAM(FEET) =   1627.70
  CHANNEL LENGTH THRU SUBAREA(FEET) =   373.00   CHANNEL SLOPE =  0.0153
  CHANNEL BASE(FEET) =    0.00   "Z" FACTOR =  99.000
  MANNING'S FACTOR = 0.015   MAXIMUM DEPTH(FEET) =   0.50
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.202
  SUBAREA LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        0.93      0.74     0.100    52
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.74
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       2.22
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   1.80
  AVERAGE FLOW DEPTH(FEET) =   0.11   TRAVEL TIME(MIN.) =   3.46
  Tc(MIN.) =    8.99
  SUBAREA AREA(ACRES) =     0.93       SUBAREA RUNOFF(CFS) =    3.45
  EFFECTIVE AREA(ACRES) =      1.03     AREA-AVERAGED Fm(INCH/HR) =   0.07
  AREA-AVERAGED Fp(INCH/HR) =   0.74  AREA-AVERAGED Ap =   0.10
  TOTAL AREA(ACRES) =        1.0         PEAK FLOW RATE(CFS) =       3.83

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.13   FLOW VELOCITY(FEET/SEC.) =   2.14
  LONGEST FLOWPATH FROM NODE    100.00 TO NODE    102.00 =     473.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    102.00 TO NODE    102.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    8.99
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.202
  SUBAREA LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        0.93      0.74     0.100    52
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.74
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA AREA(ACRES) =    0.93      SUBAREA RUNOFF(CFS) =    3.45
  EFFECTIVE AREA(ACRES) =      1.96   AREA-AVERAGED Fm(INCH/HR) =  0.07
  AREA-AVERAGED Fp(INCH/HR) =  0.74  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =        2.0       PEAK FLOW RATE(CFS) =       7.28

****************************************************************************
  FLOW PROCESS FROM NODE    200.00 TO NODE    201.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  ELEVATION DATA: UPSTREAM(FEET) =   1636.20  DOWNSTREAM(FEET) =   1632.40

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    5.000
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.440
  SUBAREA Tc AND LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                 A        0.10      0.74     0.100    52    5.00
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.74
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
```

```
  SUBAREA RUNOFF(CFS) =      0.48
  TOTAL AREA(ACRES) =      0.10   PEAK FLOW RATE(CFS) =      0.48

****************************************************************************
  FLOW PROCESS FROM NODE    201.00 TO NODE    202.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1632.40  DOWNSTREAM(FEET) =   1632.20
  CHANNEL LENGTH THRU SUBAREA(FEET) =    53.00   CHANNEL SLOPE =  0.0038
  CHANNEL BASE(FEET) =    0.00   "Z" FACTOR =  99.000
  MANNING'S FACTOR = 0.015   MAXIMUM DEPTH(FEET) =   0.50
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.099
  SUBAREA LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        0.10      0.74     0.100    52
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.74
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       0.71
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   0.80
  AVERAGE FLOW DEPTH(FEET) =   0.09   TRAVEL TIME(MIN.) =   1.10
  Tc(MIN.) =    6.10
  SUBAREA AREA(ACRES) =     0.10       SUBAREA RUNOFF(CFS) =    0.45
  EFFECTIVE AREA(ACRES) =      0.20     AREA-AVERAGED Fm(INCH/HR) =   0.07
  AREA-AVERAGED Fp(INCH/HR) =   0.74  AREA-AVERAGED Ap =   0.10
  TOTAL AREA(ACRES) =        0.2         PEAK FLOW RATE(CFS) =       0.90

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.10   FLOW VELOCITY(FEET/SEC.) =   0.85
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    202.00 =     153.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    202.00 TO NODE    202.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    6.10
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.099
  SUBAREA LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        0.10      0.74     0.100    52
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.74
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA AREA(ACRES) =    0.10      SUBAREA RUNOFF(CFS) =    0.45
  EFFECTIVE AREA(ACRES) =      0.30   AREA-AVERAGED Fm(INCH/HR) =  0.07
  AREA-AVERAGED Fp(INCH/HR) =  0.74  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =        0.3       PEAK FLOW RATE(CFS) =       1.36

****************************************************************************
  FLOW PROCESS FROM NODE    300.00 TO NODE    301.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  ELEVATION DATA: UPSTREAM(FEET) =   1633.90  DOWNSTREAM(FEET) =   1633.40

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    5.535
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.274
  SUBAREA Tc AND LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                 A        0.10      0.74     0.100    52    5.53
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.74
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA RUNOFF(CFS) =      0.47
  TOTAL AREA(ACRES) =      0.10   PEAK FLOW RATE(CFS) =      0.47
```

```
****************************************************************************
  FLOW PROCESS FROM NODE    301.00 TO NODE    302.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1633.40  DOWNSTREAM(FEET) =   1624.90
  CHANNEL LENGTH THRU SUBAREA(FEET) =   304.00   CHANNEL SLOPE =  0.0280
  CHANNEL BASE(FEET) =    0.00   "Z" FACTOR =  99.000
  MANNING'S FACTOR = 0.015   MAXIMUM DEPTH(FEET) =   0.50
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.465
  SUBAREA LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        0.49      0.74     0.100    52
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.74
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       1.45
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   1.94
  AVERAGE FLOW DEPTH(FEET) =   0.09   TRAVEL TIME(MIN.) =   2.61
  Tc(MIN.) =    8.14
  SUBAREA AREA(ACRES) =     0.49       SUBAREA RUNOFF(CFS) =    1.94
  EFFECTIVE AREA(ACRES) =      0.59     AREA-AVERAGED Fm(INCH/HR) =   0.07
  AREA-AVERAGED Fp(INCH/HR) =   0.74  AREA-AVERAGED Ap =   0.10
  TOTAL AREA(ACRES) =        0.6         PEAK FLOW RATE(CFS) =       2.33

  END OF SUBAREA CHANNEL FLOW HYDRAULICS:
  DEPTH(FEET) =  0.10   FLOW VELOCITY(FEET/SEC.) =   2.26
  LONGEST FLOWPATH FROM NODE    300.00 TO NODE    302.00 =     404.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    302.00 TO NODE    302.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN.) =    8.14
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.465
  SUBAREA LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        0.49      0.74     0.100    52
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.74
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA AREA(ACRES) =    0.49       SUBAREA RUNOFF(CFS) =    1.94
  EFFECTIVE AREA(ACRES) =      1.08   AREA-AVERAGED Fm(INCH/HR) =  0.07
  AREA-AVERAGED Fp(INCH/HR) =  0.74  AREA-AVERAGED Ap =  0.10
  TOTAL AREA(ACRES) =        1.1       PEAK FLOW RATE(CFS) =       4.27

****************************************************************************
  FLOW PROCESS FROM NODE    303.00 TO NODE    304.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   100.00
  ELEVATION DATA: UPSTREAM(FEET) =   1631.90  DOWNSTREAM(FEET) =   1631.40

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    5.535
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.274
  SUBAREA Tc AND LOSS RATE DATA(AMC III):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  COMMERCIAL                 A        0.10      0.74     0.100    52    5.53
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.74
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
  SUBAREA RUNOFF(CFS) =      0.47
  TOTAL AREA(ACRES) =      0.10   PEAK FLOW RATE(CFS) =      0.47

****************************************************************************
```

```
 FLOW PROCESS FROM NODE    304.00 TO NODE    305.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1631.40  DOWNSTREAM(FEET) =   1624.60
 CHANNEL LENGTH THRU SUBAREA(FEET) =   179.00   CHANNEL SLOPE =  0.0380
 CHANNEL BASE(FEET) =    0.00   "Z" FACTOR =  99.000
 MANNING'S FACTOR = 0.015   MAXIMUM DEPTH(FEET) =   0.50
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.856
 SUBAREA LOSS RATE DATA(AMC III):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 COMMERCIAL                 A        0.42      0.74     0.100    52
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.74
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       1.37
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   2.21
 AVERAGE FLOW DEPTH(FEET) =   0.08   TRAVEL TIME(MIN.) =   1.35
 Tc(MIN.) =    6.88
 SUBAREA AREA(ACRES) =     0.42       SUBAREA RUNOFF(CFS) =    1.81
 EFFECTIVE AREA(ACRES) =      0.52     AREA-AVERAGED Fm(INCH/HR) =   0.07
 AREA-AVERAGED Fp(INCH/HR) =   0.74  AREA-AVERAGED Ap =   0.10
 TOTAL AREA(ACRES) =        0.5         PEAK FLOW RATE(CFS) =       2.24

 END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) =  0.09   FLOW VELOCITY(FEET/SEC.) =   2.54
 LONGEST FLOWPATH FROM NODE    303.00 TO NODE    305.00 =     279.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    305.00 TO NODE    305.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN.) =    6.88
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.856
 SUBAREA LOSS RATE DATA(AMC III):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 COMMERCIAL                 A        0.42      0.74     0.100    52
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.74
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.100
 SUBAREA AREA(ACRES) =    0.42      SUBAREA RUNOFF(CFS) =    1.81
 EFFECTIVE AREA(ACRES) =      0.94   AREA-AVERAGED Fm(INCH/HR) =  0.07
 AREA-AVERAGED Fp(INCH/HR) =  0.74  AREA-AVERAGED Ap =  0.10
 TOTAL AREA(ACRES) =        0.9       PEAK FLOW RATE(CFS) =       4.05
============================================================================
 END OF STUDY SUMMARY:
 TOTAL AREA(ACRES)     =        0.9  TC(MIN.) =      6.88
 EFFECTIVE AREA(ACRES) =      0.94  AREA-AVERAGED Fm(INCH/HR)=  0.07
 AREA-AVERAGED Fp(INCH/HR) =  0.74  AREA-AVERAGED Ap = 0.100
 PEAK FLOW RATE(CFS)   =       4.05
============================================================================
============================================================================
 END OF RATIONAL METHOD ANALYSIS
```

APPENDIX G

PROPOSED CONDITIONS HYDROLOGY AES HYDROGRAPH RESULTS

```
==========================================================================
*** NON-HOMOGENEOUS WATERSHED AREA-AVERAGED LOSS RATE (Fm)
    AND LOW LOSS FRACTION ESTIMATIONS FOR AMC II:

    TOTAL 24-HOUR DURATION RAINFALL DEPTH =     3.87 (inches)

    SOIL-COVER     AREA      PERCENT OF    SCS CURVE    LOSS RATE
       TYPE      (Acres)   PERVIOUS AREA     NUMBER    Fp(in./hr.)    YIELD
         1          5.01       10.00            32.       0.975       0.845

    TOTAL AREA (Acres) =      5.01

    AREA-AVERAGED LOSS RATE, Fm (in./hr.) =  0.098

    AREA-AVERAGED LOW LOSS FRACTION, Y = 0.155
==========================================================================
```

```
==========================================================================
*** NON-HOMOGENEOUS WATERSHED AREA-AVERAGED LOSS RATE (Fm)
    AND LOW LOSS FRACTION ESTIMATIONS FOR AMC III:

    TOTAL 24-HOUR DURATION RAINFALL DEPTH =     9.02 (inches)

    SOIL-COVER     AREA      PERCENT OF    SCS CURVE    LOSS RATE
       TYPE      (Acres)   PERVIOUS AREA     NUMBER    Fp(in./hr.)    YIELD
         1          5.01       10.00       32.(AMC II)     0.742       0.911

    TOTAL AREA (Acres) =      5.01

    AREA-AVERAGED LOSS RATE, Fm (in./hr.) =  0.074

    AREA-AVERAGED LOW LOSS FRACTION, Y = 0.089
==========================================================================
```

DA1-2 YR

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA(ACRES) = 2.03
SOIL-LOSS RATE, Fm,(INCH/HR) = 0.098
LOW LOSS FRACTION = 0.155
TIME OF CONCENTRATION(MIN.) = 10.16
SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
USER SPECIFIED RAINFALL VALUES ARE USED
RETURN FREQUENCY(YEARS) = 2
5-MINUTE POINT RAINFALL VALUE(INCHES) = 0.18
30-MINUTE POINT RAINFALL VALUE(INCHES) = 0.48
1-HOUR POINT RAINFALL VALUE(INCHES) = 0.73
3-HOUR POINT RAINFALL VALUE(INCHES) = 1.39
6-HOUR POINT RAINFALL VALUE(INCHES) = 2.05
24-HOUR POINT RAINFALL VALUE(INCHES) = 3.87

TOTAL CATCHMENT RUNOFF VOLUME(ACRE-FEET) = 0.50
TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) = 0.16

****

TIME (HOURS)	VOLUME (AF)	Q (CFS)	0.	2.5	5.0	7.5	10.0
0.08	0.0000	0.00	Q	.	.	.	.
0.25	0.0008	0.11	Q	.	.	.	.
0.42	0.0024	0.12	Q	.	.	.	.
0.59	0.0040	0.12	Q	.	.	.	.
0.76	0.0057	0.12	Q	.	.	.	.
0.93	0.0073	0.12	Q	.	.	.	.
1.10	0.0089	0.12	Q	.	.	.	.
1.27	0.0106	0.12	Q	.	.	.	.
1.44	0.0123	0.12	Q	.	.	.	.
1.61	0.0139	0.12	Q	.	.	.	.
1.78	0.0156	0.12	Q	.	.	.	.
1.95	0.0173	0.12	Q	.	.	.	.
2.11	0.0190	0.12	Q	.	.	.	.
2.28	0.0208	0.12	Q	.	.	.	.
2.45	0.0225	0.12	Q	.	.	.	.
2.62	0.0242	0.13	Q	.	.	.	.
2.79	0.0260	0.13	Q	.	.	.	.
2.96	0.0277	0.13	Q	.	.	.	.
3.13	0.0295	0.13	Q	.	.	.	.
3.30	0.0313	0.13	Q	.	.	.	.
3.47	0.0331	0.13	Q	.	.	.	.
3.64	0.0349	0.13	Q	.	.	.	.

3.81	0.0368	0.13	Q	.	.	.	.
3.98	0.0386	0.13	Q	.	.	.	.
4.15	0.0405	0.13	Q	.	.	.	.
4.32	0.0424	0.13	Q	.	.	.	.
4.49	0.0442	0.14	Q	.	.	.	.
4.65	0.0461	0.14	Q	.	.	.	.
4.82	0.0481	0.14	Q	.	.	.	.
4.99	0.0500	0.14	Q	.	.	.	.
5.16	0.0519	0.14	Q	.	.	.	.
5.33	0.0539	0.14	Q	.	.	.	.
5.50	0.0559	0.14	Q	.	.	.	.
5.67	0.0579	0.14	Q	.	.	.	.
5.84	0.0599	0.14	Q	.	.	.	.
6.01	0.0620	0.15	Q	.	.	.	.
6.18	0.0640	0.15	Q	.	.	.	.
6.35	0.0661	0.15	Q	.	.	.	.
6.52	0.0682	0.15	Q	.	.	.	.
6.69	0.0703	0.15	Q	.	.	.	.
6.86	0.0724	0.15	Q	.	.	.	.
7.03	0.0746	0.16	Q	.	.	.	.
7.19	0.0768	0.16	Q	.	.	.	.
7.36	0.0790	0.16	Q	.	.	.	.
7.53	0.0812	0.16	Q	.	.	.	.
7.70	0.0834	0.16	Q	.	.	.	.
7.87	0.0857	0.16	Q	.	.	.	.
8.04	0.0880	0.17	Q	.	.	.	.
8.21	0.0903	0.17	Q	.	.	.	.
8.38	0.0927	0.17	Q	.	.	.	.
8.55	0.0950	0.17	Q	.	.	.	.
8.72	0.0974	0.17	Q	.	.	.	.
8.89	0.0999	0.17	Q	.	.	.	.
9.06	0.1023	0.18	Q	.	.	.	.
9.23	0.1048	0.18	Q	.	.	.	.
9.40	0.1074	0.18	Q	.	.	.	.
9.57	0.1099	0.18	Q	.	.	.	.
9.73	0.1125	0.19	Q	.	.	.	.
9.90	0.1152	0.19	Q	.	.	.	.
10.07	0.1179	0.19	Q	.	.	.	.
10.24	0.1206	0.20	Q	.	.	.	.
10.41	0.1234	0.20	Q	.	.	.	.
10.58	0.1262	0.20	Q	.	.	.	.
10.75	0.1290	0.21	Q	.	.	.	.
10.92	0.1319	0.21	Q	.	.	.	.
11.09	0.1349	0.21	Q	.	.	.	.
11.26	0.1379	0.22	Q	.	.	.	.
11.43	0.1409	0.22	Q	.	.	.	.
11.60	0.1441	0.22	Q	.	.	.	.
11.77	0.1473	0.23	Q	.	.	.	.
11.94	0.1505	0.23	Q	.	.	.	.
12.11	0.1540	0.26	.Q	.	.	.	.

12.27	0.1580	0.30	.Q	.	.	.	.
12.44	0.1622	0.31	.Q	.	.	.	.
12.61	0.1665	0.31	.Q	.	.	.	.
12.78	0.1710	0.32	.Q	.	.	.	.
12.95	0.1755	0.33	.Q	.	.	.	.
13.12	0.1801	0.34	.Q	.	.	.	.
13.29	0.1848	0.34	.Q	.	.	.	.
13.46	0.1897	0.35	.Q	.	.	.	.
13.63	0.1947	0.36	.Q	.	.	.	.
13.80	0.1999	0.38	.Q	.	.	.	.
13.97	0.2052	0.38	.Q	.	.	.	.
14.14	0.2108	0.42	.Q	.	.	.	.
14.31	0.2167	0.43	.Q	.	.	.	.
14.48	0.2229	0.46	.Q	.	.	.	.
14.65	0.2294	0.47	.Q	.	.	.	.
14.81	0.2362	0.50	. Q	.	.	.	.
14.98	0.2434	0.52	. Q	.	.	.	.
15.15	0.2510	0.57	. Q	.	.	.	.
15.32	0.2591	0.60	. Q	.	.	.	.
15.49	0.2683	0.70	. Q	.	.	.	.
15.66	0.2785	0.76	. Q	.	.	.	.
15.83	0.2899	0.87	. Q	.	.	.	.
16.00	0.3038	1.12	. Q	.	.	.	.
16.17	0.3307	2.71	.	Q	.	.	.
16.34	0.3555	0.84	. Q	.	.	.	.
16.51	0.3659	0.64	. Q	.	.	.	.
16.68	0.3741	0.54	. Q	.	.	.	.
16.85	0.3813	0.48	.Q	.	.	.	.
17.02	0.3878	0.44	.Q	.	.	.	.
17.19	0.3937	0.39	.Q	.	.	.	.
17.35	0.3990	0.37	.Q	.	.	.	.
17.52	0.4040	0.35	.Q	.	.	.	.
17.69	0.4087	0.33	.Q	.	.	.	.
17.86	0.4133	0.32	.Q	.	.	.	.
18.03	0.4176	0.30	.Q	.	.	.	.
18.20	0.4214	0.24	Q	.	.	.	.
18.37	0.4246	0.23	Q	.	.	.	.
18.54	0.4278	0.22	Q	.	.	.	.
18.71	0.4308	0.21	Q	.	.	.	.
18.88	0.4337	0.20	Q	.	.	.	.
19.05	0.4365	0.20	Q	.	.	.	.
19.22	0.4392	0.19	Q	.	.	.	.
19.39	0.4419	0.19	Q	.	.	.	.
19.56	0.4444	0.18	Q	.	.	.	.
19.73	0.4469	0.18	Q	.	.	.	.
19.89	0.4494	0.17	Q	.	.	.	.
20.06	0.4517	0.17	Q	.	.	.	.
20.23	0.4541	0.16	Q	.	.	.	.
20.40	0.4563	0.16	Q	.	.	.	.
20.57	0.4585	0.16	Q	.	.	.	.

20.74	0.4607	0.15	Q	.	.	.	.
20.91	0.4629	0.15	Q	.	.	.	.
21.08	0.4650	0.15	Q	.	.	.	.
21.25	0.4670	0.15	Q	.	.	.	.
21.42	0.4690	0.14	Q	.	.	.	.
21.59	0.4710	0.14	Q	.	.	.	.
21.76	0.4730	0.14	Q	.	.	.	.
21.93	0.4749	0.14	Q	.	.	.	.
22.10	0.4768	0.13	Q	.	.	.	.
22.27	0.4786	0.13	Q	.	.	.	.
22.43	0.4805	0.13	Q	.	.	.	.
22.60	0.4823	0.13	Q	.	.	.	.
22.77	0.4840	0.13	Q	.	.	.	.
22.94	0.4858	0.12	Q	.	.	.	.
23.11	0.4875	0.12	Q	.	.	.	.
23.28	0.4892	0.12	Q	.	.	.	.
23.45	0.4909	0.12	Q	.	.	.	.
23.62	0.4926	0.12	Q	.	.	.	.
23.79	0.4942	0.12	Q	.	.	.	.
23.96	0.4959	0.12	Q	.	.	.	.
24.13	0.4975	0.11	Q	.	.	.	.
24.30	0.4983	0.00	Q	.	.	.	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1442.7
10%	355.6
20%	101.6
30%	40.6
40%	20.3
50%	10.2
60%	10.2
70%	10.2
80%	10.2
90%	10.2

DA1-100 YR

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA(ACRES) = 2.03
SOIL-LOSS RATE, Fm,(INCH/HR) = 0.074
LOW LOSS FRACTION = 0.089
TIME OF CONCENTRATION(MIN.) = 8.86
SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
USER SPECIFIED RAINFALL VALUES ARE USED
RETURN FREQUENCY(YEARS) = 100
5-MINUTE POINT RAINFALL VALUE(INCHES) = 0.45
30-MINUTE POINT RAINFALL VALUE(INCHES) = 1.19
1-HOUR POINT RAINFALL VALUE(INCHES) = 1.80
3-HOUR POINT RAINFALL VALUE(INCHES) = 3.26
6-HOUR POINT RAINFALL VALUE(INCHES) = 4.73
24-HOUR POINT RAINFALL VALUE(INCHES) = 9.02

TOTAL CATCHMENT RUNOFF VOLUME(ACRE-FEET) = 1.26
TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) = 0.27

TIME (HOURS)	VOLUME (AF)	Q (CFS)	0.	2.5	5.0	7.5	10.0
0.05	0.0000	0.00	Q	.	.	.	.
0.20	0.0018	0.29	.Q	.	.	.	.
0.35	0.0054	0.29	.Q	.	.	.	.
0.50	0.0089	0.30	.Q	.	.	.	.
0.64	0.0126	0.30	.Q	.	.	.	.
0.79	0.0162	0.30	.Q	.	.	.	.
0.94	0.0198	0.30	.Q	.	.	.	.
1.09	0.0235	0.30	.Q	.	.	.	.
1.23	0.0272	0.30	.Q	.	.	.	.
1.38	0.0309	0.30	.Q	.	.	.	.
1.53	0.0346	0.31	.Q	.	.	.	.
1.68	0.0383	0.31	.Q	.	.	.	.
1.82	0.0421	0.31	.Q	.	.	.	.
1.97	0.0459	0.31	.Q	.	.	.	.
2.12	0.0497	0.31	.Q	.	.	.	.
2.27	0.0535	0.31	.Q	.	.	.	.
2.41	0.0574	0.32	.Q	.	.	.	.
2.56	0.0613	0.32	.Q	.	.	.	.
2.71	0.0651	0.32	.Q	.	.	.	.
2.86	0.0691	0.32	.Q	.	.	.	.
3.01	0.0730	0.32	.Q	.	.	.	.
3.15	0.0770	0.33	.Q	.	.	.	.

3.30	0.0810	0.33	.Q	.	.	.	.
3.45	0.0850	0.33	.Q	.	.	.	.
3.60	0.0890	0.33	.Q	.	.	.	.
3.74	0.0931	0.33	.Q	.	.	.	.
3.89	0.0972	0.34	.Q	.	.	.	.
4.04	0.1013	0.34	.Q	.	.	.	.
4.19	0.1054	0.34	.Q	.	.	.	.
4.33	0.1096	0.34	.Q	.	.	.	.
4.48	0.1138	0.34	.Q	.	.	.	.
4.63	0.1180	0.35	.Q	.	.	.	.
4.78	0.1223	0.35	.Q	.	.	.	.
4.93	0.1266	0.35	.Q	.	.	.	.
5.07	0.1309	0.35	.Q	.	.	.	.
5.22	0.1352	0.36	.Q	.	.	.	.
5.37	0.1396	0.36	.Q	.	.	.	.
5.52	0.1440	0.36	.Q	.	.	.	.
5.66	0.1485	0.37	.Q	.	.	.	.
5.81	0.1529	0.37	.Q	.	.	.	.
5.96	0.1575	0.37	.Q	.	.	.	.
6.11	0.1620	0.37	.Q	.	.	.	.
6.25	0.1666	0.38	.Q	.	.	.	.
6.40	0.1712	0.38	.Q	.	.	.	.
6.55	0.1759	0.38	.Q	.	.	.	.
6.70	0.1806	0.39	.Q	.	.	.	.
6.84	0.1853	0.39	.Q	.	.	.	.
6.99	0.1901	0.39	.Q	.	.	.	.
7.14	0.1949	0.40	.Q	.	.	.	.
7.29	0.1998	0.40	.Q	.	.	.	.
7.44	0.2047	0.40	.Q	.	.	.	.
7.58	0.2096	0.41	.Q	.	.	.	.
7.73	0.2146	0.41	.Q	.	.	.	.
7.88	0.2196	0.42	.Q	.	.	.	.
8.03	0.2247	0.42	.Q	.	.	.	.
8.17	0.2299	0.42	.Q	.	.	.	.
8.32	0.2351	0.43	.Q	.	.	.	.
8.47	0.2403	0.43	.Q	.	.	.	.
8.62	0.2456	0.44	.Q	.	.	.	.
8.76	0.2510	0.44	.Q	.	.	.	.
8.91	0.2564	0.45	.Q	.	.	.	.
9.06	0.2619	0.45	.Q	.	.	.	.
9.21	0.2674	0.46	.Q	.	.	.	.
9.35	0.2730	0.46	.Q	.	.	.	.
9.50	0.2786	0.47	.Q	.	.	.	.
9.65	0.2844	0.47	.Q	.	.	.	.
9.80	0.2902	0.48	.Q	.	.	.	.
9.95	0.2961	0.49	.Q	.	.	.	.
10.09	0.3020	0.49	.Q	.	.	.	.
10.24	0.3080	0.50	.Q	.	.	.	.
10.39	0.3141	0.50	. Q	.	.	.	.
10.54	0.3203	0.51	. Q	.	.	.	.

```
10.68      0.3266      0.52  . Q       .         .         .         .
10.83      0.3330      0.53  . Q       .         .         .         .
10.98      0.3395      0.53  . Q       .         .         .         .
11.13      0.3460      0.54  . Q       .         .         .         .
11.27      0.3527      0.55  . Q       .         .         .         .
11.42      0.3595      0.56  . Q       .         .         .         .
11.57      0.3664      0.57  . Q       .         .         .         .
11.72      0.3734      0.58  . Q       .         .         .         .
11.87      0.3806      0.59  . Q       .         .         .         .
12.01      0.3878      0.60  . Q       .         .         .         .
12.16      0.3956      0.67  . Q       .         .         .         .
12.31      0.4041      0.72  . Q       .         .         .         .
12.46      0.4130      0.73  . Q       .         .         .         .
12.60      0.4220      0.75  .  Q      .         .         .         .
12.75      0.4312      0.76  .  Q      .         .         .         .
12.90      0.4406      0.78  .  Q      .         .         .         .
13.05      0.4503      0.79  .  Q      .         .         .         .
13.19      0.4601      0.82  .  Q      .         .         .         .
13.34      0.4701      0.83  .  Q      .         .         .         .
13.49      0.4804      0.86  .  Q      .         .         .         .
13.64      0.4910      0.87  .  Q      .         .         .         .
13.78      0.5019      0.91  .  Q      .         .         .         .
13.93      0.5131      0.93  .  Q      .         .         .         .
14.08      0.5246      0.97  .  Q      .         .         .         .
14.23      0.5366      1.00  .  Q      .         .         .         .
14.38      0.5491      1.05  .   Q     .         .         .         .
14.52      0.5621      1.08  .   Q     .         .         .         .
14.67      0.5756      1.14  .   Q     .         .         .         .
14.82      0.5898      1.18  .   Q     .         .         .         .
14.97      0.6047      1.27  .    Q    .         .         .         .
15.11      0.6206      1.32  .    Q    .         .         .         .
15.26      0.6376      1.47  .    Q    .         .         .         .
15.41      0.6561      1.56  .     Q   .         .         .         .
15.56      0.6778      2.00  .       Q .         .         .         .
15.70      0.7033      2.18  .       Q .         .         .         .
15.85      0.7324      2.57  .         Q         .         .         .
16.00      0.7683      3.32  .          .  Q     .         .         .
16.15      0.8343      7.49  .          .        .        Q.         .
16.30      0.8943      2.33  .        Q.         .         .         .
16.44      0.9196      1.82  .      Q  .         .         .         .
16.59      0.9392      1.39  .    Q    .         .         .         .
16.74      0.9551      1.22  .   Q     .         .         .         .
16.89      0.9693      1.11  .   Q     .         .         .         .
17.03      0.9823      1.02  .   Q     .         .         .         .
17.18      0.9943      0.95  .  Q      .         .         .         .
17.33      1.0055      0.89  .  Q      .         .         .         .
17.48      1.0161      0.84  .  Q      .         .         .         .
17.62      1.0262      0.80  .  Q      .         .         .         .
17.77      1.0358      0.77  .  Q      .         .         .         .
17.92      1.0450      0.74  . Q       .         .         .         .
```

18.07	1.0539	0.71	. Q	.	.	.	.
18.22	1.0619	0.60	. Q	.	.	.	.
18.36	1.0690	0.58	. Q	.	.	.	.
18.51	1.0759	0.56	. Q	.	.	.	.
18.66	1.0826	0.54	. Q	.	.	.	.
18.81	1.0891	0.52	. Q	.	.	.	.
18.95	1.0954	0.51	. Q	.	.	.	.
19.10	1.1015	0.49	.Q	.	.	.	.
19.25	1.1074	0.48	.Q	.	.	.	.
19.40	1.1132	0.47	.Q	.	.	.	.
19.54	1.1189	0.46	.Q	.	.	.	.
19.69	1.1244	0.45	.Q	.	.	.	.
19.84	1.1298	0.44	.Q	.	.	.	.
19.99	1.1351	0.43	.Q	.	.	.	.
20.13	1.1403	0.42	.Q	.	.	.	.
20.28	1.1454	0.41	.Q	.	.	.	.
20.43	1.1504	0.41	.Q	.	.	.	.
20.58	1.1553	0.40	.Q	.	.	.	.
20.73	1.1601	0.39	.Q	.	.	.	.
20.87	1.1649	0.38	.Q	.	.	.	.
21.02	1.1695	0.38	.Q	.	.	.	.
21.17	1.1741	0.37	.Q	.	.	.	.
21.32	1.1786	0.37	.Q	.	.	.	.
21.46	1.1831	0.36	.Q	.	.	.	.
21.61	1.1875	0.36	.Q	.	.	.	.
21.76	1.1918	0.35	.Q	.	.	.	.
21.91	1.1960	0.35	.Q	.	.	.	.
22.05	1.2002	0.34	.Q	.	.	.	.
22.20	1.2044	0.34	.Q	.	.	.	.
22.35	1.2085	0.33	.Q	.	.	.	.
22.50	1.2125	0.33	.Q	.	.	.	.
22.64	1.2165	0.32	.Q	.	.	.	.
22.79	1.2204	0.32	.Q	.	.	.	.
22.94	1.2243	0.32	.Q	.	.	.	.
23.09	1.2282	0.31	.Q	.	.	.	.
23.24	1.2320	0.31	.Q	.	.	.	.
23.38	1.2358	0.31	.Q	.	.	.	.
23.53	1.2395	0.30	.Q	.	.	.	.
23.68	1.2432	0.30	.Q	.	.	.	.
23.83	1.2468	0.30	.Q	.	.	.	.
23.97	1.2504	0.29	.Q	.	.	.	.
24.12	1.2540	0.29	.Q	.	.	.	.
24.27	1.2558	0.00	Q	.	.	.	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Duration

Peak Flow Rate	(minutes)
0%	1444.2
10%	319.0
20%	70.9
30%	35.4
40%	17.7
50%	8.9
60%	8.9
70%	8.9
80%	8.9
90%	8.9

DA2-2YR

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA(ACRES) = 0.29
SOIL-LOSS RATE, Fm,(INCH/HR) = 0.098
LOW LOSS FRACTION = 0.155
TIME OF CONCENTRATION(MIN.) = 6.37
SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
USER SPECIFIED RAINFALL VALUES ARE USED
RETURN FREQUENCY(YEARS) = 2
5-MINUTE POINT RAINFALL VALUE(INCHES) = 0.18
30-MINUTE POINT RAINFALL VALUE(INCHES) = 0.48
1-HOUR POINT RAINFALL VALUE(INCHES) = 0.73
3-HOUR POINT RAINFALL VALUE(INCHES) = 1.39
6-HOUR POINT RAINFALL VALUE(INCHES) = 2.05
24-HOUR POINT RAINFALL VALUE(INCHES) = 3.87

TOTAL CATCHMENT RUNOFF VOLUME(ACRE-FEET) = 0.07
TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) = 0.02

****

TIME (HOURS)	VOLUME (AF)	Q (CFS)	0.	2.5	5.0	7.5	10.0
0.08	0.0001	0.02	Q	.	.	.	.
0.18	0.0002	0.02	Q	.	.	.	.
0.29	0.0004	0.02	Q	.	.	.	.
0.39	0.0005	0.02	Q	.	.	.	.
0.50	0.0006	0.02	Q	.	.	.	.
0.61	0.0008	0.02	Q	.	.	.	.
0.71	0.0009	0.02	Q	.	.	.	.
0.82	0.0011	0.02	Q	.	.	.	.
0.92	0.0012	0.02	Q	.	.	.	.
1.03	0.0014	0.02	Q	.	.	.	.
1.14	0.0015	0.02	Q	.	.	.	.
1.24	0.0017	0.02	Q	.	.	.	.
1.35	0.0018	0.02	Q	.	.	.	.
1.46	0.0020	0.02	Q	.	.	.	.
1.56	0.0021	0.02	Q	.	.	.	.
1.67	0.0023	0.02	Q	.	.	.	.
1.77	0.0024	0.02	Q	.	.	.	.
1.88	0.0026	0.02	Q	.	.	.	.
1.99	0.0027	0.02	Q	.	.	.	.
2.09	0.0029	0.02	Q	.	.	.	.
2.20	0.0030	0.02	Q	.	.	.	.
2.30	0.0032	0.02	Q	.	.	.	.

2.41	0.0034	0.02	Q	.	.	.	.
2.52	0.0035	0.02	Q	.	.	.	.
2.62	0.0037	0.02	Q	.	.	.	.
2.73	0.0038	0.02	Q	.	.	.	.
2.84	0.0040	0.02	Q	.	.	.	.
2.94	0.0041	0.02	Q	.	.	.	.
3.05	0.0043	0.02	Q	.	.	.	.
3.15	0.0045	0.02	Q	.	.	.	.
3.26	0.0046	0.02	Q	.	.	.	.
3.37	0.0048	0.02	Q	.	.	.	.
3.47	0.0049	0.02	Q	.	.	.	.
3.58	0.0051	0.02	Q	.	.	.	.
3.68	0.0053	0.02	Q	.	.	.	.
3.79	0.0054	0.02	Q	.	.	.	.
3.90	0.0056	0.02	Q	.	.	.	.
4.00	0.0058	0.02	Q	.	.	.	.
4.11	0.0059	0.02	Q	.	.	.	.
4.22	0.0061	0.02	Q	.	.	.	.
4.32	0.0063	0.02	Q	.	.	.	.
4.43	0.0064	0.02	Q	.	.	.	.
4.53	0.0066	0.02	Q	.	.	.	.
4.64	0.0068	0.02	Q	.	.	.	.
4.75	0.0070	0.02	Q	.	.	.	.
4.85	0.0071	0.02	Q	.	.	.	.
4.96	0.0073	0.02	Q	.	.	.	.
5.06	0.0075	0.02	Q	.	.	.	.
5.17	0.0076	0.02	Q	.	.	.	.
5.28	0.0078	0.02	Q	.	.	.	.
5.38	0.0080	0.02	Q	.	.	.	.
5.49	0.0082	0.02	Q	.	.	.	.
5.60	0.0084	0.02	Q	.	.	.	.
5.70	0.0085	0.02	Q	.	.	.	.
5.81	0.0087	0.02	Q	.	.	.	.
5.91	0.0089	0.02	Q	.	.	.	.
6.02	0.0091	0.02	Q	.	.	.	.
6.13	0.0093	0.02	Q	.	.	.	.
6.23	0.0095	0.02	Q	.	.	.	.
6.34	0.0096	0.02	Q	.	.	.	.
6.45	0.0098	0.02	Q	.	.	.	.
6.55	0.0100	0.02	Q	.	.	.	.
6.66	0.0102	0.02	Q	.	.	.	.
6.76	0.0104	0.02	Q	.	.	.	.
6.87	0.0106	0.02	Q	.	.	.	.
6.98	0.0108	0.02	Q	.	.	.	.
7.08	0.0110	0.02	Q	.	.	.	.
7.19	0.0112	0.02	Q	.	.	.	.
7.29	0.0114	0.02	Q	.	.	.	.
7.40	0.0116	0.02	Q	.	.	.	.
7.51	0.0118	0.02	Q	.	.	.	.
7.61	0.0120	0.02	Q	.	.	.	.

7.72	0.0122	0.02	Q	.	.	.	.
7.83	0.0124	0.02	Q	.	.	.	.
7.93	0.0126	0.02	Q	.	.	.	.
8.04	0.0128	0.02	Q	.	.	.	.
8.14	0.0130	0.02	Q	.	.	.	.
8.25	0.0132	0.02	Q	.	.	.	.
8.36	0.0134	0.02	Q	.	.	.	.
8.46	0.0136	0.02	Q	.	.	.	.
8.57	0.0138	0.02	Q	.	.	.	.
8.67	0.0141	0.02	Q	.	.	.	.
8.78	0.0143	0.02	Q	.	.	.	.
8.89	0.0145	0.03	Q	.	.	.	.
8.99	0.0147	0.03	Q	.	.	.	.
9.10	0.0149	0.03	Q	.	.	.	.
9.21	0.0152	0.03	Q	.	.	.	.
9.31	0.0154	0.03	Q	.	.	.	.
9.42	0.0156	0.03	Q	.	.	.	.
9.52	0.0159	0.03	Q	.	.	.	.
9.63	0.0161	0.03	Q	.	.	.	.
9.74	0.0163	0.03	Q	.	.	.	.
9.84	0.0166	0.03	Q	.	.	.	.
9.95	0.0168	0.03	Q	.	.	.	.
10.05	0.0170	0.03	Q	.	.	.	.
10.16	0.0173	0.03	Q	.	.	.	.
10.27	0.0175	0.03	Q	.	.	.	.
10.37	0.0178	0.03	Q	.	.	.	.
10.48	0.0180	0.03	Q	.	.	.	.
10.59	0.0183	0.03	Q	.	.	.	.
10.69	0.0185	0.03	Q	.	.	.	.
10.80	0.0188	0.03	Q	.	.	.	.
10.90	0.0191	0.03	Q	.	.	.	.
11.01	0.0193	0.03	Q	.	.	.	.
11.12	0.0196	0.03	Q	.	.	.	.
11.22	0.0199	0.03	Q	.	.	.	.
11.33	0.0201	0.03	Q	.	.	.	.
11.43	0.0204	0.03	Q	.	.	.	.
11.54	0.0207	0.03	Q	.	.	.	.
11.65	0.0210	0.03	Q	.	.	.	.
11.75	0.0213	0.03	Q	.	.	.	.
11.86	0.0216	0.03	Q	.	.	.	.
11.97	0.0219	0.03	Q	.	.	.	.
12.07	0.0222	0.04	Q	.	.	.	.
12.18	0.0225	0.04	Q	.	.	.	.
12.28	0.0229	0.04	Q	.	.	.	.
12.39	0.0233	0.04	Q	.	.	.	.
12.50	0.0237	0.04	Q	.	.	.	.
12.60	0.0241	0.04	Q	.	.	.	.
12.71	0.0245	0.05	Q	.	.	.	.
12.82	0.0249	0.05	Q	.	.	.	.
12.92	0.0253	0.05	Q	.	.	.	.

13.03	0.0257	0.05	Q	.	.	.	.
13.13	0.0261	0.05	Q	.	.	.	.
13.24	0.0265	0.05	Q	.	.	.	.
13.35	0.0270	0.05	Q	.	.	.	.
13.45	0.0274	0.05	Q	.	.	.	.
13.56	0.0279	0.05	Q	.	.	.	.
13.66	0.0283	0.05	Q	.	.	.	.
13.77	0.0288	0.05	Q	.	.	.	.
13.88	0.0293	0.05	Q	.	.	.	.
13.98	0.0297	0.06	Q	.	.	.	.
14.09	0.0302	0.06	Q	.	.	.	.
14.20	0.0308	0.06	Q	.	.	.	.
14.30	0.0313	0.06	Q	.	.	.	.
14.41	0.0319	0.06	Q	.	.	.	.
14.51	0.0324	0.07	Q	.	.	.	.
14.62	0.0330	0.07	Q	.	.	.	.
14.73	0.0336	0.07	Q	.	.	.	.
14.83	0.0343	0.07	Q	.	.	.	.
14.94	0.0349	0.07	Q	.	.	.	.
15.04	0.0356	0.08	Q	.	.	.	.
15.15	0.0363	0.08	Q	.	.	.	.
15.26	0.0370	0.09	Q	.	.	.	.
15.36	0.0378	0.09	Q	.	.	.	.
15.47	0.0386	0.10	Q	.	.	.	.
15.58	0.0396	0.11	Q	.	.	.	.
15.68	0.0406	0.12	Q	.	.	.	.
15.79	0.0416	0.12	Q	.	.	.	.
15.89	0.0428	0.16	Q	.	.	.	.
16.00	0.0444	0.21	Q	.	.	.	.
16.11	0.0475	0.49	.Q	.	.	.	.
16.21	0.0502	0.13	Q	.	.	.	.
16.32	0.0512	0.11	Q	.	.	.	.
16.42	0.0521	0.10	Q	.	.	.	.
16.53	0.0529	0.08	Q	.	.	.	.
16.64	0.0536	0.08	Q	.	.	.	.
16.74	0.0543	0.07	Q	.	.	.	.
16.85	0.0549	0.07	Q	.	.	.	.
16.96	0.0555	0.06	Q	.	.	.	.
17.06	0.0560	0.06	Q	.	.	.	.
17.17	0.0565	0.06	Q	.	.	.	.
17.27	0.0570	0.05	Q	.	.	.	.
17.38	0.0575	0.05	Q	.	.	.	.
17.49	0.0579	0.05	Q	.	.	.	.
17.59	0.0583	0.05	Q	.	.	.	.
17.70	0.0587	0.05	Q	.	.	.	.
17.80	0.0591	0.05	Q	.	.	.	.
17.91	0.0595	0.04	Q	.	.	.	.
18.02	0.0599	0.04	Q	.	.	.	.
18.12	0.0603	0.03	Q	.	.	.	.
18.23	0.0605	0.03	Q	.	.	.	.

18.34	0.0608	0.03	Q	.	.	.	.
18.44	0.0611	0.03	Q	.	.	.	.
18.55	0.0614	0.03	Q	.	.	.	.
18.65	0.0617	0.03	Q	.	.	.	.
18.76	0.0619	0.03	Q	.	.	.	.
18.87	0.0622	0.03	Q	.	.	.	.
18.97	0.0624	0.03	Q	.	.	.	.
19.08	0.0627	0.03	Q	.	.	.	.
19.18	0.0629	0.03	Q	.	.	.	.
19.29	0.0632	0.03	Q	.	.	.	.
19.40	0.0634	0.03	Q	.	.	.	.
19.50	0.0636	0.03	Q	.	.	.	.
19.61	0.0638	0.03	Q	.	.	.	.
19.72	0.0641	0.03	Q	.	.	.	.
19.82	0.0643	0.02	Q	.	.	.	.
19.93	0.0645	0.02	Q	.	.	.	.
20.03	0.0647	0.02	Q	.	.	.	.
20.14	0.0649	0.02	Q	.	.	.	.
20.25	0.0651	0.02	Q	.	.	.	.
20.35	0.0653	0.02	Q	.	.	.	.
20.46	0.0655	0.02	Q	.	.	.	.
20.57	0.0657	0.02	Q	.	.	.	.
20.67	0.0659	0.02	Q	.	.	.	.
20.78	0.0661	0.02	Q	.	.	.	.
20.88	0.0663	0.02	Q	.	.	.	.
20.99	0.0665	0.02	Q	.	.	.	.
21.10	0.0667	0.02	Q	.	.	.	.
21.20	0.0669	0.02	Q	.	.	.	.
21.31	0.0670	0.02	Q	.	.	.	.
21.41	0.0672	0.02	Q	.	.	.	.
21.52	0.0674	0.02	Q	.	.	.	.
21.63	0.0676	0.02	Q	.	.	.	.
21.73	0.0677	0.02	Q	.	.	.	.
21.84	0.0679	0.02	Q	.	.	.	.
21.95	0.0681	0.02	Q	.	.	.	.
22.05	0.0682	0.02	Q	.	.	.	.
22.16	0.0684	0.02	Q	.	.	.	.
22.26	0.0686	0.02	Q	.	.	.	.
22.37	0.0687	0.02	Q	.	.	.	.
22.48	0.0689	0.02	Q	.	.	.	.
22.58	0.0691	0.02	Q	.	.	.	.
22.69	0.0692	0.02	Q	.	.	.	.
22.79	0.0694	0.02	Q	.	.	.	.
22.90	0.0695	0.02	Q	.	.	.	.
23.01	0.0697	0.02	Q	.	.	.	.
23.11	0.0699	0.02	Q	.	.	.	.
23.22	0.0700	0.02	Q	.	.	.	.
23.33	0.0702	0.02	Q	.	.	.	.
23.43	0.0703	0.02	Q	.	.	.	.
23.54	0.0705	0.02	Q	.	.	.	.

23.64	0.0706	0.02	Q	.	.	.	.
23.75	0.0708	0.02	Q	.	.	.	.
23.86	0.0709	0.02	Q	.	.	.	.
23.96	0.0710	0.02	Q	.	.	.	.
24.07	0.0712	0.02	Q	.	.	.	.
24.17	0.0713	0.00	Q	.	.	.	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1446.0
10%	261.2
20%	57.3
30%	19.1
40%	12.7
50%	6.4
60%	6.4
70%	6.4
80%	6.4
90%	6.4

DA2-100YR

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA(ACRES) = 0.29
SOIL-LOSS RATE, Fm,(INCH/HR) = 0.074
LOW LOSS FRACTION = 0.089
TIME OF CONCENTRATION(MIN.) = 6.10
SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
USER SPECIFIED RAINFALL VALUES ARE USED
RETURN FREQUENCY(YEARS) = 100
5-MINUTE POINT RAINFALL VALUE(INCHES) = 0.45
30-MINUTE POINT RAINFALL VALUE(INCHES) = 1.19
1-HOUR POINT RAINFALL VALUE(INCHES) = 1.80
3-HOUR POINT RAINFALL VALUE(INCHES) = 3.26
6-HOUR POINT RAINFALL VALUE(INCHES) = 4.73
24-HOUR POINT RAINFALL VALUE(INCHES) = 9.02

TOTAL CATCHMENT RUNOFF VOLUME(ACRE-FEET) = 0.18
TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) = 0.04

****

TIME (HOURS)	VOLUME (AF)	Q (CFS)	0.	2.5	5.0	7.5	10.0
0.04	0.0001	0.04	Q	.	.	.	.
0.14	0.0004	0.04	Q	.	.	.	.
0.24	0.0008	0.04	Q	.	.	.	.
0.34	0.0011	0.04	Q	.	.	.	.
0.45	0.0015	0.04	Q	.	.	.	.
0.55	0.0018	0.04	Q	.	.	.	.
0.65	0.0022	0.04	Q	.	.	.	.
0.75	0.0025	0.04	Q	.	.	.	.
0.85	0.0029	0.04	Q	.	.	.	.
0.95	0.0033	0.04	Q	.	.	.	.
1.06	0.0036	0.04	Q	.	.	.	.
1.16	0.0040	0.04	Q	.	.	.	.
1.26	0.0043	0.04	Q	.	.	.	.
1.36	0.0047	0.04	Q	.	.	.	.
1.46	0.0051	0.04	Q	.	.	.	.
1.56	0.0054	0.04	Q	.	.	.	.
1.67	0.0058	0.04	Q	.	.	.	.
1.77	0.0062	0.04	Q	.	.	.	.
1.87	0.0066	0.04	Q	.	.	.	.
1.97	0.0069	0.04	Q	.	.	.	.
2.07	0.0073	0.04	Q	.	.	.	.
2.17	0.0077	0.04	Q	.	.	.	.

2.28	0.0081	0.05	Q	.	.	.	.
2.38	0.0084	0.05	Q	.	.	.	.
2.48	0.0088	0.05	Q	.	.	.	.
2.58	0.0092	0.05	Q	.	.	.	.
2.68	0.0096	0.05	Q	.	.	.	.
2.78	0.0100	0.05	Q	.	.	.	.
2.88	0.0104	0.05	Q	.	.	.	.
2.99	0.0107	0.05	Q	.	.	.	.
3.09	0.0111	0.05	Q	.	.	.	.
3.19	0.0115	0.05	Q	.	.	.	.
3.29	0.0119	0.05	Q	.	.	.	.
3.39	0.0123	0.05	Q	.	.	.	.
3.50	0.0127	0.05	Q	.	.	.	.
3.60	0.0131	0.05	Q	.	.	.	.
3.70	0.0135	0.05	Q	.	.	.	.
3.80	0.0139	0.05	Q	.	.	.	.
3.90	0.0143	0.05	Q	.	.	.	.
4.00	0.0147	0.05	Q	.	.	.	.
4.11	0.0151	0.05	Q	.	.	.	.
4.21	0.0155	0.05	Q	.	.	.	.
4.31	0.0159	0.05	Q	.	.	.	.
4.41	0.0164	0.05	Q	.	.	.	.
4.51	0.0168	0.05	Q	.	.	.	.
4.61	0.0172	0.05	Q	.	.	.	.
4.72	0.0176	0.05	Q	.	.	.	.
4.82	0.0180	0.05	Q	.	.	.	.
4.92	0.0184	0.05	Q	.	.	.	.
5.02	0.0189	0.05	Q	.	.	.	.
5.12	0.0193	0.05	Q	.	.	.	.
5.22	0.0197	0.05	Q	.	.	.	.
5.32	0.0202	0.05	Q	.	.	.	.
5.43	0.0206	0.05	Q	.	.	.	.
5.53	0.0210	0.05	Q	.	.	.	.
5.63	0.0215	0.05	Q	.	.	.	.
5.73	0.0219	0.05	Q	.	.	.	.
5.83	0.0223	0.05	Q	.	.	.	.
5.93	0.0228	0.05	Q	.	.	.	.
6.04	0.0232	0.05	Q	.	.	.	.
6.14	0.0237	0.05	Q	.	.	.	.
6.24	0.0241	0.05	Q	.	.	.	.
6.34	0.0246	0.05	Q	.	.	.	.
6.44	0.0251	0.05	Q	.	.	.	.
6.55	0.0255	0.05	Q	.	.	.	.
6.65	0.0260	0.06	Q	.	.	.	.
6.75	0.0264	0.06	Q	.	.	.	.
6.85	0.0269	0.06	Q	.	.	.	.
6.95	0.0274	0.06	Q	.	.	.	.
7.05	0.0279	0.06	Q	.	.	.	.
7.16	0.0283	0.06	Q	.	.	.	.
7.26	0.0288	0.06	Q	.	.	.	.

7.36	0.0293	0.06	Q	.	.	.	.
7.46	0.0298	0.06	Q	.	.	.	.
7.56	0.0303	0.06	Q	.	.	.	.
7.66	0.0308	0.06	Q	.	.	.	.
7.76	0.0312	0.06	Q	.	.	.	.
7.87	0.0317	0.06	Q	.	.	.	.
7.97	0.0322	0.06	Q	.	.	.	.
8.07	0.0327	0.06	Q	.	.	.	.
8.17	0.0333	0.06	Q	.	.	.	.
8.27	0.0338	0.06	Q	.	.	.	.
8.38	0.0343	0.06	Q	.	.	.	.
8.48	0.0348	0.06	Q	.	.	.	.
8.58	0.0353	0.06	Q	.	.	.	.
8.68	0.0358	0.06	Q	.	.	.	.
8.78	0.0364	0.06	Q	.	.	.	.
8.88	0.0369	0.06	Q	.	.	.	.
8.99	0.0374	0.06	Q	.	.	.	.
9.09	0.0380	0.06	Q	.	.	.	.
9.19	0.0385	0.07	Q	.	.	.	.
9.29	0.0391	0.07	Q	.	.	.	.
9.39	0.0396	0.07	Q	.	.	.	.
9.49	0.0402	0.07	Q	.	.	.	.
9.60	0.0408	0.07	Q	.	.	.	.
9.70	0.0413	0.07	Q	.	.	.	.
9.80	0.0419	0.07	Q	.	.	.	.
9.90	0.0425	0.07	Q	.	.	.	.
10.00	0.0431	0.07	Q	.	.	.	.
10.10	0.0437	0.07	Q	.	.	.	.
10.20	0.0443	0.07	Q	.	.	.	.
10.31	0.0449	0.07	Q	.	.	.	.
10.41	0.0455	0.07	Q	.	.	.	.
10.51	0.0461	0.07	Q	.	.	.	.
10.61	0.0467	0.07	Q	.	.	.	.
10.71	0.0473	0.07	Q	.	.	.	.
10.82	0.0479	0.08	Q	.	.	.	.
10.92	0.0486	0.08	Q	.	.	.	.
11.02	0.0492	0.08	Q	.	.	.	.
11.12	0.0499	0.08	Q	.	.	.	.
11.22	0.0505	0.08	Q	.	.	.	.
11.32	0.0512	0.08	Q	.	.	.	.
11.43	0.0519	0.08	Q	.	.	.	.
11.53	0.0525	0.08	Q	.	.	.	.
11.63	0.0532	0.08	Q	.	.	.	.
11.73	0.0539	0.08	Q	.	.	.	.
11.83	0.0546	0.08	Q	.	.	.	.
11.93	0.0553	0.09	Q	.	.	.	.
12.03	0.0561	0.09	Q	.	.	.	.
12.14	0.0569	0.10	Q	.	.	.	.
12.24	0.0577	0.10	Q	.	.	.	.
12.34	0.0586	0.10	Q	.	.	.	.

12.44	0.0595	0.11	Q	.	.	.	.
12.54	0.0603	0.11	Q	.	.	.	.
12.65	0.0613	0.11	Q	.	.	.	.
12.75	0.0622	0.11	Q	.	.	.	.
12.85	0.0631	0.11	Q	.	.	.	.
12.95	0.0640	0.11	Q	.	.	.	.
13.05	0.0650	0.11	Q	.	.	.	.
13.15	0.0660	0.12	Q	.	.	.	.
13.26	0.0669	0.12	Q	.	.	.	.
13.36	0.0679	0.12	Q	.	.	.	.
13.46	0.0690	0.12	Q	.	.	.	.
13.56	0.0700	0.12	Q	.	.	.	.
13.66	0.0711	0.13	Q	.	.	.	.
13.76	0.0721	0.13	Q	.	.	.	.
13.87	0.0732	0.13	Q	.	.	.	.
13.97	0.0744	0.13	Q	.	.	.	.
14.07	0.0755	0.14	Q	.	.	.	.
14.17	0.0767	0.14	Q	.	.	.	.
14.27	0.0779	0.15	Q	.	.	.	.
14.37	0.0791	0.15	Q	.	.	.	.
14.48	0.0804	0.16	Q	.	.	.	.
14.58	0.0817	0.16	Q	.	.	.	.
14.68	0.0831	0.17	Q	.	.	.	.
14.78	0.0845	0.17	Q	.	.	.	.
14.88	0.0860	0.18	Q	.	.	.	.
14.98	0.0875	0.18	Q	.	.	.	.
15.09	0.0890	0.19	Q	.	.	.	.
15.19	0.0907	0.20	Q	.	.	.	.
15.29	0.0925	0.22	Q	.	.	.	.
15.39	0.0943	0.23	Q	.	.	.	.
15.49	0.0964	0.28	.Q	.	.	.	.
15.59	0.0988	0.29	.Q	.	.	.	.
15.70	0.1015	0.34	.Q	.	.	.	.
15.80	0.1043	0.33	.Q	.	.	.	.
15.90	0.1075	0.44	.Q	.	.	.	.
16.00	0.1118	0.57	. Q	.	.	.	.
16.10	0.1195	1.28	. Q	.	.	.	.
16.20	0.1264	0.37	.Q	.	.	.	.
16.31	0.1293	0.31	.Q	.	.	.	.
16.41	0.1317	0.26	.Q	.	.	.	.
16.51	0.1337	0.21	Q	.	.	.	.
16.61	0.1354	0.19	Q	.	.	.	.
16.71	0.1369	0.17	Q	.	.	.	.
16.81	0.1383	0.16	Q	.	.	.	.
16.92	0.1396	0.15	Q	.	.	.	.
17.02	0.1409	0.14	Q	.	.	.	.
17.12	0.1420	0.14	Q	.	.	.	.
17.22	0.1432	0.13	Q	.	.	.	.
17.32	0.1442	0.13	Q	.	.	.	.
17.42	0.1453	0.12	Q	.	.	.	.

17.52	0.1463	0.12	Q	.	.	.	.
17.63	0.1472	0.11	Q	.	.	.	.
17.73	0.1482	0.11	Q	.	.	.	.
17.83	0.1491	0.11	Q	.	.	.	.
17.93	0.1500	0.10	Q	.	.	.	.
18.03	0.1509	0.10	Q	.	.	.	.
18.14	0.1516	0.09	Q	.	.	.	.
18.24	0.1524	0.08	Q	.	.	.	.
18.34	0.1531	0.08	Q	.	.	.	.
18.44	0.1537	0.08	Q	.	.	.	.
18.54	0.1544	0.08	Q	.	.	.	.
18.64	0.1550	0.08	Q	.	.	.	.
18.74	0.1557	0.07	Q	.	.	.	.
18.85	0.1563	0.07	Q	.	.	.	.
18.95	0.1569	0.07	Q	.	.	.	.
19.05	0.1575	0.07	Q	.	.	.	.
19.15	0.1581	0.07	Q	.	.	.	.
19.25	0.1587	0.07	Q	.	.	.	.
19.36	0.1593	0.07	Q	.	.	.	.
19.46	0.1598	0.07	Q	.	.	.	.
19.56	0.1604	0.06	Q	.	.	.	.
19.66	0.1609	0.06	Q	.	.	.	.
19.76	0.1614	0.06	Q	.	.	.	.
19.86	0.1620	0.06	Q	.	.	.	.
19.97	0.1625	0.06	Q	.	.	.	.
20.07	0.1630	0.06	Q	.	.	.	.
20.17	0.1635	0.06	Q	.	.	.	.
20.27	0.1640	0.06	Q	.	.	.	.
20.37	0.1645	0.06	Q	.	.	.	.
20.47	0.1650	0.06	Q	.	.	.	.
20.58	0.1655	0.06	Q	.	.	.	.
20.68	0.1659	0.06	Q	.	.	.	.
20.78	0.1664	0.06	Q	.	.	.	.
20.88	0.1669	0.05	Q	.	.	.	.
20.98	0.1673	0.05	Q	.	.	.	.
21.08	0.1678	0.05	Q	.	.	.	.
21.18	0.1682	0.05	Q	.	.	.	.
21.29	0.1687	0.05	Q	.	.	.	.
21.39	0.1691	0.05	Q	.	.	.	.
21.49	0.1695	0.05	Q	.	.	.	.
21.59	0.1700	0.05	Q	.	.	.	.
21.69	0.1704	0.05	Q	.	.	.	.
21.80	0.1708	0.05	Q	.	.	.	.
21.90	0.1712	0.05	Q	.	.	.	.
22.00	0.1716	0.05	Q	.	.	.	.
22.10	0.1720	0.05	Q	.	.	.	.
22.20	0.1724	0.05	Q	.	.	.	.
22.30	0.1728	0.05	Q	.	.	.	.
22.41	0.1732	0.05	Q	.	.	.	.
22.51	0.1736	0.05	Q	.	.	.	.

22.61	0.1740	0.05	Q	.	.	.	.
22.71	0.1744	0.05	Q	.	.	.	.
22.81	0.1748	0.05	Q	.	.	.	.
22.91	0.1752	0.05	Q	.	.	.	.
23.02	0.1756	0.04	Q	.	.	.	.
23.12	0.1759	0.04	Q	.	.	.	.
23.22	0.1763	0.04	Q	.	.	.	.
23.32	0.1767	0.04	Q	.	.	.	.
23.42	0.1770	0.04	Q	.	.	.	.
23.52	0.1774	0.04	Q	.	.	.	.
23.62	0.1778	0.04	Q	.	.	.	.
23.73	0.1781	0.04	Q	.	.	.	.
23.83	0.1785	0.04	Q	.	.	.	.
23.93	0.1788	0.04	Q	.	.	.	.
24.03	0.1792	0.04	Q	.	.	.	.
24.13	0.1794	0.00	Q	.	.	.	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1445.7
10%	213.5
20%	61.0
30%	18.3
40%	12.2
50%	6.1
60%	6.1
70%	6.1
80%	6.1
90%	6.1

DA3.1-2YR

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA(ACRES) = 1.07
SOIL-LOSS RATE, Fm,(INCH/HR) = 0.098
LOW LOSS FRACTION = 0.155
TIME OF CONCENTRATION(MIN.) = 8.67
SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
USER SPECIFIED RAINFALL VALUES ARE USED
RETURN FREQUENCY(YEARS) = 2
5-MINUTE POINT RAINFALL VALUE(INCHES) = 0.18
30-MINUTE POINT RAINFALL VALUE(INCHES) = 0.48
1-HOUR POINT RAINFALL VALUE(INCHES) = 0.73
3-HOUR POINT RAINFALL VALUE(INCHES) = 1.39
6-HOUR POINT RAINFALL VALUE(INCHES) = 2.05
24-HOUR POINT RAINFALL VALUE(INCHES) = 3.87

TOTAL CATCHMENT RUNOFF VOLUME(ACRE-FEET) = 0.26
TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) = 0.08

****

TIME (HOURS)	VOLUME (AF)	Q (CFS)	0.	2.5	5.0	7.5	10.0
0.10	0.0004	0.06	Q	.	.	.	.
0.25	0.0011	0.06	Q	.	.	.	.
0.39	0.0018	0.06	Q	.	.	.	.
0.54	0.0025	0.06	Q	.	.	.	.
0.68	0.0033	0.06	Q	.	.	.	.
0.83	0.0040	0.06	Q	.	.	.	.
0.97	0.0047	0.06	Q	.	.	.	.
1.12	0.0055	0.06	Q	.	.	.	.
1.26	0.0062	0.06	Q	.	.	.	.
1.41	0.0070	0.06	Q	.	.	.	.
1.55	0.0077	0.06	Q	.	.	.	.
1.69	0.0085	0.06	Q	.	.	.	.
1.84	0.0092	0.06	Q	.	.	.	.
1.98	0.0100	0.06	Q	.	.	.	.
2.13	0.0108	0.06	Q	.	.	.	.
2.27	0.0116	0.07	Q	.	.	.	.
2.42	0.0123	0.07	Q	.	.	.	.
2.56	0.0131	0.07	Q	.	.	.	.
2.71	0.0139	0.07	Q	.	.	.	.
2.85	0.0147	0.07	Q	.	.	.	.
2.99	0.0155	0.07	Q	.	.	.	.
3.14	0.0163	0.07	Q	.	.	.	.

3.28	0.0171	0.07	Q	.	.	.	.
3.43	0.0179	0.07	Q	.	.	.	.
3.57	0.0187	0.07	Q	.	.	.	.
3.72	0.0196	0.07	Q	.	.	.	.
3.86	0.0204	0.07	Q	.	.	.	.
4.01	0.0212	0.07	Q	.	.	.	.
4.15	0.0220	0.07	Q	.	.	.	.
4.30	0.0229	0.07	Q	.	.	.	.
4.44	0.0237	0.07	Q	.	.	.	.
4.58	0.0246	0.07	Q	.	.	.	.
4.73	0.0255	0.07	Q	.	.	.	.
4.87	0.0263	0.07	Q	.	.	.	.
5.02	0.0272	0.07	Q	.	.	.	.
5.16	0.0281	0.07	Q	.	.	.	.
5.31	0.0290	0.07	Q	.	.	.	.
5.45	0.0298	0.07	Q	.	.	.	.
5.60	0.0307	0.08	Q	.	.	.	.
5.74	0.0317	0.08	Q	.	.	.	.
5.89	0.0326	0.08	Q	.	.	.	.
6.03	0.0335	0.08	Q	.	.	.	.
6.17	0.0344	0.08	Q	.	.	.	.
6.32	0.0353	0.08	Q	.	.	.	.
6.46	0.0363	0.08	Q	.	.	.	.
6.61	0.0372	0.08	Q	.	.	.	.
6.75	0.0382	0.08	Q	.	.	.	.
6.90	0.0391	0.08	Q	.	.	.	.
7.04	0.0401	0.08	Q	.	.	.	.
7.19	0.0411	0.08	Q	.	.	.	.
7.33	0.0421	0.08	Q	.	.	.	.
7.47	0.0431	0.08	Q	.	.	.	.
7.62	0.0441	0.08	Q	.	.	.	.
7.76	0.0451	0.09	Q	.	.	.	.
7.91	0.0461	0.09	Q	.	.	.	.
8.05	0.0472	0.09	Q	.	.	.	.
8.20	0.0482	0.09	Q	.	.	.	.
8.34	0.0493	0.09	Q	.	.	.	.
8.49	0.0503	0.09	Q	.	.	.	.
8.63	0.0514	0.09	Q	.	.	.	.
8.77	0.0525	0.09	Q	.	.	.	.
8.92	0.0536	0.09	Q	.	.	.	.
9.06	0.0547	0.09	Q	.	.	.	.
9.21	0.0558	0.09	Q	.	.	.	.
9.35	0.0570	0.10	Q	.	.	.	.
9.50	0.0581	0.10	Q	.	.	.	.
9.64	0.0593	0.10	Q	.	.	.	.
9.79	0.0605	0.10	Q	.	.	.	.
9.93	0.0617	0.10	Q	.	.	.	.
10.08	0.0629	0.10	Q	.	.	.	.
10.22	0.0641	0.10	Q	.	.	.	.
10.36	0.0654	0.10	Q	.	.	.	.

10.51	0.0666	0.11	Q	.	.	.	.
10.65	0.0679	0.11	Q	.	.	.	.
10.80	0.0692	0.11	Q	.	.	.	.
10.94	0.0705	0.11	Q	.	.	.	.
11.09	0.0718	0.11	Q	.	.	.	.
11.23	0.0732	0.11	Q	.	.	.	.
11.38	0.0746	0.12	Q	.	.	.	.
11.52	0.0760	0.12	Q	.	.	.	.
11.66	0.0774	0.12	Q	.	.	.	.
11.81	0.0788	0.12	Q	.	.	.	.
11.95	0.0803	0.12	Q	.	.	.	.
12.10	0.0819	0.14	Q	.	.	.	.
12.24	0.0837	0.16	Q	.	.	.	.
12.39	0.0856	0.16	Q	.	.	.	.
12.53	0.0875	0.16	Q	.	.	.	.
12.68	0.0895	0.17	Q	.	.	.	.
12.82	0.0915	0.17	Q	.	.	.	.
12.97	0.0935	0.17	Q	.	.	.	.
13.11	0.0956	0.18	Q	.	.	.	.
13.25	0.0978	0.18	Q	.	.	.	.
13.40	0.0999	0.18	Q	.	.	.	.
13.54	0.1022	0.19	Q	.	.	.	.
13.69	0.1045	0.19	Q	.	.	.	.
13.83	0.1068	0.20	Q	.	.	.	.
13.98	0.1092	0.20	Q	.	.	.	.
14.12	0.1118	0.22	Q	.	.	.	.
14.27	0.1144	0.23	Q	.	.	.	.
14.41	0.1172	0.24	Q	.	.	.	.
14.55	0.1201	0.24	Q	.	.	.	.
14.70	0.1230	0.26	.Q	.	.	.	.
14.84	0.1262	0.26	.Q	.	.	.	.
14.99	0.1294	0.28	.Q	.	.	.	.
15.13	0.1329	0.29	.Q	.	.	.	.
15.28	0.1365	0.32	.Q	.	.	.	.
15.42	0.1404	0.34	.Q	.	.	.	.
15.57	0.1448	0.40	.Q	.	.	.	.
15.71	0.1497	0.43	.Q	.	.	.	.
15.86	0.1552	0.49	.Q	.	.	.	.
16.00	0.1620	0.64	. Q	.	.	.	.
16.14	0.1750	1.54	. Q	.	.	.	.
16.29	0.1869	0.45	.Q	.	.	.	.
16.43	0.1918	0.37	.Q	.	.	.	.
16.58	0.1958	0.31	.Q	.	.	.	.
16.72	0.1993	0.27	.Q	.	.	.	.
16.87	0.2024	0.25	Q	.	.	.	.
17.01	0.2053	0.23	Q	.	.	.	.
17.16	0.2079	0.21	Q	.	.	.	.
17.30	0.2103	0.20	Q	.	.	.	.
17.44	0.2126	0.19	Q	.	.	.	.
17.59	0.2148	0.18	Q	.	.	.	.

17.73	0.2169	0.17	Q	.	.	.	.
17.88	0.2189	0.16	Q	.	.	.	.
18.02	0.2208	0.16	Q	.	.	.	.
18.17	0.2225	0.13	Q	.	.	.	.
18.31	0.2240	0.12	Q	.	.	.	.
18.46	0.2254	0.12	Q	.	.	.	.
18.60	0.2268	0.11	Q	.	.	.	.
18.75	0.2281	0.11	Q	.	.	.	.
18.89	0.2294	0.11	Q	.	.	.	.
19.03	0.2307	0.10	Q	.	.	.	.
19.18	0.2319	0.10	Q	.	.	.	.
19.32	0.2331	0.10	Q	.	.	.	.
19.47	0.2343	0.10	Q	.	.	.	.
19.61	0.2354	0.09	Q	.	.	.	.
19.76	0.2365	0.09	Q	.	.	.	.
19.90	0.2376	0.09	Q	.	.	.	.
20.05	0.2387	0.09	Q	.	.	.	.
20.19	0.2397	0.09	Q	.	.	.	.
20.33	0.2408	0.09	Q	.	.	.	.
20.48	0.2418	0.08	Q	.	.	.	.
20.62	0.2428	0.08	Q	.	.	.	.
20.77	0.2437	0.08	Q	.	.	.	.
20.91	0.2447	0.08	Q	.	.	.	.
21.06	0.2456	0.08	Q	.	.	.	.
21.20	0.2466	0.08	Q	.	.	.	.
21.35	0.2475	0.08	Q	.	.	.	.
21.49	0.2484	0.07	Q	.	.	.	.
21.64	0.2492	0.07	Q	.	.	.	.
21.78	0.2501	0.07	Q	.	.	.	.
21.92	0.2510	0.07	Q	.	.	.	.
22.07	0.2518	0.07	Q	.	.	.	.
22.21	0.2527	0.07	Q	.	.	.	.
22.36	0.2535	0.07	Q	.	.	.	.
22.50	0.2543	0.07	Q	.	.	.	.
22.65	0.2551	0.07	Q	.	.	.	.
22.79	0.2559	0.07	Q	.	.	.	.
22.94	0.2567	0.07	Q	.	.	.	.
23.08	0.2575	0.06	Q	.	.	.	.
23.23	0.2582	0.06	Q	.	.	.	.
23.37	0.2590	0.06	Q	.	.	.	.
23.51	0.2598	0.06	Q	.	.	.	.
23.66	0.2605	0.06	Q	.	.	.	.
23.80	0.2612	0.06	Q	.	.	.	.
23.95	0.2620	0.06	Q	.	.	.	.
24.09	0.2627	0.06	Q	.	.	.	.
24.24	0.2631	0.00	Q	.	.	.	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have

an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1447.9
10%	355.5
20%	78.0
30%	26.0
40%	17.3
50%	8.7
60%	8.7
70%	8.7
80%	8.7
90%	8.7

DA3.1-100YR

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA(ACRES) = 1.07
SOIL-LOSS RATE, Fm,(INCH/HR) = 0.074
LOW LOSS FRACTION = 0.089
TIME OF CONCENTRATION(MIN.) = 8.14
SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
USER SPECIFIED RAINFALL VALUES ARE USED
RETURN FREQUENCY(YEARS) = 100
5-MINUTE POINT RAINFALL VALUE(INCHES) = 0.45
30-MINUTE POINT RAINFALL VALUE(INCHES) = 1.19
1-HOUR POINT RAINFALL VALUE(INCHES) = 1.80
3-HOUR POINT RAINFALL VALUE(INCHES) = 3.26
6-HOUR POINT RAINFALL VALUE(INCHES) = 4.73
24-HOUR POINT RAINFALL VALUE(INCHES) = 9.02

TOTAL CATCHMENT RUNOFF VOLUME(ACRE-FEET) = 0.66
TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) = 0.14

****

TIME (HOURS)	VOLUME (AF)	Q (CFS)	0.	2.5	5.0	7.5	10.0
0.13	0.0008	0.15	Q	.	.	.	.
0.26	0.0025	0.15	Q	.	.	.	.
0.40	0.0043	0.16	Q	.	.	.	.
0.53	0.0060	0.16	Q	.	.	.	.
0.67	0.0078	0.16	Q	.	.	.	.
0.81	0.0095	0.16	Q	.	.	.	.
0.94	0.0113	0.16	Q	.	.	.	.
1.08	0.0131	0.16	Q	.	.	.	.
1.21	0.0148	0.16	Q	.	.	.	.
1.35	0.0166	0.16	Q	.	.	.	.
1.48	0.0184	0.16	Q	.	.	.	.
1.62	0.0202	0.16	Q	.	.	.	.
1.75	0.0221	0.16	Q	.	.	.	.
1.89	0.0239	0.16	Q	.	.	.	.
2.03	0.0257	0.16	Q	.	.	.	.
2.16	0.0276	0.17	Q	.	.	.	.
2.30	0.0294	0.17	Q	.	.	.	.
2.43	0.0313	0.17	Q	.	.	.	.
2.57	0.0332	0.17	Q	.	.	.	.
2.70	0.0351	0.17	Q	.	.	.	.
2.84	0.0370	0.17	Q	.	.	.	.
2.98	0.0389	0.17	Q	.	.	.	.

3.11	0.0408	0.17	Q	.	.	.	.
3.25	0.0427	0.17	Q	.	.	.	.
3.38	0.0447	0.17	Q	.	.	.	.
3.52	0.0466	0.17	Q	.	.	.	.
3.65	0.0486	0.18	Q	.	.	.	.
3.79	0.0505	0.18	Q	.	.	.	.
3.93	0.0525	0.18	Q	.	.	.	.
4.06	0.0545	0.18	Q	.	.	.	.
4.20	0.0565	0.18	Q	.	.	.	.
4.33	0.0586	0.18	Q	.	.	.	.
4.47	0.0606	0.18	Q	.	.	.	.
4.60	0.0626	0.18	Q	.	.	.	.
4.74	0.0647	0.18	Q	.	.	.	.
4.88	0.0668	0.19	Q	.	.	.	.
5.01	0.0689	0.19	Q	.	.	.	.
5.15	0.0710	0.19	Q	.	.	.	.
5.28	0.0731	0.19	Q	.	.	.	.
5.42	0.0752	0.19	Q	.	.	.	.
5.55	0.0773	0.19	Q	.	.	.	.
5.69	0.0795	0.19	Q	.	.	.	.
5.82	0.0817	0.19	Q	.	.	.	.
5.96	0.0839	0.20	Q	.	.	.	.
6.10	0.0861	0.20	Q	.	.	.	.
6.23	0.0883	0.20	Q	.	.	.	.
6.37	0.0905	0.20	Q	.	.	.	.
6.50	0.0928	0.20	Q	.	.	.	.
6.64	0.0950	0.20	Q	.	.	.	.
6.77	0.0973	0.20	Q	.	.	.	.
6.91	0.0996	0.21	Q	.	.	.	.
7.05	0.1019	0.21	Q	.	.	.	.
7.18	0.1043	0.21	Q	.	.	.	.
7.32	0.1066	0.21	Q	.	.	.	.
7.45	0.1090	0.21	Q	.	.	.	.
7.59	0.1114	0.21	Q	.	.	.	.
7.72	0.1138	0.22	Q	.	.	.	.
7.86	0.1163	0.22	Q	.	.	.	.
8.00	0.1188	0.22	Q	.	.	.	.
8.13	0.1212	0.22	Q	.	.	.	.
8.27	0.1237	0.23	Q	.	.	.	.
8.40	0.1263	0.23	Q	.	.	.	.
8.54	0.1288	0.23	Q	.	.	.	.
8.67	0.1314	0.23	Q	.	.	.	.
8.81	0.1340	0.23	Q	.	.	.	.
8.95	0.1366	0.24	Q	.	.	.	.
9.08	0.1393	0.24	Q	.	.	.	.
9.22	0.1420	0.24	Q	.	.	.	.
9.35	0.1447	0.24	Q	.	.	.	.
9.49	0.1474	0.25	Q	.	.	.	.
9.62	0.1502	0.25	Q	.	.	.	.
9.76	0.1530	0.25	.Q	.	.	.	.

9.90	0.1559	0.25	.Q	.	.	.	.
10.03	0.1587	0.26	.Q	.	.	.	.
10.17	0.1616	0.26	.Q	.	.	.	.
10.30	0.1646	0.26	.Q	.	.	.	.
10.44	0.1675	0.27	.Q	.	.	.	.
10.57	0.1706	0.27	.Q	.	.	.	.
10.71	0.1736	0.27	.Q	.	.	.	.
10.84	0.1767	0.28	.Q	.	.	.	.
10.98	0.1798	0.28	.Q	.	.	.	.
11.12	0.1830	0.29	.Q	.	.	.	.
11.25	0.1863	0.29	.Q	.	.	.	.
11.39	0.1895	0.29	.Q	.	.	.	.
11.52	0.1929	0.30	.Q	.	.	.	.
11.66	0.1962	0.30	.Q	.	.	.	.
11.79	0.1997	0.31	.Q	.	.	.	.
11.93	0.2032	0.31	.Q	.	.	.	.
12.07	0.2068	0.33	.Q	.	.	.	.
12.20	0.2108	0.37	.Q	.	.	.	.
12.34	0.2150	0.38	.Q	.	.	.	.
12.47	0.2193	0.39	.Q	.	.	.	.
12.61	0.2237	0.40	.Q	.	.	.	.
12.74	0.2282	0.40	.Q	.	.	.	.
12.88	0.2327	0.41	.Q	.	.	.	.
13.02	0.2374	0.42	.Q	.	.	.	.
13.15	0.2421	0.43	.Q	.	.	.	.
13.29	0.2469	0.43	.Q	.	.	.	.
13.42	0.2519	0.45	.Q	.	.	.	.
13.56	0.2570	0.46	.Q	.	.	.	.
13.69	0.2621	0.47	.Q	.	.	.	.
13.83	0.2675	0.48	.Q	.	.	.	.
13.97	0.2729	0.50	.Q	.	.	.	.
14.10	0.2786	0.51	. Q	.	.	.	.
14.24	0.2844	0.53	. Q	.	.	.	.
14.37	0.2905	0.55	. Q	.	.	.	.
14.51	0.2968	0.57	. Q	.	.	.	.
14.64	0.3033	0.59	. Q	.	.	.	.
14.78	0.3101	0.63	. Q	.	.	.	.
14.91	0.3172	0.65	. Q	.	.	.	.
15.05	0.3248	0.70	. Q	.	.	.	.
15.19	0.3327	0.73	. Q	.	.	.	.
15.32	0.3413	0.81	. Q	.	.	.	.
15.46	0.3509	0.90	. Q	.	.	.	.
15.59	0.3620	1.09	. Q	.	.	.	.
15.73	0.3748	1.19	. Q	.	.	.	.
15.86	0.3894	1.41	. Q	.	.	.	.
16.00	0.4076	1.82	. Q	.	.	.	.
16.14	0.4408	4.11	. .	Q	.	.	.
16.27	0.4708	1.24	. Q	.	.	.	.
16.41	0.4835	1.02	. Q	.	.	.	.
16.54	0.4935	0.76	. Q	.	.	.	.

16.68	0.5015	0.67	. Q	.	.	.	.
16.81	0.5087	0.61	. Q	.	.	.	.
16.95	0.5152	0.56	. Q	.	.	.	.
17.09	0.5213	0.52	. Q	.	.	.	.
17.22	0.5269	0.49	.Q	.	.	.	.
17.36	0.5323	0.46	.Q	.	.	.	.
17.49	0.5373	0.44	.Q	.	.	.	.
17.63	0.5422	0.42	.Q	.	.	.	.
17.76	0.5468	0.41	.Q	.	.	.	.
17.90	0.5513	0.39	.Q	.	.	.	.
18.03	0.5556	0.38	.Q	.	.	.	.
18.17	0.5595	0.32	.Q	.	.	.	.
18.31	0.5630	0.31	.Q	.	.	.	.
18.44	0.5664	0.30	.Q	.	.	.	.
18.58	0.5696	0.29	.Q	.	.	.	.
18.71	0.5728	0.28	.Q	.	.	.	.
18.85	0.5759	0.27	.Q	.	.	.	.
18.98	0.5789	0.27	.Q	.	.	.	.
19.12	0.5819	0.26	.Q	.	.	.	.
19.26	0.5848	0.25	.Q	.	.	.	.
19.39	0.5876	0.25	Q	.	.	.	.
19.53	0.5903	0.24	Q	.	.	.	.
19.66	0.5930	0.24	Q	.	.	.	.
19.80	0.5956	0.23	Q	.	.	.	.
19.93	0.5982	0.23	Q	.	.	.	.
20.07	0.6007	0.22	Q	.	.	.	.
20.21	0.6032	0.22	Q	.	.	.	.
20.34	0.6057	0.22	Q	.	.	.	.
20.48	0.6081	0.21	Q	.	.	.	.
20.61	0.6104	0.21	Q	.	.	.	.
20.75	0.6127	0.21	Q	.	.	.	.
20.88	0.6150	0.20	Q	.	.	.	.
21.02	0.6173	0.20	Q	.	.	.	.
21.16	0.6195	0.20	Q	.	.	.	.
21.29	0.6217	0.19	Q	.	.	.	.
21.43	0.6238	0.19	Q	.	.	.	.
21.56	0.6260	0.19	Q	.	.	.	.
21.70	0.6281	0.19	Q	.	.	.	.
21.83	0.6301	0.18	Q	.	.	.	.
21.97	0.6322	0.18	Q	.	.	.	.
22.11	0.6342	0.18	Q	.	.	.	.
22.24	0.6362	0.18	Q	.	.	.	.
22.38	0.6382	0.17	Q	.	.	.	.
22.51	0.6401	0.17	Q	.	.	.	.
22.65	0.6421	0.17	Q	.	.	.	.
22.78	0.6440	0.17	Q	.	.	.	.
22.92	0.6458	0.17	Q	.	.	.	.
23.05	0.6477	0.17	Q	.	.	.	.
23.19	0.6496	0.16	Q	.	.	.	.
23.33	0.6514	0.16	Q	.	.	.	.

23.46	0.6532	0.16	Q	.	.	.	.
23.60	0.6550	0.16	Q	.	.	.	.
23.73	0.6568	0.16	Q	.	.	.	.
23.87	0.6585	0.16	Q	.	.	.	.
24.00	0.6603	0.15	Q	.	.	.	.
24.14	0.6611	0.00	Q	.	.	.	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1440.8
10%	293.0
20%	65.1
30%	32.6
40%	16.3
50%	8.1
60%	8.1
70%	8.1
80%	8.1
90%	8.1

DA3.2-2YR

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA(ACRES) = 0.94
SOIL-LOSS RATE, Fm,(INCH/HR) = 0.098
LOW LOSS FRACTION = 0.155
TIME OF CONCENTRATION(MIN.) = 7.30
SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
USER SPECIFIED RAINFALL VALUES ARE USED
RETURN FREQUENCY(YEARS) = 2
5-MINUTE POINT RAINFALL VALUE(INCHES) = 0.18
30-MINUTE POINT RAINFALL VALUE(INCHES) = 0.48
1-HOUR POINT RAINFALL VALUE(INCHES) = 0.73
3-HOUR POINT RAINFALL VALUE(INCHES) = 1.39
6-HOUR POINT RAINFALL VALUE(INCHES) = 2.05
24-HOUR POINT RAINFALL VALUE(INCHES) = 3.87

TOTAL CATCHMENT RUNOFF VOLUME(ACRE-FEET) = 0.23
TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) = 0.07

****

TIME (HOURS)	VOLUME (AF)	Q (CFS)	0.	2.5	5.0	7.5	10.0
0.06	0.0001	0.05	Q	.	.	.	.
0.18	0.0007	0.05	Q	.	.	.	.
0.30	0.0012	0.05	Q	.	.	.	.
0.43	0.0017	0.05	Q	.	.	.	.
0.55	0.0023	0.05	Q	.	.	.	.
0.67	0.0028	0.05	Q	.	.	.	.
0.79	0.0034	0.05	Q	.	.	.	.
0.91	0.0039	0.05	Q	.	.	.	.
1.03	0.0045	0.05	Q	.	.	.	.
1.16	0.0050	0.05	Q	.	.	.	.
1.28	0.0056	0.06	Q	.	.	.	.
1.40	0.0061	0.06	Q	.	.	.	.
1.52	0.0067	0.06	Q	.	.	.	.
1.64	0.0072	0.06	Q	.	.	.	.
1.76	0.0078	0.06	Q	.	.	.	.
1.89	0.0084	0.06	Q	.	.	.	.
2.01	0.0089	0.06	Q	.	.	.	.
2.13	0.0095	0.06	Q	.	.	.	.
2.25	0.0101	0.06	Q	.	.	.	.
2.37	0.0106	0.06	Q	.	.	.	.
2.49	0.0112	0.06	Q	.	.	.	.
2.62	0.0118	0.06	Q	.	.	.	.

2.74	0.0124	0.06	Q	.	.	.	.
2.86	0.0130	0.06	Q	.	.	.	.
2.98	0.0136	0.06	Q	.	.	.	.
3.10	0.0142	0.06	Q	.	.	.	.
3.22	0.0148	0.06	Q	.	.	.	.
3.35	0.0154	0.06	Q	.	.	.	.
3.47	0.0160	0.06	Q	.	.	.	.
3.59	0.0166	0.06	Q	.	.	.	.
3.71	0.0172	0.06	Q	.	.	.	.
3.83	0.0178	0.06	Q	.	.	.	.
3.95	0.0184	0.06	Q	.	.	.	.
4.08	0.0190	0.06	Q	.	.	.	.
4.20	0.0196	0.06	Q	.	.	.	.
4.32	0.0203	0.06	Q	.	.	.	.
4.44	0.0209	0.06	Q	.	.	.	.
4.56	0.0215	0.06	Q	.	.	.	.
4.68	0.0222	0.06	Q	.	.	.	.
4.81	0.0228	0.06	Q	.	.	.	.
4.93	0.0234	0.06	Q	.	.	.	.
5.05	0.0241	0.06	Q	.	.	.	.
5.17	0.0247	0.07	Q	.	.	.	.
5.29	0.0254	0.07	Q	.	.	.	.
5.41	0.0261	0.07	Q	.	.	.	.
5.54	0.0267	0.07	Q	.	.	.	.
5.66	0.0274	0.07	Q	.	.	.	.
5.78	0.0281	0.07	Q	.	.	.	.
5.90	0.0287	0.07	Q	.	.	.	.
6.02	0.0294	0.07	Q	.	.	.	.
6.14	0.0301	0.07	Q	.	.	.	.
6.27	0.0308	0.07	Q	.	.	.	.
6.39	0.0315	0.07	Q	.	.	.	.
6.51	0.0322	0.07	Q	.	.	.	.
6.63	0.0329	0.07	Q	.	.	.	.
6.75	0.0336	0.07	Q	.	.	.	.
6.88	0.0343	0.07	Q	.	.	.	.
7.00	0.0350	0.07	Q	.	.	.	.
7.12	0.0357	0.07	Q	.	.	.	.
7.24	0.0365	0.07	Q	.	.	.	.
7.36	0.0372	0.07	Q	.	.	.	.
7.48	0.0379	0.07	Q	.	.	.	.
7.61	0.0387	0.07	Q	.	.	.	.
7.73	0.0394	0.07	Q	.	.	.	.
7.85	0.0402	0.08	Q	.	.	.	.
7.97	0.0410	0.08	Q	.	.	.	.
8.09	0.0417	0.08	Q	.	.	.	.
8.21	0.0425	0.08	Q	.	.	.	.
8.34	0.0433	0.08	Q	.	.	.	.
8.46	0.0441	0.08	Q	.	.	.	.
8.58	0.0449	0.08	Q	.	.	.	.
8.70	0.0457	0.08	Q	.	.	.	.

8.82	0.0465	0.08	Q	.	.	.	.
8.94	0.0473	0.08	Q	.	.	.	.
9.06	0.0481	0.08	Q	.	.	.	.
9.19	0.0490	0.08	Q	.	.	.	.
9.31	0.0498	0.08	Q	.	.	.	.
9.43	0.0507	0.08	Q	.	.	.	.
9.55	0.0515	0.09	Q	.	.	.	.
9.67	0.0524	0.09	Q	.	.	.	.
9.80	0.0533	0.09	Q	.	.	.	.
9.92	0.0541	0.09	Q	.	.	.	.
10.04	0.0550	0.09	Q	.	.	.	.
10.16	0.0559	0.09	Q	.	.	.	.
10.28	0.0569	0.09	Q	.	.	.	.
10.40	0.0578	0.09	Q	.	.	.	.
10.52	0.0587	0.09	Q	.	.	.	.
10.65	0.0597	0.09	Q	.	.	.	.
10.77	0.0606	0.10	Q	.	.	.	.
10.89	0.0616	0.10	Q	.	.	.	.
11.01	0.0626	0.10	Q	.	.	.	.
11.13	0.0636	0.10	Q	.	.	.	.
11.26	0.0646	0.10	Q	.	.	.	.
11.38	0.0656	0.10	Q	.	.	.	.
11.50	0.0666	0.10	Q	.	.	.	.
11.62	0.0677	0.11	Q	.	.	.	.
11.74	0.0687	0.11	Q	.	.	.	.
11.86	0.0698	0.11	Q	.	.	.	.
11.98	0.0709	0.11	Q	.	.	.	.
12.11	0.0721	0.12	Q	.	.	.	.
12.23	0.0734	0.14	Q	.	.	.	.
12.35	0.0748	0.14	Q	.	.	.	.
12.47	0.0762	0.14	Q	.	.	.	.
12.59	0.0777	0.14	Q	.	.	.	.
12.72	0.0791	0.15	Q	.	.	.	.
12.84	0.0806	0.15	Q	.	.	.	.
12.96	0.0821	0.15	Q	.	.	.	.
13.08	0.0837	0.15	Q	.	.	.	.
13.20	0.0853	0.16	Q	.	.	.	.
13.32	0.0869	0.16	Q	.	.	.	.
13.45	0.0885	0.16	Q	.	.	.	.
13.57	0.0902	0.17	Q	.	.	.	.
13.69	0.0919	0.17	Q	.	.	.	.
13.81	0.0936	0.17	Q	.	.	.	.
13.93	0.0954	0.18	Q	.	.	.	.
14.05	0.0972	0.18	Q	.	.	.	.
14.18	0.0991	0.20	Q	.	.	.	.
14.30	0.1011	0.20	Q	.	.	.	.
14.42	0.1032	0.21	Q	.	.	.	.
14.54	0.1053	0.21	Q	.	.	.	.
14.66	0.1075	0.22	Q	.	.	.	.
14.78	0.1098	0.23	Q	.	.	.	.

14.90	0.1122	0.24	Q	.	.	.	.
15.03	0.1146	0.25	Q	.	.	.	.
15.15	0.1172	0.27	.Q	.	.	.	.
15.27	0.1200	0.28	.Q	.	.	.	.
15.39	0.1229	0.30	.Q	.	.	.	.
15.51	0.1261	0.33	.Q	.	.	.	.
15.63	0.1296	0.37	.Q	.	.	.	.
15.76	0.1335	0.40	.Q	.	.	.	.
15.88	0.1378	0.47	.Q	.	.	.	.
16.00	0.1433	0.62	. Q	.	.	.	.
16.12	0.1538	1.48	. Q	.	.	.	.
16.24	0.1632	0.40	.Q	.	.	.	.
16.36	0.1670	0.35	.Q	.	.	.	.
16.49	0.1702	0.29	.Q	.	.	.	.
16.61	0.1729	0.26	.Q	.	.	.	.
16.73	0.1754	0.24	Q	.	.	.	.
16.85	0.1777	0.22	Q	.	.	.	.
16.97	0.1798	0.21	Q	.	.	.	.
17.09	0.1818	0.19	Q	.	.	.	.
17.22	0.1837	0.18	Q	.	.	.	.
17.34	0.1854	0.17	Q	.	.	.	.
17.46	0.1871	0.16	Q	.	.	.	.
17.58	0.1887	0.16	Q	.	.	.	.
17.70	0.1902	0.15	Q	.	.	.	.
17.83	0.1917	0.15	Q	.	.	.	.
17.95	0.1931	0.14	Q	.	.	.	.
18.07	0.1946	0.14	Q	.	.	.	.
18.19	0.1958	0.11	Q	.	.	.	.
18.31	0.1969	0.11	Q	.	.	.	.
18.43	0.1979	0.10	Q	.	.	.	.
18.56	0.1990	0.10	Q	.	.	.	.
18.68	0.1999	0.10	Q	.	.	.	.
18.80	0.2009	0.10	Q	.	.	.	.
18.92	0.2019	0.09	Q	.	.	.	.
19.04	0.2028	0.09	Q	.	.	.	.
19.16	0.2037	0.09	Q	.	.	.	.
19.28	0.2046	0.09	Q	.	.	.	.
19.41	0.2054	0.09	Q	.	.	.	.
19.53	0.2063	0.08	Q	.	.	.	.
19.65	0.2071	0.08	Q	.	.	.	.
19.77	0.2079	0.08	Q	.	.	.	.
19.89	0.2087	0.08	Q	.	.	.	.
20.02	0.2095	0.08	Q	.	.	.	.
20.14	0.2103	0.08	Q	.	.	.	.
20.26	0.2111	0.08	Q	.	.	.	.
20.38	0.2118	0.07	Q	.	.	.	.
20.50	0.2126	0.07	Q	.	.	.	.
20.62	0.2133	0.07	Q	.	.	.	.
20.74	0.2140	0.07	Q	.	.	.	.
20.87	0.2147	0.07	Q	.	.	.	.

20.99	0.2154	0.07	Q	.	.	.	.
21.11	0.2161	0.07	Q	.	.	.	.
21.23	0.2168	0.07	Q	.	.	.	.
21.35	0.2175	0.07	Q	.	.	.	.
21.48	0.2181	0.07	Q	.	.	.	.
21.60	0.2188	0.06	Q	.	.	.	.
21.72	0.2194	0.06	Q	.	.	.	.
21.84	0.2201	0.06	Q	.	.	.	.
21.96	0.2207	0.06	Q	.	.	.	.
22.08	0.2213	0.06	Q	.	.	.	.
22.20	0.2219	0.06	Q	.	.	.	.
22.33	0.2226	0.06	Q	.	.	.	.
22.45	0.2232	0.06	Q	.	.	.	.
22.57	0.2238	0.06	Q	.	.	.	.
22.69	0.2244	0.06	Q	.	.	.	.
22.81	0.2249	0.06	Q	.	.	.	.
22.93	0.2255	0.06	Q	.	.	.	.
23.06	0.2261	0.06	Q	.	.	.	.
23.18	0.2267	0.06	Q	.	.	.	.
23.30	0.2272	0.06	Q	.	.	.	.
23.42	0.2278	0.06	Q	.	.	.	.
23.54	0.2283	0.05	Q	.	.	.	.
23.67	0.2289	0.05	Q	.	.	.	.
23.79	0.2294	0.05	Q	.	.	.	.
23.91	0.2300	0.05	Q	.	.	.	.
24.03	0.2305	0.05	Q	.	.	.	.
24.15	0.2308	0.00	Q	.	.	.	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1445.4
10%	306.6
20%	65.7
30%	21.9
40%	14.6
50%	7.3
60%	7.3
70%	7.3
80%	7.3
90%	7.3

DA3.2-100YR

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA(ACRES) = 0.94
SOIL-LOSS RATE, Fm,(INCH/HR) = 0.074
LOW LOSS FRACTION = 0.089
TIME OF CONCENTRATION(MIN.) = 6.88
SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
USER SPECIFIED RAINFALL VALUES ARE USED
RETURN FREQUENCY(YEARS) = 100
5-MINUTE POINT RAINFALL VALUE(INCHES) = 0.45
30-MINUTE POINT RAINFALL VALUE(INCHES) = 1.19
1-HOUR POINT RAINFALL VALUE(INCHES) = 1.80
3-HOUR POINT RAINFALL VALUE(INCHES) = 3.26
6-HOUR POINT RAINFALL VALUE(INCHES) = 4.73
24-HOUR POINT RAINFALL VALUE(INCHES) = 9.02

TOTAL CATCHMENT RUNOFF VOLUME(ACRE-FEET) = 0.58
TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) = 0.13

****

TIME (HOURS)	VOLUME (AF)	Q (CFS)	0.	2.5	5.0	7.5	10.0
0.06	0.0003	0.13	Q	.	.	.	.
0.18	0.0016	0.14	Q	.	.	.	.
0.29	0.0029	0.14	Q	.	.	.	.
0.41	0.0042	0.14	Q	.	.	.	.
0.52	0.0055	0.14	Q	.	.	.	.
0.63	0.0068	0.14	Q	.	.	.	.
0.75	0.0081	0.14	Q	.	.	.	.
0.86	0.0094	0.14	Q	.	.	.	.
0.98	0.0107	0.14	Q	.	.	.	.
1.09	0.0120	0.14	Q	.	.	.	.
1.21	0.0134	0.14	Q	.	.	.	.
1.32	0.0147	0.14	Q	.	.	.	.
1.44	0.0160	0.14	Q	.	.	.	.
1.55	0.0174	0.14	Q	.	.	.	.
1.67	0.0187	0.14	Q	.	.	.	.
1.78	0.0201	0.14	Q	.	.	.	.
1.90	0.0214	0.14	Q	.	.	.	.
2.01	0.0228	0.14	Q	.	.	.	.
2.13	0.0242	0.15	Q	.	.	.	.
2.24	0.0255	0.15	Q	.	.	.	.
2.35	0.0269	0.15	Q	.	.	.	.
2.47	0.0283	0.15	Q	.	.	.	.

2.58	0.0297	0.15	Q	.	.	.	.
2.70	0.0311	0.15	Q	.	.	.	.
2.81	0.0325	0.15	Q	.	.	.	.
2.93	0.0339	0.15	Q	.	.	.	.
3.04	0.0354	0.15	Q	.	.	.	.
3.16	0.0368	0.15	Q	.	.	.	.
3.27	0.0382	0.15	Q	.	.	.	.
3.39	0.0397	0.15	Q	.	.	.	.
3.50	0.0411	0.15	Q	.	.	.	.
3.62	0.0426	0.15	Q	.	.	.	.
3.73	0.0440	0.15	Q	.	.	.	.
3.85	0.0455	0.16	Q	.	.	.	.
3.96	0.0470	0.16	Q	.	.	.	.
4.07	0.0485	0.16	Q	.	.	.	.
4.19	0.0500	0.16	Q	.	.	.	.
4.30	0.0515	0.16	Q	.	.	.	.
4.42	0.0530	0.16	Q	.	.	.	.
4.53	0.0545	0.16	Q	.	.	.	.
4.65	0.0560	0.16	Q	.	.	.	.
4.76	0.0575	0.16	Q	.	.	.	.
4.88	0.0591	0.16	Q	.	.	.	.
4.99	0.0606	0.16	Q	.	.	.	.
5.11	0.0622	0.17	Q	.	.	.	.
5.22	0.0638	0.17	Q	.	.	.	.
5.34	0.0653	0.17	Q	.	.	.	.
5.45	0.0669	0.17	Q	.	.	.	.
5.57	0.0685	0.17	Q	.	.	.	.
5.68	0.0701	0.17	Q	.	.	.	.
5.79	0.0717	0.17	Q	.	.	.	.
5.91	0.0734	0.17	Q	.	.	.	.
6.02	0.0750	0.17	Q	.	.	.	.
6.14	0.0766	0.17	Q	.	.	.	.
6.25	0.0783	0.18	Q	.	.	.	.
6.37	0.0799	0.18	Q	.	.	.	.
6.48	0.0816	0.18	Q	.	.	.	.
6.60	0.0833	0.18	Q	.	.	.	.
6.71	0.0850	0.18	Q	.	.	.	.
6.83	0.0867	0.18	Q	.	.	.	.
6.94	0.0884	0.18	Q	.	.	.	.
7.06	0.0901	0.18	Q	.	.	.	.
7.17	0.0919	0.18	Q	.	.	.	.
7.29	0.0936	0.19	Q	.	.	.	.
7.40	0.0954	0.19	Q	.	.	.	.
7.51	0.0972	0.19	Q	.	.	.	.
7.63	0.0990	0.19	Q	.	.	.	.
7.74	0.1008	0.19	Q	.	.	.	.
7.86	0.1026	0.19	Q	.	.	.	.
7.97	0.1044	0.19	Q	.	.	.	.
8.09	0.1063	0.20	Q	.	.	.	.
8.20	0.1081	0.20	Q	.	.	.	.

8.32	0.1100	0.20	Q	.	.	.	.
8.43	0.1119	0.20	Q	.	.	.	.
8.55	0.1138	0.20	Q	.	.	.	.
8.66	0.1157	0.20	Q	.	.	.	.
8.78	0.1176	0.21	Q	.	.	.	.
8.89	0.1196	0.21	Q	.	.	.	.
9.01	0.1215	0.21	Q	.	.	.	.
9.12	0.1235	0.21	Q	.	.	.	.
9.23	0.1255	0.21	Q	.	.	.	.
9.35	0.1275	0.21	Q	.	.	.	.
9.46	0.1296	0.22	Q	.	.	.	.
9.58	0.1316	0.22	Q	.	.	.	.
9.69	0.1337	0.22	Q	.	.	.	.
9.81	0.1358	0.22	Q	.	.	.	.
9.92	0.1379	0.22	Q	.	.	.	.
10.04	0.1401	0.23	Q	.	.	.	.
10.15	0.1422	0.23	Q	.	.	.	.
10.27	0.1444	0.23	Q	.	.	.	.
10.38	0.1466	0.23	Q	.	.	.	.
10.50	0.1488	0.24	Q	.	.	.	.
10.61	0.1511	0.24	Q	.	.	.	.
10.73	0.1534	0.24	Q	.	.	.	.
10.84	0.1557	0.24	Q	.	.	.	.
10.95	0.1580	0.25	Q	.	.	.	.
11.07	0.1604	0.25	.Q	.	.	.	.
11.18	0.1627	0.25	.Q	.	.	.	.
11.30	0.1652	0.26	.Q	.	.	.	.
11.41	0.1676	0.26	.Q	.	.	.	.
11.53	0.1701	0.26	.Q	.	.	.	.
11.64	0.1726	0.27	.Q	.	.	.	.
11.76	0.1752	0.27	.Q	.	.	.	.
11.87	0.1777	0.27	.Q	.	.	.	.
11.99	0.1804	0.28	.Q	.	.	.	.
12.10	0.1831	0.30	.Q	.	.	.	.
12.22	0.1861	0.33	.Q	.	.	.	.
12.33	0.1892	0.33	.Q	.	.	.	.
12.45	0.1924	0.34	.Q	.	.	.	.
12.56	0.1957	0.34	.Q	.	.	.	.
12.67	0.1990	0.35	.Q	.	.	.	.
12.79	0.2023	0.36	.Q	.	.	.	.
12.90	0.2057	0.36	.Q	.	.	.	.
13.02	0.2092	0.37	.Q	.	.	.	.
13.13	0.2127	0.38	.Q	.	.	.	.
13.25	0.2163	0.38	.Q	.	.	.	.
13.36	0.2200	0.39	.Q	.	.	.	.
13.48	0.2237	0.40	.Q	.	.	.	.
13.59	0.2275	0.41	.Q	.	.	.	.
13.71	0.2314	0.41	.Q	.	.	.	.
13.82	0.2353	0.43	.Q	.	.	.	.
13.94	0.2394	0.43	.Q	.	.	.	.

```
14.05      0.2436      0.45  .Q        .         .         .         .
14.17      0.2479      0.46  .Q        .         .         .         .
14.28      0.2523      0.48  .Q        .         .         .         .
14.39      0.2568      0.49  .Q        .         .         .         .
14.51      0.2615      0.51  . Q       .         .         .         .
14.62      0.2664      0.52  . Q       .         .         .         .
14.74      0.2714      0.54  . Q       .         .         .         .
14.85      0.2767      0.56  . Q       .         .         .         .
14.97      0.2821      0.59  . Q       .         .         .         .
15.08      0.2879      0.61  . Q       .         .         .         .
15.20      0.2939      0.66  . Q       .         .         .         .
15.31      0.3003      0.69  . Q       .         .         .         .
15.43      0.3076      0.83  .  Q      .         .         .         .
15.54      0.3158      0.90  .  Q      .         .         .         .
15.66      0.3250      1.03  .   Q     .         .         .         .
15.77      0.3350      1.08  .   Q     .         .         .         .
15.89      0.3465      1.35  .    Q    .         .         .         .
16.00      0.3611      1.74  .     Q   .         .         .         .
16.11      0.3878      3.91  .         .    Q    .         .         .
16.23      0.4118      1.14  .   Q     .         .         .         .
16.34      0.4217      0.96  .  Q      .         .         .         .
16.46      0.4297      0.73  . Q       .         .         .         .
16.57      0.4362      0.64  . Q       .         .         .         .
16.69      0.4420      0.58  . Q       .         .         .         .
16.80      0.4472      0.53  . Q       .         .         .         .
16.92      0.4521      0.50  .Q        .         .         .         .
17.03      0.4566      0.47  .Q        .         .         .         .
17.15      0.4609      0.44  .Q        .         .         .         .
17.26      0.4650      0.42  .Q        .         .         .         .
17.38      0.4689      0.40  .Q        .         .         .         .
17.49      0.4726      0.39  .Q        .         .         .         .
17.61      0.4762      0.37  .Q        .         .         .         .
17.72      0.4796      0.36  .Q        .         .         .         .
17.83      0.4830      0.35  .Q        .         .         .         .
17.95      0.4862      0.34  .Q        .         .         .         .
18.06      0.4894      0.33  .Q        .         .         .         .
18.18      0.4923      0.28  .Q        .         .         .         .
18.29      0.4949      0.27  .Q        .         .         .         .
18.41      0.4974      0.26  .Q        .         .         .         .
18.52      0.4998      0.26  .Q        .         .         .         .
18.64      0.5022      0.25  Q         .         .         .         .
18.75      0.5045      0.24  Q         .         .         .         .
18.87      0.5068      0.24  Q         .         .         .         .
18.98      0.5090      0.23  Q         .         .         .         .
19.10      0.5112      0.23  Q         .         .         .         .
19.21      0.5134      0.22  Q         .         .         .         .
19.33      0.5155      0.22  Q         .         .         .         .
19.44      0.5175      0.21  Q         .         .         .         .
19.55      0.5195      0.21  Q         .         .         .         .
19.67      0.5215      0.21  Q         .         .         .         .
```

19.78	0.5235	0.20	Q	.	.	.	.
19.90	0.5254	0.20	Q	.	.	.	.
20.01	0.5273	0.20	Q	.	.	.	.
20.13	0.5291	0.19	Q	.	.	.	.
20.24	0.5310	0.19	Q	.	.	.	.
20.36	0.5328	0.19	Q	.	.	.	.
20.47	0.5345	0.19	Q	.	.	.	.
20.59	0.5363	0.18	Q	.	.	.	.
20.70	0.5380	0.18	Q	.	.	.	.
20.82	0.5397	0.18	Q	.	.	.	.
20.93	0.5414	0.18	Q	.	.	.	.
21.05	0.5431	0.17	Q	.	.	.	.
21.16	0.5447	0.17	Q	.	.	.	.
21.27	0.5463	0.17	Q	.	.	.	.
21.39	0.5479	0.17	Q	.	.	.	.
21.50	0.5495	0.17	Q	.	.	.	.
21.62	0.5511	0.16	Q	.	.	.	.
21.73	0.5526	0.16	Q	.	.	.	.
21.85	0.5542	0.16	Q	.	.	.	.
21.96	0.5557	0.16	Q	.	.	.	.
22.08	0.5572	0.16	Q	.	.	.	.
22.19	0.5587	0.16	Q	.	.	.	.
22.31	0.5601	0.15	Q	.	.	.	.
22.42	0.5616	0.15	Q	.	.	.	.
22.54	0.5630	0.15	Q	.	.	.	.
22.65	0.5645	0.15	Q	.	.	.	.
22.77	0.5659	0.15	Q	.	.	.	.
22.88	0.5673	0.15	Q	.	.	.	.
22.99	0.5687	0.15	Q	.	.	.	.
23.11	0.5701	0.14	Q	.	.	.	.
23.22	0.5714	0.14	Q	.	.	.	.
23.34	0.5728	0.14	Q	.	.	.	.
23.45	0.5741	0.14	Q	.	.	.	.
23.57	0.5755	0.14	Q	.	.	.	.
23.68	0.5768	0.14	Q	.	.	.	.
23.80	0.5781	0.14	Q	.	.	.	.
23.91	0.5794	0.14	Q	.	.	.	.
24.03	0.5807	0.14	Q	.	.	.	.
24.14	0.5813	0.00	Q	.	.	.	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1444.8
10%	240.8

20%	61.9
30%	20.6
40%	13.8
50%	6.9
60%	6.9
70%	6.9
80%	6.9
90%	6.9

APPENDIX H

UNDERGROUND CHAMBER ANALYSIS, PONDPACK HYDROGRAPH RESULTS

Thrifty Rialto 2-Year

Project Summary	
Title	
Engineer	
Company	
Date	9/21/2021

Notes

Table of Contents

	User Notifications	2
	Master Network Summary	3
DA 1		
	Read Hydrograph	4
DA 2		
	Read Hydrograph	4
DA 3.1		
	Read Hydrograph	4
DA 3.2		
	Read Hydrograph	4
O-1		
	Addition Summary	10
O-2		
	Addition Summary	10
North (IN)		
	Time vs. Elevation	12
South (IN)		
	Time vs. Elevation	12
North		
	Time vs. Volume	18
South		
	Time vs. Volume	18
North		
	Elevation vs. Volume Curve	24
South		
	Elevation vs. Volume Curve	24
Composite Outlet Structure - 1		
	Outlet Input Data	28
	Individual Outlet Curves	30
	Composite Rating Curve	31
Composite Outlet Structure - 2		
	Outlet Input Data	28
	Individual Outlet Curves	30
	Composite Rating Curve	31

Table of Contents

North

Elevation-Volume-Flow Table (Pond) 36

North (INF)

Pond Infiltration Hydrograph 37

North (IN)

Detention Time 40

Level Pool Pond Routing Summary 41

North (OUT)

Pond Routed Hydrograph (total out) 42

North (IN)

Pond Inflow Summary 43

Outlet-1

Diverted Hydrograph 44

Outlet-2

Diverted Hydrograph 44

South

Elevation-Volume-Flow Table (Pond) 36

South (INF)

Pond Infiltration Hydrograph 37

South (IN)

Detention Time 40

Level Pool Pond Routing Summary 41

South (OUT)

Pond Routed Hydrograph (total out) 42

South (IN)

Pond Inflow Summary 43

Thrifty Rialto 2-Year

Subsection: User Notifications

User Notifications?	No user notifications generated.

Thrifty Rialto 2-Year

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)
DA 1	Post-Development 2 year	0	21,703.000	16.230	2.05
DA 2	Post-Development 2 year	0	3,131.000	16.140	0.38
DA 3.1	Post-Development 2 year	0	11,412.000	16.200	1.10
DA 3.2	Post-Development 2 year	0	10,045.000	16.140	1.30

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)
O-1	Post-Development 2 year	0	0.000	0.000	0.00
O-2	Post-Development 2 year	0	0.000	0.000	0.00

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft³)
North (IN)	Post-Development 2 year	0	21,624.000	16.200	1.98	(N/A)	(N/A)
North (OUT)	Post-Development 2 year	0	0.000	0.000	0.00	1,622.21	2,547.000
South (IN)	Post-Development 2 year	0	24,540.000	16.150	2.66	(N/A)	(N/A)
South (OUT)	Post-Development 2 year	0	0.000	0.000	0.00	1,619.46	3,237.000

Thrifty Rialto 2-Year

Subsection: Read Hydrograph
Scenario: Post-Development 2 year
Label: DA 1

Peak Discharge	2.05 ft³/s
Time to Peak	16.230 hours
Hydrograph Volume	21,702.937 ft³

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.170 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.080	0.00	0.11	0.12	0.12	0.12
0.930	0.12	0.12	0.12	0.12	0.12
1.780	0.12	0.12	0.12	0.12	0.12
2.630	0.13	0.13	0.13	0.13	0.13
3.480	0.13	0.13	0.13	0.13	0.13
4.330	0.13	0.14	0.14	0.14	0.14
5.180	0.14	0.14	0.14	0.14	0.14
6.030	0.15	0.15	0.15	0.15	0.15
6.880	0.15	0.16	0.16	0.16	0.16
7.730	0.16	0.16	0.17	0.17	0.17
8.580	0.17	0.17	0.17	0.18	0.18
9.430	0.18	0.18	0.19	0.19	0.19
10.280	0.20	0.20	0.20	0.21	0.21
11.130	0.21	0.22	0.22	0.22	0.23
11.980	0.24	0.27	0.30	0.31	0.31
12.830	0.32	0.33	0.34	0.34	0.35
13.680	0.37	0.38	0.39	0.42	0.44
14.530	0.46	0.48	0.51	0.54	0.58
15.380	0.64	0.72	0.80	0.96	1.68
16.230	2.05	0.77	0.60	0.52	0.47
17.080	0.42	0.38	0.36	0.34	0.33
17.930	0.31	0.28	0.24	0.23	0.22
18.780	0.21	0.20	0.20	0.19	0.19
19.630	0.18	0.18	0.17	0.17	0.16
20.480	0.16	0.16	0.15	0.15	0.15
21.330	0.15	0.14	0.14	0.14	0.14
22.180	0.13	0.13	0.13	0.13	0.12
23.030	0.12	0.12	0.12	0.12	0.12
23.880	0.12	0.11	0.05	(N/A)	(N/A)

Thrifty Rialto 2-Year

Subsection: Read Hydrograph
Scenario: Post-Development 2 year
Label: DA 2

Peak Discharge	0.38 ft³/s
Time to Peak	16.140 hours
Hydrograph Volume	3,130.704 ft³

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.110 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.080	0.02	0.02	0.02	0.02	0.02
0.630	0.02	0.02	0.02	0.02	0.02
1.180	0.02	0.02	0.02	0.02	0.02
1.730	0.02	0.02	0.02	0.02	0.02
2.280	0.02	0.02	0.02	0.02	0.02
2.830	0.02	0.02	0.02	0.02	0.02
3.380	0.02	0.02	0.02	0.02	0.02
3.930	0.02	0.02	0.02	0.02	0.02
4.480	0.02	0.02	0.02	0.02	0.02
5.030	0.02	0.02	0.02	0.02	0.02
5.580	0.02	0.02	0.02	0.02	0.02
6.130	0.02	0.02	0.02	0.02	0.02
6.680	0.02	0.02	0.02	0.02	0.02
7.230	0.02	0.02	0.02	0.02	0.02
7.780	0.02	0.02	0.02	0.02	0.02
8.330	0.02	0.02	0.02	0.02	0.02
8.880	0.03	0.03	0.03	0.03	0.03
9.430	0.03	0.03	0.03	0.03	0.03
9.980	0.03	0.03	0.03	0.03	0.03
10.530	0.03	0.03	0.03	0.03	0.03
11.080	0.03	0.03	0.03	0.03	0.03
11.630	0.03	0.03	0.03	0.03	0.04
12.180	0.04	0.04	0.04	0.04	0.04
12.730	0.05	0.05	0.05	0.05	0.05
13.280	0.05	0.05	0.05	0.05	0.05
13.830	0.05	0.06	0.06	0.06	0.06
14.380	0.06	0.07	0.07	0.07	0.07
14.930	0.07	0.08	0.08	0.09	0.09
15.480	0.10	0.11	0.12	0.13	0.17
16.030	0.29	0.38	0.12	0.11	0.09
16.580	0.08	0.08	0.07	0.06	0.06
17.130	0.06	0.05	0.05	0.05	0.05
17.680	0.05	0.05	0.04	0.04	0.03
18.230	0.03	0.03	0.03	0.03	0.03
18.780	0.03	0.03	0.03	0.03	0.03
19.330	0.03	0.03	0.03	0.03	0.03
19.880	0.02	0.02	0.02	0.02	0.02

Thrifty Rialto 2-Year

Subsection: Read Hydrograph
Scenario: Post-Development 2 year
Label: DA 2

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.110 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
20.430	0.02	0.02	0.02	0.02	0.02
20.980	0.02	0.02	0.02	0.02	0.02
21.530	0.02	0.02	0.02	0.02	0.02
22.080	0.02	0.02	0.02	0.02	0.02
22.630	0.02	0.02	0.02	0.02	0.02
23.180	0.02	0.02	0.02	0.02	0.02
23.730	0.02	0.02	0.02	0.02	0.00

Thrifty Rialto 2-Year

Subsection: Read Hydrograph
Scenario: Post-Development 2 year
Label: DA 3.1

Peak Discharge	1.10 ft³/s
Time to Peak	16.200 hours
Hydrograph Volume	11,412.240 ft³

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.140 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.100	0.06	0.06	0.06	0.06	0.06
0.800	0.06	0.06	0.06	0.06	0.06
1.500	0.06	0.06	0.06	0.06	0.06
2.200	0.07	0.07	0.07	0.07	0.07
2.900	0.07	0.07	0.07	0.07	0.07
3.600	0.07	0.07	0.07	0.07	0.07
4.300	0.07	0.07	0.07	0.07	0.07
5.000	0.07	0.07	0.07	0.07	0.08
5.700	0.08	0.08	0.08	0.08	0.08
6.400	0.08	0.08	0.08	0.08	0.08
7.100	0.08	0.08	0.08	0.08	0.08
7.800	0.09	0.09	0.09	0.09	0.09
8.500	0.09	0.09	0.09	0.09	0.09
9.200	0.09	0.10	0.10	0.10	0.10
9.900	0.10	0.10	0.10	0.10	0.11
10.600	0.11	0.11	0.11	0.11	0.11
11.300	0.11	0.12	0.12	0.12	0.12
12.000	0.13	0.15	0.16	0.16	0.16
12.700	0.17	0.17	0.17	0.18	0.18
13.400	0.18	0.19	0.19	0.20	0.20
14.100	0.22	0.23	0.24	0.24	0.25
14.800	0.26	0.27	0.29	0.31	0.33
15.500	0.37	0.42	0.46	0.55	1.03
16.200	1.10	0.42	0.35	0.30	0.26
16.900	0.25	0.23	0.21	0.20	0.19
17.600	0.18	0.17	0.16	0.16	0.13
18.300	0.12	0.12	0.11	0.11	0.11
19.000	0.10	0.10	0.10	0.10	0.09
19.700	0.09	0.09	0.09	0.09	0.09
20.400	0.09	0.08	0.08	0.08	0.08
21.100	0.08	0.08	0.08	0.07	0.07
21.800	0.07	0.07	0.07	0.07	0.07
22.500	0.07	0.07	0.07	0.07	0.06
23.200	0.06	0.06	0.06	0.06	0.06
23.900	0.06	0.06	0.02	(N/A)	(N/A)

Thrifty Rialto 2-Year

Subsection: Read Hydrograph
Scenario: Post-Development 2 year
Label: DA 3.2

Peak Discharge	1.30 ft³/s
Time to Peak	16.140 hours
Hydrograph Volume	10,045.468 ft³

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.120 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.060	0.05	0.05	0.05	0.05	0.05
0.660	0.05	0.05	0.05	0.05	0.05
1.260	0.06	0.06	0.06	0.06	0.06
1.860	0.06	0.06	0.06	0.06	0.06
2.460	0.06	0.06	0.06	0.06	0.06
3.060	0.06	0.06	0.06	0.06	0.06
3.660	0.06	0.06	0.06	0.06	0.06
4.260	0.06	0.06	0.06	0.06	0.06
4.860	0.06	0.06	0.06	0.07	0.07
5.460	0.07	0.07	0.07	0.07	0.07
6.060	0.07	0.07	0.07	0.07	0.07
6.660	0.07	0.07	0.07	0.07	0.07
7.260	0.07	0.07	0.07	0.07	0.07
7.860	0.08	0.08	0.08	0.08	0.08
8.460	0.08	0.08	0.08	0.08	0.08
9.060	0.08	0.08	0.08	0.08	0.09
9.660	0.09	0.09	0.09	0.09	0.09
10.260	0.09	0.09	0.09	0.09	0.10
10.860	0.10	0.10	0.10	0.10	0.10
11.460	0.10	0.11	0.11	0.11	0.11
12.060	0.12	0.13	0.14	0.14	0.14
12.660	0.15	0.15	0.15	0.15	0.15
13.260	0.16	0.16	0.16	0.17	0.17
13.860	0.17	0.18	0.19	0.20	0.20
14.460	0.21	0.21	0.22	0.23	0.24
15.060	0.25	0.27	0.28	0.31	0.34
15.660	0.38	0.41	0.49	0.76	1.30
16.260	0.39	0.34	0.29	0.26	0.24
16.860	0.22	0.21	0.19	0.18	0.17
17.460	0.16	0.16	0.15	0.15	0.14
18.060	0.14	0.11	0.11	0.10	0.10
18.660	0.10	0.10	0.09	0.09	0.09
19.260	0.09	0.09	0.08	0.08	0.08
19.860	0.08	0.08	0.08	0.08	0.07
20.460	0.07	0.07	0.07	0.07	0.07
21.060	0.07	0.07	0.07	0.07	0.07
21.660	0.06	0.06	0.06	0.06	0.06

Thrifty Rialto 2-Year

Subsection: Read Hydrograph
Scenario: Post-Development 2 year
Label: DA 3.2

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.120 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
22.260	0.06	0.06	0.06	0.06	0.06
22.860	0.06	0.06	0.06	0.06	0.06
23.460	0.06	0.05	0.05	0.05	0.05
24.060	0.04	0.00	(N/A)	(N/A)	(N/A)

Summary for Hydrograph Addition at 'O-1'

Upstream Link	Upstream Node
Outlet-1	North

Node Inflows

Inflow Type	Element	Volume (ft^3)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	Outlet-1	0.000	0.000	0.00
Flow (In)	O-1	0.000	0.000	0.00

Thrifty Rialto 2-Year

Subsection: Addition Summary
Scenario: Post-Development 2 year
Label: O-2

Summary for Hydrograph Addition at 'O-2'

Upstream Link	Upstream Node
Outlet-2	South

Node Inflows

Inflow Type	Element	Volume (ft^3)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	Outlet-2	0.000	0.000	0.00
Flow (In)	O-2	0.000	0.000	0.00

Thrifty Rialto 2-Year

Subsection: Time vs. Elevation
Scenario: Post-Development 2 year
Label: North (IN)

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	1,621.00	1,621.00	1,621.00	1,621.00	1,621.01
0.250	1,621.02	1,621.03	1,621.04	1,621.05	1,621.06
0.500	1,621.06	1,621.07	1,621.07	1,621.08	1,621.08
0.750	1,621.08	1,621.08	1,621.09	1,621.09	1,621.09
1.000	1,621.09	1,621.09	1,621.09	1,621.09	1,621.09
1.250	1,621.09	1,621.09	1,621.09	1,621.09	1,621.09
1.500	1,621.09	1,621.09	1,621.09	1,621.09	1,621.09
1.750	1,621.09	1,621.09	1,621.09	1,621.09	1,621.10
2.000	1,621.10	1,621.10	1,621.10	1,621.10	1,621.10
2.250	1,621.10	1,621.10	1,621.10	1,621.10	1,621.10
2.500	1,621.10	1,621.10	1,621.10	1,621.10	1,621.10
2.750	1,621.10	1,621.10	1,621.10	1,621.10	1,621.10
3.000	1,621.10	1,621.10	1,621.10	1,621.10	1,621.10
3.250	1,621.10	1,621.10	1,621.10	1,621.10	1,621.10
3.500	1,621.10	1,621.10	1,621.10	1,621.10	1,621.10
3.750	1,621.10	1,621.10	1,621.10	1,621.10	1,621.10
4.000	1,621.10	1,621.10	1,621.10	1,621.10	1,621.10
4.250	1,621.10	1,621.10	1,621.10	1,621.10	1,621.10
4.500	1,621.11	1,621.11	1,621.11	1,621.11	1,621.11
4.750	1,621.11	1,621.11	1,621.11	1,621.11	1,621.11
5.000	1,621.11	1,621.11	1,621.11	1,621.11	1,621.11
5.250	1,621.11	1,621.11	1,621.11	1,621.11	1,621.11
5.500	1,621.11	1,621.11	1,621.11	1,621.11	1,621.11
5.750	1,621.11	1,621.11	1,621.11	1,621.11	1,621.11
6.000	1,621.11	1,621.11	1,621.11	1,621.12	1,621.12
6.250	1,621.12	1,621.12	1,621.12	1,621.12	1,621.12
6.500	1,621.12	1,621.12	1,621.12	1,621.12	1,621.12
6.750	1,621.12	1,621.12	1,621.12	1,621.12	1,621.12
7.000	1,621.12	1,621.12	1,621.12	1,621.12	1,621.12
7.250	1,621.12	1,621.12	1,621.13	1,621.13	1,621.13
7.500	1,621.13	1,621.13	1,621.13	1,621.13	1,621.13
7.750	1,621.13	1,621.13	1,621.13	1,621.13	1,621.13
8.000	1,621.13	1,621.13	1,621.13	1,621.13	1,621.13
8.250	1,621.13	1,621.13	1,621.13	1,621.13	1,621.13
8.500	1,621.13	1,621.13	1,621.13	1,621.13	1,621.13
8.750	1,621.13	1,621.13	1,621.13	1,621.13	1,621.14
9.000	1,621.14	1,621.14	1,621.14	1,621.14	1,621.14
9.250	1,621.14	1,621.14	1,621.14	1,621.14	1,621.14
9.500	1,621.14	1,621.14	1,621.14	1,621.14	1,621.14
9.750	1,621.14	1,621.15	1,621.15	1,621.15	1,621.15
10.000	1,621.15	1,621.15	1,621.15	1,621.15	1,621.15

Thrifty Rialto 2-Year

Subsection: Time vs. Elevation
Scenario: Post-Development 2 year
Label: North (IN)

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
10.250	1,621.15	1,621.15	1,621.15	1,621.15	1,621.16
10.500	1,621.16	1,621.16	1,621.16	1,621.16	1,621.16
10.750	1,621.16	1,621.16	1,621.16	1,621.16	1,621.16
11.000	1,621.16	1,621.16	1,621.16	1,621.17	1,621.17
11.250	1,621.17	1,621.17	1,621.17	1,621.17	1,621.17
11.500	1,621.17	1,621.17	1,621.17	1,621.17	1,621.17
11.750	1,621.17	1,621.18	1,621.18	1,621.18	1,621.18
12.000	1,621.18	1,621.18	1,621.19	1,621.19	1,621.19
12.250	1,621.20	1,621.21	1,621.21	1,621.22	1,621.22
12.500	1,621.22	1,621.23	1,621.23	1,621.23	1,621.24
12.750	1,621.24	1,621.24	1,621.24	1,621.25	1,621.25
13.000	1,621.25	1,621.25	1,621.26	1,621.26	1,621.26
13.250	1,621.26	1,621.26	1,621.26	1,621.27	1,621.27
13.500	1,621.27	1,621.27	1,621.27	1,621.28	1,621.28
13.750	1,621.28	1,621.28	1,621.29	1,621.29	1,621.29
14.000	1,621.29	1,621.30	1,621.30	1,621.30	1,621.31
14.250	1,621.31	1,621.32	1,621.32	1,621.33	1,621.33
14.500	1,621.34	1,621.34	1,621.35	1,621.35	1,621.36
14.750	1,621.36	1,621.36	1,621.37	1,621.38	1,621.38
15.000	1,621.39	1,621.39	1,621.40	1,621.41	1,621.41
15.250	1,621.42	1,621.43	1,621.44	1,621.45	1,621.46
15.500	1,621.48	1,621.49	1,621.50	1,621.51	1,621.52
15.750	1,621.53	1,621.55	1,621.56	1,621.59	1,621.62
16.000	1,621.66	1,621.72	1,621.80	1,621.88	1,621.96
16.250	1,622.05	1,622.12	1,622.17	1,622.19	1,622.20
16.500	1,622.21	1,622.21	1,622.21	1,622.20	1,622.20
16.750	1,622.19	1,622.18	1,622.17	1,622.16	1,622.15
17.000	1,622.14	1,622.13	1,622.11	1,622.10	1,622.08
17.250	1,622.06	1,622.05	1,622.03	1,622.01	1,621.99
17.500	1,621.98	1,621.96	1,621.94	1,621.92	1,621.90
17.750	1,621.88	1,621.86	1,621.84	1,621.82	1,621.80
18.000	1,621.77	1,621.75	1,621.73	1,621.70	1,621.68
18.250	1,621.65	1,621.63	1,621.60	1,621.57	1,621.55
18.500	1,621.52	1,621.49	1,621.44	1,621.39	1,621.36
18.750	1,621.33	1,621.30	1,621.28	1,621.26	1,621.24
19.000	1,621.23	1,621.22	1,621.21	1,621.20	1,621.19
19.250	1,621.19	1,621.18	1,621.18	1,621.17	1,621.17
19.500	1,621.16	1,621.16	1,621.16	1,621.16	1,621.15
19.750	1,621.15	1,621.15	1,621.15	1,621.15	1,621.14
20.000	1,621.14	1,621.14	1,621.14	1,621.14	1,621.14
20.250	1,621.14	1,621.13	1,621.13	1,621.13	1,621.13

Thrifty Rialto 2-Year

Subsection: Time vs. Elevation
Scenario: Post-Development 2 year
Label: North (IN)

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
20.500	1,621.13	1,621.13	1,621.13	1,621.13	1,621.13
20.750	1,621.13	1,621.13	1,621.12	1,621.12	1,621.12
21.000	1,621.12	1,621.12	1,621.12	1,621.12	1,621.12
21.250	1,621.12	1,621.12	1,621.12	1,621.12	1,621.12
21.500	1,621.12	1,621.12	1,621.11	1,621.11	1,621.11
21.750	1,621.11	1,621.11	1,621.11	1,621.11	1,621.11
22.000	1,621.11	1,621.11	1,621.11	1,621.11	1,621.11
22.250	1,621.11	1,621.11	1,621.11	1,621.11	1,621.11
22.500	1,621.10	1,621.10	1,621.10	1,621.10	1,621.10
22.750	1,621.10	1,621.10	1,621.10	1,621.10	1,621.10
23.000	1,621.10	1,621.10	1,621.10	1,621.10	1,621.10
23.250	1,621.10	1,621.10	1,621.10	1,621.10	1,621.10
23.500	1,621.10	1,621.10	1,621.10	1,621.10	1,621.10
23.750	1,621.10	1,621.10	1,621.10	1,621.10	1,621.10
24.000	1,621.09	(N/A)	(N/A)	(N/A)	(N/A)

Thrifty Rialto 2-Year

Subsection: Time vs. Elevation
Scenario: Post-Development 2 year
Label: South (IN)

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	1,618.00	1,618.00	1,618.01	1,618.02	1,618.04
0.250	1,618.05	1,618.06	1,618.06	1,618.07	1,618.08
0.500	1,618.08	1,618.08	1,618.09	1,618.09	1,618.09
0.750	1,618.09	1,618.09	1,618.10	1,618.10	1,618.10
1.000	1,618.10	1,618.10	1,618.10	1,618.10	1,618.10
1.250	1,618.10	1,618.10	1,618.10	1,618.11	1,618.11
1.500	1,618.11	1,618.11	1,618.11	1,618.11	1,618.11
1.750	1,618.11	1,618.11	1,618.11	1,618.11	1,618.11
2.000	1,618.11	1,618.11	1,618.11	1,618.11	1,618.11
2.250	1,618.11	1,618.11	1,618.11	1,618.11	1,618.12
2.500	1,618.12	1,618.12	1,618.12	1,618.12	1,618.12
2.750	1,618.12	1,618.12	1,618.12	1,618.12	1,618.12
3.000	1,618.12	1,618.12	1,618.12	1,618.12	1,618.12
3.250	1,618.12	1,618.12	1,618.12	1,618.12	1,618.12
3.500	1,618.12	1,618.12	1,618.12	1,618.12	1,618.12
3.750	1,618.12	1,618.12	1,618.12	1,618.12	1,618.12
4.000	1,618.12	1,618.12	1,618.12	1,618.12	1,618.12
4.250	1,618.12	1,618.12	1,618.12	1,618.12	1,618.12
4.500	1,618.12	1,618.12	1,618.12	1,618.12	1,618.12
4.750	1,618.12	1,618.12	1,618.12	1,618.12	1,618.12
5.000	1,618.12	1,618.12	1,618.12	1,618.12	1,618.12
5.250	1,618.12	1,618.12	1,618.12	1,618.12	1,618.12
5.500	1,618.13	1,618.13	1,618.13	1,618.13	1,618.13
5.750	1,618.13	1,618.13	1,618.13	1,618.13	1,618.13
6.000	1,618.13	1,618.13	1,618.13	1,618.13	1,618.13
6.250	1,618.13	1,618.13	1,618.13	1,618.13	1,618.13
6.500	1,618.13	1,618.13	1,618.13	1,618.13	1,618.13
6.750	1,618.13	1,618.13	1,618.13	1,618.13	1,618.13
7.000	1,618.13	1,618.13	1,618.13	1,618.13	1,618.13
7.250	1,618.13	1,618.13	1,618.13	1,618.13	1,618.13
7.500	1,618.13	1,618.14	1,618.14	1,618.14	1,618.14
7.750	1,618.14	1,618.14	1,618.14	1,618.14	1,618.14
8.000	1,618.14	1,618.15	1,618.15	1,618.15	1,618.15
8.250	1,618.15	1,618.15	1,618.15	1,618.15	1,618.15
8.500	1,618.15	1,618.15	1,618.15	1,618.15	1,618.15
8.750	1,618.15	1,618.15	1,618.15	1,618.15	1,618.15
9.000	1,618.15	1,618.15	1,618.16	1,618.16	1,618.16
9.250	1,618.16	1,618.16	1,618.16	1,618.16	1,618.16
9.500	1,618.16	1,618.16	1,618.17	1,618.17	1,618.17
9.750	1,618.17	1,618.17	1,618.17	1,618.17	1,618.17
10.000	1,618.17	1,618.17	1,618.17	1,618.17	1,618.17

Thrifty Rialto 2-Year

Subsection: Time vs. Elevation
Scenario: Post-Development 2 year
Label: South (IN)

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
10.250	1,618.17	1,618.17	1,618.17	1,618.17	1,618.18
10.500	1,618.18	1,618.18	1,618.18	1,618.18	1,618.18
10.750	1,618.18	1,618.18	1,618.18	1,618.18	1,618.19
11.000	1,618.19	1,618.19	1,618.19	1,618.19	1,618.19
11.250	1,618.19	1,618.19	1,618.19	1,618.19	1,618.19
11.500	1,618.19	1,618.19	1,618.20	1,618.20	1,618.20
11.750	1,618.20	1,618.20	1,618.20	1,618.20	1,618.20
12.000	1,618.21	1,618.21	1,618.21	1,618.22	1,618.22
12.250	1,618.23	1,618.24	1,618.24	1,618.25	1,618.25
12.500	1,618.25	1,618.26	1,618.26	1,618.26	1,618.27
12.750	1,618.27	1,618.27	1,618.28	1,618.28	1,618.28
13.000	1,618.28	1,618.29	1,618.29	1,618.29	1,618.29
13.250	1,618.30	1,618.30	1,618.30	1,618.30	1,618.30
13.500	1,618.31	1,618.31	1,618.31	1,618.31	1,618.31
13.750	1,618.32	1,618.32	1,618.32	1,618.32	1,618.33
14.000	1,618.33	1,618.34	1,618.34	1,618.35	1,618.35
14.250	1,618.36	1,618.36	1,618.37	1,618.37	1,618.38
14.500	1,618.38	1,618.39	1,618.39	1,618.40	1,618.40
14.750	1,618.41	1,618.42	1,618.42	1,618.43	1,618.43
15.000	1,618.44	1,618.45	1,618.45	1,618.46	1,618.47
15.250	1,618.48	1,618.49	1,618.50	1,618.51	1,618.52
15.500	1,618.53	1,618.54	1,618.55	1,618.57	1,618.59
15.750	1,618.61	1,618.64	1,618.67	1,618.70	1,618.75
16.000	1,618.81	1,618.90	1,619.02	1,619.15	1,619.27
16.250	1,619.35	1,619.40	1,619.42	1,619.44	1,619.45
16.500	1,619.46	1,619.46	1,619.46	1,619.46	1,619.46
16.750	1,619.46	1,619.46	1,619.45	1,619.44	1,619.44
17.000	1,619.43	1,619.42	1,619.41	1,619.40	1,619.38
17.250	1,619.37	1,619.36	1,619.34	1,619.33	1,619.31
17.500	1,619.30	1,619.28	1,619.26	1,619.25	1,619.23
17.750	1,619.21	1,619.20	1,619.18	1,619.16	1,619.14
18.000	1,619.12	1,619.10	1,619.08	1,619.05	1,619.03
18.250	1,619.01	1,618.98	1,618.96	1,618.93	1,618.91
18.500	1,618.88	1,618.86	1,618.83	1,618.81	1,618.78
18.750	1,618.75	1,618.73	1,618.70	1,618.68	1,618.65
19.000	1,618.62	1,618.60	1,618.57	1,618.54	1,618.51
19.250	1,618.48	1,618.43	1,618.39	1,618.35	1,618.32
19.500	1,618.30	1,618.28	1,618.26	1,618.24	1,618.23
19.750	1,618.22	1,618.21	1,618.20	1,618.19	1,618.18
20.000	1,618.18	1,618.17	1,618.17	1,618.17	1,618.16
20.250	1,618.16	1,618.16	1,618.16	1,618.16	1,618.15

Thrifty Rialto 2-Year

Subsection: Time vs. Elevation
Scenario: Post-Development 2 year
Label: South (IN)

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
20.500	1,618.15	1,618.15	1,618.15	1,618.14	1,618.14
20.750	1,618.14	1,618.14	1,618.14	1,618.14	1,618.14
21.000	1,618.14	1,618.14	1,618.14	1,618.14	1,618.14
21.250	1,618.14	1,618.14	1,618.14	1,618.14	1,618.13
21.500	1,618.13	1,618.13	1,618.13	1,618.13	1,618.13
21.750	1,618.13	1,618.12	1,618.12	1,618.12	1,618.12
22.000	1,618.12	1,618.12	1,618.12	1,618.12	1,618.12
22.250	1,618.12	1,618.12	1,618.12	1,618.12	1,618.12
22.500	1,618.12	1,618.12	1,618.12	1,618.12	1,618.12
22.750	1,618.12	1,618.12	1,618.12	1,618.12	1,618.12
23.000	1,618.12	1,618.12	1,618.12	1,618.12	1,618.12
23.250	1,618.11	1,618.11	1,618.11	1,618.11	1,618.11
23.500	1,618.11	1,618.11	1,618.11	1,618.11	1,618.11
23.750	1,618.11	1,618.11	1,618.11	1,618.11	1,618.10
24.000	1,618.10	(N/A)	(N/A)	(N/A)	(N/A)

Thrifty Rialto 2-Year

Subsection: Time vs. Volume
Scenario: Post-Development 2 year
Label: North

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
0.000	0.000	0.000	1.000	6.000	16.000
0.250	29.000	44.000	57.000	68.000	77.000
0.500	86.000	93.000	98.000	103.000	107.000
0.750	111.000	113.000	115.000	117.000	119.000
1.000	120.000	121.000	122.000	123.000	123.000
1.250	124.000	124.000	125.000	125.000	125.000
1.500	126.000	126.000	126.000	126.000	126.000
1.750	126.000	126.000	126.000	126.000	126.000
2.000	126.000	127.000	127.000	127.000	127.000
2.250	127.000	127.000	127.000	127.000	127.000
2.500	127.000	128.000	129.000	130.000	131.000
2.750	132.000	132.000	133.000	133.000	134.000
3.000	134.000	135.000	135.000	135.000	135.000
3.250	135.000	136.000	136.000	136.000	136.000
3.500	136.000	136.000	136.000	136.000	136.000
3.750	136.000	136.000	136.000	136.000	136.000
4.000	136.000	136.000	136.000	136.000	136.000
4.250	136.000	136.000	136.000	137.000	138.000
4.500	139.000	140.000	141.000	142.000	142.000
4.750	143.000	143.000	144.000	144.000	144.000
5.000	145.000	145.000	145.000	145.000	145.000
5.250	145.000	145.000	145.000	146.000	146.000
5.500	146.000	146.000	146.000	146.000	146.000
5.750	146.000	146.000	146.000	146.000	147.000
6.000	148.000	149.000	150.000	151.000	152.000
6.250	152.000	153.000	153.000	153.000	154.000
6.500	154.000	154.000	154.000	155.000	155.000
6.750	155.000	155.000	155.000	155.000	156.000
7.000	157.000	158.000	159.000	160.000	161.000
7.250	161.000	162.000	162.000	163.000	163.000
7.500	163.000	164.000	164.000	164.000	164.000
7.750	164.000	164.000	165.000	165.000	165.000
8.000	166.000	167.000	168.000	169.000	170.000
8.250	171.000	171.000	172.000	172.000	173.000
8.500	173.000	173.000	173.000	174.000	174.000
8.750	174.000	174.000	174.000	174.000	175.000
9.000	175.000	176.000	177.000	178.000	179.000
9.250	180.000	181.000	181.000	182.000	182.000
9.500	182.000	183.000	183.000	184.000	185.000
9.750	186.000	187.000	188.000	189.000	190.000
10.000	190.000	191.000	192.000	193.000	194.000

Thrifty Rialto 2-Year

Subsection: Time vs. Volume
Scenario: Post-Development 2 year
Label: North

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
10.250	195.000	196.000	197.000	198.000	199.000
10.500	200.000	200.000	201.000	202.000	203.000
10.750	204.000	205.000	206.000	207.000	208.000
11.000	209.000	210.000	210.000	211.000	212.000
11.250	213.000	214.000	216.000	217.000	218.000
11.500	219.000	219.000	220.000	221.000	222.000
11.750	223.000	225.000	226.000	228.000	230.000
12.000	232.000	235.000	239.000	244.000	250.000
12.250	257.000	264.000	272.000	279.000	285.000
12.500	290.000	295.000	299.000	303.000	306.000
12.750	310.000	313.000	316.000	319.000	323.000
13.000	326.000	329.000	332.000	335.000	338.000
13.250	340.000	342.000	344.000	346.000	349.000
13.500	351.000	354.000	356.000	359.000	363.000
13.750	366.000	370.000	373.000	377.000	381.000
14.000	385.000	389.000	393.000	399.000	405.000
14.250	412.000	418.000	424.000	430.000	435.000
14.500	441.000	447.000	453.000	458.000	464.000
14.750	469.000	475.000	481.000	488.000	494.000
15.000	502.000	509.000	517.000	525.000	535.000
15.250	545.000	557.000	570.000	583.000	599.000
15.500	616.000	635.000	656.000	680.000	708.000
15.750	742.000	783.000	834.000	894.000	974.000
16.000	1,090.000	1,258.000	1,459.000	1,668.000	1,896.000
16.250	2,141.000	2,331.000	2,449.000	2,510.000	2,531.000
16.500	2,544.000	2,547.000	2,543.000	2,533.000	2,518.000
16.750	2,499.000	2,476.000	2,451.000	2,424.000	2,396.000
17.000	2,366.000	2,334.000	2,300.000	2,263.000	2,225.000
17.250	2,180.000	2,133.000	2,084.000	2,035.000	1,984.000
17.500	1,933.000	1,881.000	1,828.000	1,775.000	1,726.000
17.750	1,676.000	1,625.000	1,574.000	1,518.000	1,458.000
18.000	1,397.000	1,333.000	1,268.000	1,200.000	1,130.000
18.250	1,063.000	997.000	930.000	861.000	785.000
18.500	708.000	632.000	564.000	510.000	467.000
18.750	429.000	394.000	364.000	338.000	316.000
19.000	298.000	282.000	269.000	257.000	247.000
19.250	238.000	231.000	224.000	219.000	214.000
19.500	210.000	206.000	203.000	200.000	197.000
19.750	195.000	192.000	190.000	188.000	186.000
20.000	184.000	183.000	181.000	179.000	177.000
20.250	176.000	174.000	173.000	172.000	170.000

Thrifty Rialto 2-Year

Subsection: Time vs. Volume
Scenario: Post-Development 2 year
Label: North

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
20.500	170.000	169.000	168.000	167.000	165.000
20.750	164.000	163.000	162.000	161.000	160.000
21.000	159.000	159.000	158.000	158.000	157.000
21.250	157.000	156.000	155.000	154.000	153.000
21.500	152.000	151.000	150.000	150.000	149.000
21.750	148.000	148.000	148.000	147.000	147.000
22.000	146.000	145.000	144.000	143.000	142.000
22.250	141.000	140.000	140.000	139.000	139.000
22.500	138.000	138.000	138.000	137.000	137.000
22.750	137.000	136.000	136.000	135.000	134.000
23.000	133.000	132.000	131.000	131.000	130.000
23.250	129.000	129.000	129.000	128.000	128.000
23.500	128.000	128.000	127.000	127.000	127.000
23.750	127.000	127.000	127.000	127.000	127.000
24.000	126.000	(N/A)	(N/A)	(N/A)	(N/A)

Thrifty Rialto 2-Year

Subsection: Time vs. Volume
Scenario: Post-Development 2 year
Label: South

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
0.000	0.000	0.000	11.000	32.000	49.000
0.250	64.000	76.000	86.000	95.000	102.000
0.500	108.000	112.000	116.000	119.000	122.000
0.750	124.000	126.000	128.000	129.000	130.000
1.000	131.000	132.000	132.000	133.000	134.000
1.250	135.000	137.000	138.000	139.000	140.000
1.500	141.000	142.000	142.000	143.000	143.000
1.750	144.000	144.000	144.000	144.000	145.000
2.000	145.000	145.000	145.000	145.000	146.000
2.250	147.000	148.000	149.000	150.000	151.000
2.500	151.000	152.000	152.000	153.000	153.000
2.750	153.000	154.000	154.000	154.000	154.000
3.000	154.000	154.000	155.000	155.000	155.000
3.250	155.000	155.000	155.000	155.000	155.000
3.500	155.000	155.000	155.000	155.000	155.000
3.750	155.000	155.000	155.000	155.000	155.000
4.000	155.000	155.000	155.000	155.000	155.000
4.250	155.000	155.000	155.000	155.000	155.000
4.500	155.000	155.000	155.000	155.000	155.000
4.750	155.000	155.000	155.000	155.000	155.000
5.000	155.000	155.000	156.000	156.000	157.000
5.250	158.000	159.000	160.000	161.000	162.000
5.500	163.000	164.000	165.000	166.000	167.000
5.750	168.000	169.000	170.000	171.000	171.000
6.000	172.000	172.000	172.000	173.000	173.000
6.250	173.000	173.000	173.000	173.000	174.000
6.500	174.000	174.000	174.000	174.000	174.000
6.750	174.000	174.000	174.000	174.000	174.000
7.000	174.000	174.000	174.000	174.000	174.000
7.250	174.000	174.000	174.000	174.000	174.000
7.500	174.000	174.000	174.000	175.000	175.000
7.750	176.000	178.000	180.000	182.000	184.000
8.000	185.000	186.000	187.000	188.000	189.000
8.250	190.000	190.000	191.000	191.000	191.000
8.500	192.000	192.000	192.000	192.000	192.000
8.750	193.000	193.000	194.000	195.000	196.000
9.000	197.000	198.000	199.000	199.000	200.000
9.250	201.000	202.000	203.000	204.000	206.000
9.500	207.000	209.000	211.000	213.000	214.000
9.750	215.000	217.000	217.000	218.000	219.000
10.000	219.000	220.000	220.000	221.000	221.000

Thrifty Rialto 2-Year

Subsection: Time vs. Volume
Scenario: Post-Development 2 year
Label: South

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
10.250	221.000	221.000	222.000	222.000	223.000
10.500	224.000	225.000	226.000	228.000	229.000
10.750	231.000	233.000	234.000	236.000	237.000
11.000	238.000	239.000	240.000	240.000	241.000
11.250	242.000	243.000	244.000	245.000	247.000
11.500	248.000	250.000	252.000	253.000	255.000
11.750	257.000	258.000	259.000	260.000	262.000
12.000	264.000	268.000	273.000	280.000	288.000
12.250	296.000	305.000	312.000	318.000	324.000
12.500	328.000	332.000	336.000	341.000	346.000
12.750	351.000	356.000	361.000	364.000	367.000
13.000	370.000	373.000	376.000	380.000	383.000
13.250	386.000	389.000	392.000	394.000	396.000
13.500	399.000	402.000	406.000	409.000	412.000
13.750	415.000	418.000	421.000	425.000	429.000
14.000	433.000	439.000	444.000	451.000	457.000
14.250	464.000	471.000	477.000	483.000	489.000
14.500	496.000	502.000	508.000	514.000	521.000
14.750	528.000	534.000	541.000	549.000	557.000
15.000	566.000	576.000	587.000	598.000	610.000
15.250	624.000	638.000	653.000	672.000	696.000
15.500	725.000	762.000	804.000	854.000	906.000
15.750	961.000	1,023.000	1,096.000	1,194.000	1,326.000
16.000	1,514.000	1,745.000	2,062.000	2,410.000	2,741.000
16.250	2,957.000	3,064.000	3,124.000	3,165.000	3,196.000
16.500	3,217.000	3,230.000	3,237.000	3,237.000	3,234.000
16.750	3,226.000	3,214.000	3,199.000	3,181.000	3,161.000
17.000	3,138.000	3,112.000	3,087.000	3,059.000	3,029.000
17.250	2,998.000	2,964.000	2,930.000	2,893.000	2,851.000
17.500	2,807.000	2,763.000	2,718.000	2,672.000	2,624.000
17.750	2,576.000	2,526.000	2,475.000	2,426.000	2,378.000
18.000	2,330.000	2,280.000	2,227.000	2,164.000	2,097.000
18.250	2,028.000	1,960.000	1,891.000	1,821.000	1,755.000
18.500	1,691.000	1,628.000	1,563.000	1,491.000	1,418.000
18.750	1,345.000	1,272.000	1,198.000	1,123.000	1,054.000
19.000	986.000	917.000	845.000	767.000	690.000
19.250	615.000	550.000	500.000	459.000	423.000
19.500	390.000	360.000	335.000	314.000	296.000
19.750	280.000	267.000	255.000	244.000	236.000
20.000	228.000	222.000	217.000	213.000	210.000
20.250	207.000	204.000	201.000	198.000	195.000

Thrifty Rialto 2-Year

Subsection: Time vs. Volume
Scenario: Post-Development 2 year
Label: South

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
20.500	192.000	189.000	187.000	185.000	183.000
20.750	182.000	180.000	179.000	179.000	178.000
21.000	177.000	177.000	176.000	176.000	176.000
21.250	175.000	175.000	175.000	174.000	173.000
21.500	172.000	170.000	168.000	166.000	165.000
21.750	163.000	162.000	161.000	160.000	159.000
22.000	158.000	158.000	157.000	157.000	157.000
22.250	156.000	156.000	156.000	156.000	156.000
22.500	156.000	155.000	155.000	155.000	155.000
22.750	155.000	155.000	155.000	155.000	155.000
23.000	154.000	154.000	152.000	151.000	151.000
23.250	150.000	149.000	148.000	148.000	147.000
23.500	146.000	145.000	144.000	142.000	141.000
23.750	140.000	140.000	139.000	139.000	138.000
24.000	137.000	(N/A)	(N/A)	(N/A)	(N/A)

Thrifty Rialto 2-Year

Subsection: Elevation vs. Volume Curve
Scenario: Post-Development 2 year
Label: North

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ft^3)
1,621.00	0.000
1,621.08	108.350
1,621.17	216.700
1,621.25	325.050
1,621.33	433.400
1,621.42	541.750
1,621.50	650.100
1,621.58	877.560
1,621.67	1,104.050
1,621.75	1,329.650
1,621.83	1,554.350
1,621.92	1,778.030
1,622.00	2,000.720
1,622.08	2,222.510
1,622.17	2,443.330
1,622.25	2,663.160
1,622.33	2,881.970
1,622.42	3,099.730
1,622.50	3,316.470
1,622.58	3,532.150
1,622.67	3,746.760
1,622.75	3,960.170
1,622.83	4,172.450
1,622.92	4,383.530
1,623.00	4,593.390
1,623.08	4,801.910
1,623.17	5,009.260
1,623.25	5,214.980
1,623.33	5,419.030
1,623.42	5,621.530
1,623.50	5,822.250
1,623.58	6,021.100
1,623.67	6,218.060
1,623.75	6,412.940
1,623.83	6,605.650
1,623.92	6,796.150
1,624.00	6,984.250
1,624.08	7,169.830
1,624.17	7,352.840
1,624.25	7,533.030
1,624.33	7,710.270
1,624.42	7,884.200
1,624.50	8,054.540

Thrifty Rialto 2-Year

Subsection: Elevation vs. Volume Curve
Scenario: Post-Development 2 year
Label: North

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ft^3)
1,624.58	8,220.890
1,624.67	8,382.580
1,624.75	8,539.000
1,624.83	8,689.140
1,624.92	8,831.170
1,625.00	8,960.180
1,625.08	9,083.070
1,625.17	9,201.660
1,625.25	9,315.930
1,625.33	9,424.280
1,625.42	9,532.630
1,625.50	9,640.980
1,625.58	9,749.330
1,625.67	9,857.680
1,625.75	9,966.030

Thrifty Rialto 2-Year

Subsection: Elevation vs. Volume Curve
Scenario: Post-Development 2 year
Label: South

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ft³)
1,618.00	0.000
1,618.08	108.070
1,618.17	216.150
1,618.25	324.220
1,618.33	432.300
1,618.42	540.370
1,618.50	648.450
1,618.58	877.760
1,618.67	1,106.120
1,618.75	1,333.540
1,618.83	1,560.030
1,618.92	1,785.500
1,619.00	2,009.990
1,619.08	2,233.540
1,619.17	2,456.130
1,619.25	2,677.720
1,619.33	2,898.300
1,619.42	3,117.830
1,619.50	3,336.340
1,619.58	3,553.790
1,619.67	3,770.160
1,619.75	3,985.370
1,619.83	4,199.440
1,619.92	4,412.310
1,620.00	4,623.960
1,620.08	4,834.300
1,620.17	5,043.450
1,620.25	5,250.950
1,620.33	5,456.840
1,620.42	5,661.120
1,620.50	5,863.640
1,620.58	6,064.290
1,620.67	6,263.010
1,620.75	6,459.670
1,620.83	6,654.150
1,620.92	6,846.370
1,621.00	7,036.190
1,621.08	7,223.460
1,621.17	7,408.110
1,621.25	7,589.920
1,621.33	7,768.700
1,621.42	7,944.120
1,621.50	8,115.870

Thrifty Rialto 2-Year

Subsection: Elevation vs. Volume Curve
Scenario: Post-Development 2 year
Label: South

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ft^3)
1,621.58	8,283.510
1,621.67	8,446.440
1,621.75	8,603.980
1,621.83	8,755.080
1,621.92	8,897.810
1,622.00	9,027.110
1,622.08	9,150.160
1,622.17	9,268.810
1,622.25	9,383.030
1,622.33	9,491.100
1,622.42	9,599.180
1,622.50	9,707.250
1,622.58	9,815.330
1,622.67	9,923.400
1,622.75	10,031.480

Thrifty Rialto 2-Year

Subsection: Outlet Input Data Scenario: Post-Development 2 year

Label: Composite Outlet Structure - 1

Requested Pond Water Surface Elevations	
Minimum (Headwater)	1,621.00 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	1,625.75 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice - 1	Forward	TW	1,622.25	1,625.75
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Orifice - 1 Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	1,622.25 ft
Orifice Diameter	18.0 in
Orifice Coefficient	0.600

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

Thrifty Rialto 2-Year

Subsection: Individual Outlet Curves
Scenario: Post-Development 2 year
Label: Composite Outlet Structure - 1

RATING TABLE FOR ONE OUTLET TYPE
Structure ID = Orifice - 1 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,621.00	0.00	(N/A)	0.00
1,621.50	0.00	(N/A)	0.00
1,622.00	0.00	(N/A)	0.00
1,622.25	0.00	(N/A)	0.00
1,622.50	0.26	(N/A)	0.00
1,623.00	2.11	(N/A)	0.00
1,623.50	5.25	(N/A)	0.00
1,624.00	8.51	(N/A)	0.00
1,624.50	10.42	(N/A)	0.00
1,625.00	12.03	(N/A)	0.00
1,625.50	13.45	(N/A)	0.00
1,625.75	14.10	(N/A)	0.00

Computation Messages
HW & TW below invert
HW & TW below invert
HW & TW below invert
Upstream HW & DNstream TW < Inv.El
CRIT.DEPTH CONTROL Vh= .064ft Dcr= .186ft
CRIT.DEPTH Hev= .00ft
CRIT.DEPTH CONTROL Vh= .202ft Dcr= .548ft
CRIT.DEPTH Hev= .00ft
CRIT.DEPTH CONTROL Vh= .366ft Dcr= .883ft
CRIT.DEPTH Hev= .00ft
H =1.00
H =1.50
H =2.00
H =2.50
H =2.75

Thrifty Rialto 2-Year

Subsection: Composite Rating Curve
Scenario: Post-Development 2 year
Label: Composite Outlet Structure - 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,621.00	0.00	(N/A)	0.00
1,621.50	0.00	(N/A)	0.00
1,622.00	0.00	(N/A)	0.00
1,622.25	0.00	(N/A)	0.00
1,622.50	0.26	(N/A)	0.00
1,623.00	2.11	(N/A)	0.00
1,623.50	5.25	(N/A)	0.00
1,624.00	8.51	(N/A)	0.00
1,624.50	10.42	(N/A)	0.00
1,625.00	12.03	(N/A)	0.00
1,625.50	13.45	(N/A)	0.00
1,625.75	14.10	(N/A)	0.00

Contributing Structures
None Contributing
None Contributing
None Contributing
None Contributing
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1

Thrifty Rialto 2-Year

Subsection: Outlet Input Data
Scenario: Post-Development 2 year
Label: Composite Outlet Structure - 2

Requested Pond Water Surface Elevations	
Minimum (Headwater)	1,618.00 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	1,622.75 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice - 1	Forward	TW	1,619.50	1,622.75
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Orifice - 1 Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	1,619.50 ft
Orifice Diameter	18.0 in
Orifice Coefficient	0.600

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

Thrifty Rialto 2-Year

Subsection: Individual Outlet Curves
Scenario: Post-Development 2 year
Label: Composite Outlet Structure - 2

RATING TABLE FOR ONE OUTLET TYPE
Structure ID = Orifice - 1 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,618.00	0.00	(N/A)	0.00
1,618.50	0.00	(N/A)	0.00
1,619.00	0.00	(N/A)	0.00
1,619.50	0.00	(N/A)	0.00
1,620.00	0.98	(N/A)	0.00
1,620.50	3.55	(N/A)	0.00
1,621.00	7.37	(N/A)	0.00
1,621.50	9.51	(N/A)	0.00
1,622.00	11.25	(N/A)	0.00
1,622.50	12.76	(N/A)	0.00
1,622.75	13.45	(N/A)	0.00

Computation Messages
HW & TW below invert
HW & TW below invert
HW & TW below invert
Upstream HW & DNstream TW < Inv.El
CRIT.DEPTH CONTROL Vh= .130ft Dcr= .369ft
CRIT.DEPTH Hev= .00ft
CRIT.DEPTH CONTROL Vh= .279ft Dcr= .720ft
CRIT.DEPTH Hev= .00ft
H =.75
H =1.25
H =1.75
H =2.25
H =2.50

Thrifty Rialto 2-Year

Subsection: Composite Rating Curve
Scenario: Post-Development 2 year
Label: Composite Outlet Structure - 2

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,618.00	0.00	(N/A)	0.00
1,618.50	0.00	(N/A)	0.00
1,619.00	0.00	(N/A)	0.00
1,619.50	0.00	(N/A)	0.00
1,620.00	0.98	(N/A)	0.00
1,620.50	3.55	(N/A)	0.00
1,621.00	7.37	(N/A)	0.00
1,621.50	9.51	(N/A)	0.00
1,622.00	11.25	(N/A)	0.00
1,622.50	12.76	(N/A)	0.00
1,622.75	13.45	(N/A)	0.00

Contributing Structures
None Contributing
None Contributing
None Contributing
None Contributing
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1

Thrifty Rialto 2-Year

Subsection: Elevation-Volume-Flow Table (Pond) Scenario: Post-Development 2 year

Label: North

Infiltration	
Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	0.63 ft³/s

Initial Conditions	
Elevation (Water Surface, Initial)	1,621.00 ft
Volume (Initial)	0.000 ft³
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft³/s)	Storage (ft³)	Area (acres)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
1,621.00	0.00	0.000	0.000	0.00	0.00	0.00
1,621.50	0.00	650.100	0.000	0.63	0.63	7.85
1,622.00	0.00	2,000.720	0.000	0.63	0.63	22.86
1,622.25	0.00	2,663.160	0.000	0.63	0.63	30.22
1,622.50	0.26	3,316.470	0.000	0.63	0.89	37.74
1,623.00	2.11	4,593.390	0.000	0.63	2.74	53.78
1,623.50	5.25	5,822.250	0.000	0.63	5.88	70.57
1,624.00	8.51	6,984.250	0.000	0.63	9.14	86.74
1,624.50	10.42	8,054.540	0.000	0.63	11.05	100.54
1,625.00	12.03	8,960.180	0.000	0.63	12.66	112.22
1,625.50	13.45	9,640.980	0.000	0.63	14.08	121.20
1,625.75	14.10	9,966.030	0.000	0.63	14.73	125.47

Thrifty Rialto 2-Year

Subsection: Pond Infiltration Hydrograph
Scenario: Post-Development 2 year
Label: North (INF)

Peak Discharge	0.63 ft³/s
Time to Peak	16.550 hours
Hydrograph Volume	21,500.617 ft³

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.100	0.00	0.01	0.01	0.03	0.04
0.350	0.05	0.06	0.07	0.08	0.09
0.600	0.09	0.10	0.10	0.10	0.11
0.850	0.11	0.11	0.11	0.11	0.11
1.100	0.12	0.12	0.12	0.12	0.12
1.350	0.12	0.12	0.12	0.12	0.12
1.600	0.12	0.12	0.12	0.12	0.12
1.850	0.12	0.12	0.12	0.12	0.12
2.100	0.12	0.12	0.12	0.12	0.12
2.350	0.12	0.12	0.12	0.12	0.12
2.600	0.12	0.12	0.12	0.13	0.13
2.850	0.13	0.13	0.13	0.13	0.13
3.100	0.13	0.13	0.13	0.13	0.13
3.350	0.13	0.13	0.13	0.13	0.13
3.600	0.13	0.13	0.13	0.13	0.13
3.850	0.13	0.13	0.13	0.13	0.13
4.100	0.13	0.13	0.13	0.13	0.13
4.350	0.13	0.13	0.13	0.13	0.13
4.600	0.13	0.14	0.14	0.14	0.14
4.850	0.14	0.14	0.14	0.14	0.14
5.100	0.14	0.14	0.14	0.14	0.14
5.350	0.14	0.14	0.14	0.14	0.14
5.600	0.14	0.14	0.14	0.14	0.14
5.850	0.14	0.14	0.14	0.14	0.14
6.100	0.14	0.15	0.15	0.15	0.15
6.350	0.15	0.15	0.15	0.15	0.15
6.600	0.15	0.15	0.15	0.15	0.15
6.850	0.15	0.15	0.15	0.15	0.15
7.100	0.15	0.15	0.16	0.16	0.16
7.350	0.16	0.16	0.16	0.16	0.16
7.600	0.16	0.16	0.16	0.16	0.16
7.850	0.16	0.16	0.16	0.16	0.16
8.100	0.16	0.16	0.17	0.17	0.17
8.350	0.17	0.17	0.17	0.17	0.17
8.600	0.17	0.17	0.17	0.17	0.17
8.850	0.17	0.17	0.17	0.17	0.17
9.100	0.17	0.17	0.18	0.18	0.18

Thrifty Rialto 2-Year

Subsection: Pond Infiltration Hydrograph
Scenario: Post-Development 2 year
Label: North (INF)

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
9.350	0.18	0.18	0.18	0.18	0.18
9.600	0.18	0.18	0.18	0.18	0.18
9.850	0.18	0.19	0.19	0.19	0.19
10.100	0.19	0.19	0.19	0.19	0.19
10.350	0.19	0.19	0.20	0.20	0.20
10.600	0.20	0.20	0.20	0.20	0.20
10.850	0.20	0.20	0.21	0.21	0.21
11.100	0.21	0.21	0.21	0.21	0.21
11.350	0.21	0.21	0.22	0.22	0.22
11.600	0.22	0.22	0.22	0.22	0.22
11.850	0.22	0.22	0.23	0.23	0.23
12.100	0.23	0.24	0.25	0.25	0.26
12.350	0.27	0.27	0.28	0.28	0.29
12.600	0.29	0.29	0.30	0.30	0.30
12.850	0.31	0.31	0.31	0.32	0.32
13.100	0.32	0.32	0.33	0.33	0.33
13.350	0.33	0.33	0.34	0.34	0.34
13.600	0.34	0.35	0.35	0.35	0.36
13.850	0.36	0.36	0.37	0.37	0.37
14.100	0.38	0.38	0.39	0.40	0.40
14.350	0.41	0.41	0.42	0.42	0.43
14.600	0.44	0.44	0.45	0.45	0.46
14.850	0.47	0.47	0.48	0.49	0.49
15.100	0.50	0.51	0.52	0.53	0.54
15.350	0.56	0.57	0.58	0.60	0.62
15.600	0.63	0.63	0.63	0.63	0.63
15.850	0.63	0.63	0.63	0.63	0.63
16.100	0.63	0.63	0.63	0.63	0.63
16.350	0.63	0.63	0.63	0.63	0.63
16.600	0.63	0.63	0.63	0.63	0.63
16.850	0.63	0.63	0.63	0.63	0.63
17.100	0.63	0.63	0.63	0.63	0.63
17.350	0.63	0.63	0.63	0.63	0.63
17.600	0.63	0.63	0.63	0.63	0.63
17.850	0.63	0.63	0.63	0.63	0.63
18.100	0.63	0.63	0.63	0.63	0.63
18.350	0.63	0.63	0.63	0.63	0.61
18.600	0.55	0.50	0.45	0.41	0.38
18.850	0.35	0.33	0.31	0.29	0.27
19.100	0.26	0.25	0.24	0.23	0.23
19.350	0.22	0.22	0.21	0.21	0.20
19.600	0.20	0.20	0.19	0.19	0.19

Thrifty Rialto 2-Year

Subsection: Pond Infiltration Hydrograph
Scenario: Post-Development 2 year
Label: North (INF)

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
19.850	0.19	0.18	0.18	0.18	0.18
20.100	0.18	0.17	0.17	0.17	0.17
20.350	0.17	0.17	0.17	0.16	0.16
20.600	0.16	0.16	0.16	0.16	0.16
20.850	0.16	0.16	0.15	0.15	0.15
21.100	0.15	0.15	0.15	0.15	0.15
21.350	0.15	0.15	0.15	0.15	0.15
21.600	0.14	0.14	0.14	0.14	0.14
21.850	0.14	0.14	0.14	0.14	0.14
22.100	0.14	0.14	0.14	0.14	0.13
22.350	0.13	0.13	0.13	0.13	0.13
22.600	0.13	0.13	0.13	0.13	0.13
22.850	0.13	0.13	0.13	0.13	0.13
23.100	0.12	0.12	0.12	0.12	0.12
23.350	0.12	0.12	0.12	0.12	0.12
23.600	0.12	0.12	0.12	0.12	0.12
23.850	0.12	0.12	0.12	0.12	(N/A)

Subsection: Detention Time
Label: North (IN)

Scenario: Post-Development 2 year

Infiltration	
Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	0.63 ft³/s

Approximate Detention Times	
Time to Peak (Outflow + Infiltration, Peak to Peak Detention Time)	15.600 hours
Time to Peak (Inflow, Peak to Peak Detention Time)	16.200 hours
Detention Time (Peak to Peak)	0.000 hours
Time to Centroid (Outflow)	13.943 hours
Time to Centroid (Inflow)	13.570 hours
Detention Time (Centroid to Centroid)	0.373 hours
Weighted Average Plug Time	0.434 hours
Maximum Plug Volume Plug Time	0.941 hours
Maximum Inflow Plug Volume	349.583 ft³
Time (Maximum Plug Volume, Start)	16.200 hours
Time (Maximum Plug Volume, End)	16.250 hours

Thrifty Rialto 2-Year

Subsection: Level Pool Pond Routing Summary
Scenario: Post-Development 2 year
Label: North (IN)

Infiltration	
Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	0.63 ft³/s

Initial Conditions	
Elevation (Water Surface, Initial)	1,621.00 ft
Volume (Initial)	0.000 ft³
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	1.98 ft³/s	Time to Peak (Flow, In)	16.200 hours
Infiltration (Peak)	0.63 ft³/s	Time to Peak (Infiltration)	15.600 hours
Flow (Peak Outlet)	0.00 ft³/s	Time to Peak (Flow, Outlet)	0.000 hours

Elevation (Water Surface, Peak)	1,622.21 ft
Volume (Peak)	2,547.097 ft³

Mass Balance (ft³)	
Volume (Initial)	0.000 ft³
Volume (Total Inflow)	21,624.000 ft³
Volume (Total Infiltration)	21,520.000 ft³
Volume (Total Outlet Outflow)	0.000 ft³
Volume (Retained)	108.000 ft³
Volume (Unrouted)	4.000 ft³
Error (Mass Balance)	0.0 %

Thrifty Rialto 2-Year

Subsection: Pond Routed Hydrograph (total out) Scenario: Post-Development 2 year
Label: North (OUT)

Peak Discharge	0.00 ft³/s
Time to Peak	8.000 hours
Hydrograph Volume	0.000 ft³

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.000	0.00	0.00	(N/A)	(N/A)	(N/A)

Thrifty Rialto 2-Year

Subsection: Pond Inflow Summary
Scenario: Post-Development 2 year
Label: North (IN)

Summary for Hydrograph Addition at 'North'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	DA 1

Node Inflows

Inflow Type	Element	Volume (ft³)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	DA 1	21,702.937	16.230	2.05
Flow (In)	North	21,624.031	16.200	1.98

Thrifty Rialto 2-Year

Subsection: Diverted Hydrograph
Scenario: Post-Development 2 year
Label: Outlet-1

Peak Discharge	0.00 ft³/s
Time to Peak	8.000 hours
Hydrograph Volume	0.000 ft³

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.000	0.00	0.00	(N/A)	(N/A)	(N/A)

Thrifty Rialto 2-Year

Subsection: Diverted Hydrograph
Scenario: Post-Development 2 year
Label: Outlet-2

Peak Discharge	0.00 ft³/s
Time to Peak	8.000 hours
Hydrograph Volume	0.000 ft³

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.000	0.00	0.00	(N/A)	(N/A)	(N/A)

Thrifty Rialto 2-Year

Subsection: Elevation-Volume-Flow Table (Pond) Scenario: Post-Development 2 year

Label: South

Infiltration	
Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	0.63 ft³/s

Initial Conditions	
Elevation (Water Surface, Initial)	1,618.00 ft
Volume (Initial)	0.000 ft³
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft³/s)	Storage (ft³)	Area (acres)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
1,618.00	0.00	0.000	0.000	0.00	0.00	0.00
1,618.50	0.00	648.450	0.000	0.63	0.63	7.84
1,619.00	0.00	2,009.990	0.000	0.63	0.63	22.96
1,619.50	0.00	3,336.340	0.000	0.63	0.63	37.70
1,620.00	0.98	4,623.960	0.000	0.63	1.61	52.99
1,620.50	3.55	5,863.640	0.000	0.63	4.18	69.33
1,621.00	7.37	7,036.190	0.000	0.63	8.00	86.18
1,621.50	9.51	8,115.870	0.000	0.63	10.14	100.32
1,622.00	11.25	9,027.110	0.000	0.63	11.88	112.18
1,622.50	12.76	9,707.250	0.000	0.63	13.39	121.25
1,622.75	13.45	10,031.480	0.000	0.63	14.08	125.54

Thrifty Rialto 2-Year

Subsection: Pond Infiltration Hydrograph
Scenario: Post-Development 2 year
Label: South (INF)

Peak Discharge	0.63 ft³/s
Time to Peak	18.600 hours
Hydrograph Volume	24,404.343 ft³

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.050	0.00	0.01	0.03	0.05	0.06
0.300	0.07	0.08	0.09	0.09	0.10
0.550	0.11	0.11	0.11	0.12	0.12
0.800	0.12	0.12	0.12	0.12	0.12
1.050	0.13	0.13	0.13	0.13	0.13
1.300	0.13	0.13	0.13	0.13	0.14
1.550	0.14	0.14	0.14	0.14	0.14
1.800	0.14	0.14	0.14	0.14	0.14
2.050	0.14	0.14	0.14	0.14	0.14
2.300	0.14	0.14	0.14	0.15	0.15
2.550	0.15	0.15	0.15	0.15	0.15
2.800	0.15	0.15	0.15	0.15	0.15
3.050	0.15	0.15	0.15	0.15	0.15
3.300	0.15	0.15	0.15	0.15	0.15
3.550	0.15	0.15	0.15	0.15	0.15
3.800	0.15	0.15	0.15	0.15	0.15
4.050	0.15	0.15	0.15	0.15	0.15
4.300	0.15	0.15	0.15	0.15	0.15
4.550	0.15	0.15	0.15	0.15	0.15
4.800	0.15	0.15	0.15	0.15	0.15
5.050	0.15	0.15	0.15	0.15	0.15
5.300	0.15	0.16	0.16	0.16	0.16
5.550	0.16	0.16	0.16	0.16	0.16
5.800	0.17	0.17	0.17	0.17	0.17
6.050	0.17	0.17	0.17	0.17	0.17
6.300	0.17	0.17	0.17	0.17	0.17
6.550	0.17	0.17	0.17	0.17	0.17
6.800	0.17	0.17	0.17	0.17	0.17
7.050	0.17	0.17	0.17	0.17	0.17
7.300	0.17	0.17	0.17	0.17	0.17
7.550	0.17	0.17	0.17	0.17	0.17
7.800	0.17	0.18	0.18	0.18	0.18
8.050	0.18	0.18	0.19	0.19	0.19
8.300	0.19	0.19	0.19	0.19	0.19
8.550	0.19	0.19	0.19	0.19	0.19
8.800	0.19	0.19	0.19	0.19	0.19
9.050	0.19	0.20	0.20	0.20	0.20

Thrifty Rialto 2-Year

Subsection: Pond Infiltration Hydrograph
Scenario: Post-Development 2 year
Label: South (INF)

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
9.300	0.20	0.20	0.20	0.20	0.21
9.550	0.21	0.21	0.21	0.21	0.21
9.800	0.21	0.22	0.22	0.22	0.22
10.050	0.22	0.22	0.22	0.22	0.22
10.300	0.22	0.22	0.22	0.22	0.22
10.550	0.22	0.22	0.22	0.23	0.23
10.800	0.23	0.23	0.23	0.23	0.23
11.050	0.24	0.24	0.24	0.24	0.24
11.300	0.24	0.24	0.24	0.24	0.24
11.550	0.25	0.25	0.25	0.25	0.25
11.800	0.25	0.25	0.26	0.26	0.26
12.050	0.26	0.27	0.27	0.28	0.29
12.300	0.30	0.30	0.31	0.31	0.32
12.550	0.32	0.33	0.33	0.34	0.34
12.800	0.34	0.35	0.35	0.36	0.36
13.050	0.36	0.36	0.37	0.37	0.37
13.300	0.38	0.38	0.38	0.38	0.38
13.550	0.39	0.39	0.39	0.40	0.40
13.800	0.40	0.41	0.41	0.41	0.42
14.050	0.42	0.43	0.43	0.44	0.45
14.300	0.46	0.46	0.47	0.48	0.48
14.550	0.49	0.50	0.50	0.51	0.52
14.800	0.52	0.53	0.54	0.54	0.55
15.050	0.56	0.57	0.58	0.59	0.61
15.300	0.62	0.63	0.63	0.63	0.63
15.550	0.63	0.63	0.63	0.63	0.63
15.800	0.63	0.63	0.63	0.63	0.63
16.050	0.63	0.63	0.63	0.63	0.63
16.300	0.63	0.63	0.63	0.63	0.63
16.550	0.63	0.63	0.63	0.63	0.63
16.800	0.63	0.63	0.63	0.63	0.63
17.050	0.63	0.63	0.63	0.63	0.63
17.300	0.63	0.63	0.63	0.63	0.63
17.550	0.63	0.63	0.63	0.63	0.63
17.800	0.63	0.63	0.63	0.63	0.63
18.050	0.63	0.63	0.63	0.63	0.63
18.300	0.63	0.63	0.63	0.63	0.63
18.550	0.63	0.63	0.63	0.63	0.63
18.800	0.63	0.63	0.63	0.63	0.63
19.050	0.63	0.63	0.63	0.63	0.60
19.300	0.54	0.49	0.44	0.41	0.38
19.550	0.35	0.33	0.31	0.29	0.27

Thrifty Rialto 2-Year

Subsection: Pond Infiltration Hydrograph
Scenario: Post-Development 2 year
Label: South (INF)

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
19.800	0.26	0.25	0.24	0.23	0.23
20.050	0.22	0.22	0.21	0.21	0.20
20.300	0.20	0.20	0.20	0.19	0.19
20.550	0.19	0.18	0.18	0.18	0.18
20.800	0.18	0.18	0.17	0.17	0.17
21.050	0.17	0.17	0.17	0.17	0.17
21.300	0.17	0.17	0.17	0.17	0.17
21.550	0.17	0.16	0.16	0.16	0.16
21.800	0.16	0.16	0.15	0.15	0.15
22.050	0.15	0.15	0.15	0.15	0.15
22.300	0.15	0.15	0.15	0.15	0.15
22.550	0.15	0.15	0.15	0.15	0.15
22.800	0.15	0.15	0.15	0.15	0.15
23.050	0.15	0.15	0.15	0.15	0.14
23.300	0.14	0.14	0.14	0.14	0.14
23.550	0.14	0.14	0.14	0.14	0.13
23.800	0.13	0.13	0.13	0.13	0.13

Thrifty Rialto 2-Year

Subsection: Detention Time
Label: South (IN)

Scenario: Post-Development 2 year

Infiltration	
Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	0.63 ft³/s

Approximate Detention Times	
Time to Peak (Outflow + Infiltration, Peak to Peak Detention Time)	15.350 hours
Time to Peak (Inflow, Peak to Peak Detention Time)	16.150 hours
Detention Time (Peak to Peak)	0.000 hours
Time to Centroid (Outflow)	13.991 hours
Time to Centroid (Inflow)	13.531 hours
Detention Time (Centroid to Centroid)	0.461 hours
Weighted Average Plug Time	0.522 hours
Maximum Plug Volume Plug Time	1.063 hours
Maximum Inflow Plug Volume	465.767 ft³
Time (Maximum Plug Volume, Start)	16.100 hours
Time (Maximum Plug Volume, End)	16.150 hours

Thrifty Rialto 2-Year

Subsection: Level Pool Pond Routing Summary
Scenario: Post-Development 2 year
Label: South (IN)

Infiltration	
Infiltration Method (Computed)	Constant
Infiltration Rate (Constant)	0.63 ft³/s

Initial Conditions	
Elevation (Water Surface, Initial)	1,618.00 ft
Volume (Initial)	0.000 ft³
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	2.66 ft³/s	Time to Peak (Flow, In)	16.150 hours
Infiltration (Peak)	0.63 ft³/s	Time to Peak (Infiltration)	15.350 hours
Flow (Peak Outlet)	0.00 ft³/s	Time to Peak (Flow, Outlet)	0.000 hours

Elevation (Water Surface, Peak)	1,619.46 ft
Volume (Peak)	3,237.497 ft³

Mass Balance (ft³)	
Volume (Initial)	0.000 ft³
Volume (Total Inflow)	24,540.000 ft³
Volume (Total Infiltration)	24,426.000 ft³
Volume (Total Outlet Outflow)	0.000 ft³
Volume (Retained)	117.000 ft³
Volume (Unrouted)	4.000 ft³
Error (Mass Balance)	0.0 %

Thrifty Rialto 2-Year

Subsection: Pond Routed Hydrograph (total out) Scenario: Post-Development 2 year
Label: South (OUT)

Peak Discharge	0.00 ft³/s
Time to Peak	8.000 hours
Hydrograph Volume	0.000 ft³

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.000	0.00	0.00	(N/A)	(N/A)	(N/A)

Summary for Hydrograph Addition at 'South'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	DA 3.2
<Catchment to Outflow Node>	DA 2
<Catchment to Outflow Node>	DA 3.1

Node Inflows

Inflow Type	Element	Volume (ft³)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	DA 3.2	10,045.468	16.140	1.30
Flow (From)	DA 2	3,130.704	16.140	0.38
Flow (From)	DA 3.1	11,412.240	16.200	1.10
Flow (In)	South	24,539.524	16.150	2.66

Index

C

Composite Outlet Structure - 1 (Composite Rating Curve)...

Composite Outlet Structure - 1 (Individual Outlet Curves)...

Composite Outlet Structure - 1 (Outlet Input Data)...

Composite Outlet Structure - 2 (Composite Rating Curve)...

Composite Outlet Structure - 2 (Individual Outlet Curves)...

Composite Outlet Structure - 2 (Outlet Input Data)...

Composite Rating Curve...31, 35

D

DA 1 (Read Hydrograph)...

DA 2 (Read Hydrograph)...

DA 3.1 (Read Hydrograph)...

DA 3.2 (Read Hydrograph)...

Detention Time...40, 50

Diverted Hydrograph...44, 45

M

Master Network Summary...3

N

North (Elevation vs. Volume Curve)...

North (Elevation-Volume-Flow Table (Pond))...

North (IN) (Detention Time)...

North (IN) (Level Pool Pond Routing Summary)...

North (IN) (Pond Inflow Summary)...

North (IN) (Time vs. Elevation)...

North (INF) (Pond Infiltration Hydrograph)...

North (OUT) (Pond Routed Hydrograph (total out))...

North (Time vs. Volume)...

O

O-1 (Addition Summary)...

O-2 (Addition Summary)...

Outlet Input Data...28, 29, 32, 33

Outlet-1 (Diverted Hydrograph)...

Outlet-2 (Diverted Hydrograph)...

S

South (Elevation vs. Volume Curve)...

South (Elevation-Volume-Flow Table (Pond))...

South (IN) (Detention Time)...

South (IN) (Level Pool Pond Routing Summary)...

South (IN) (Pond Inflow Summary)...

South (IN) (Time vs. Elevation)...

South (INF) (Pond Infiltration Hydrograph)...

South (OUT) (Pond Routed Hydrograph (total out))...

South (Time vs. Volume)...

U

User Notifications...2

Thrifty Rialto 100-Year

Project Summary	
Title	
Engineer	
Company	
Date	9/21/2021

Notes

Table of Contents

	User Notifications	2
	Master Network Summary	3
DA 1		
	Read Hydrograph	4
DA 2		
	Read Hydrograph	4
DA 3.1		
	Read Hydrograph	4
DA 3.2		
	Read Hydrograph	4
O-1		
	Addition Summary	11
O-2		
	Addition Summary	11
North (OUT)		
	Time vs. Elevation	13
South (OUT)		
	Time vs. Elevation	13
North		
	Time vs. Volume	19
South		
	Time vs. Volume	19
North		
	Elevation vs. Volume Curve	25
South		
	Elevation vs. Volume Curve	25
Composite Outlet Structure - 1		
	Outlet Input Data	29
	Individual Outlet Curves	31
	Composite Rating Curve	32
Composite Outlet Structure - 2		
	Outlet Input Data	29
	Individual Outlet Curves	31
	Composite Rating Curve	32

Table of Contents

North

Elevation-Volume-Flow Table (Pond) 37

North (IN)

Detention Time 38

Level Pool Pond Routing Summary 39

North (OUT)

Pond Routed Hydrograph (total out) 40

North (IN)

Pond Inflow Summary 43

Outlet-1

Diverted Hydrograph 44

Outlet-2

Diverted Hydrograph 44

South

Elevation-Volume-Flow Table (Pond) 37

South (IN)

Detention Time 38

Level Pool Pond Routing Summary 39

South (OUT)

Pond Routed Hydrograph (total out) 40

South (IN)

Pond Inflow Summary 43

Thrifty Rialto 100-Year

Subsection: User Notifications

User Notifications?	No user notifications generated.

Thrifty Rialto 100-Year

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)
DA 1	Post-Development 100 year	0	54,706.000	16.100	6.10
DA 2	Post-Development 100 year	0	7,788.000	16.140	0.92
DA 3.1	Post-Development 100 year	0	28,748.000	16.120	3.78
DA 3.2	Post-Development 100 year	0	25,290.000	16.140	3.22

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)
O-1	Post-Development 100 year	0	51,194.000	16.200	4.95
O-2	Post-Development 100 year	0	57,926.000	16.200	6.19

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft³)
North (IN)	Post-Development 100 year	0	54,539.000	16.100	6.10	(N/A)	(N/A)
North (OUT)	Post-Development 100 year	0	51,194.000	16.200	4.95	1,623.45	5,700.000
South (IN)	Post-Development 100 year	0	61,703.000	16.100	7.22	(N/A)	(N/A)
South (OUT)	Post-Development 100 year	0	57,926.000	16.200	6.19	1,620.85	6,688.000

Thrifty Rialto 100-Year

Subsection: Read Hydrograph
Scenario: Post-Development 100 year
Label: DA 1

Peak Discharge	6.10 ft³/s
Time to Peak	16.100 hours
Hydrograph Volume	54,706.089 ft³

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.150 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.050	0.00	0.29	0.29	0.30	0.30
0.800	0.30	0.30	0.30	0.30	0.30
1.550	0.31	0.31	0.31	0.31	0.31
2.300	0.31	0.32	0.32	0.32	0.32
3.050	0.32	0.33	0.33	0.33	0.33
3.800	0.33	0.34	0.34	0.34	0.34
4.550	0.34	0.35	0.35	0.35	0.36
5.300	0.36	0.36	0.37	0.37	0.37
6.050	0.37	0.38	0.38	0.38	0.39
6.800	0.39	0.39	0.40	0.40	0.40
7.550	0.41	0.41	0.42	0.42	0.42
8.300	0.43	0.43	0.44	0.44	0.45
9.050	0.45	0.46	0.46	0.47	0.47
9.800	0.48	0.49	0.49	0.50	0.50
10.550	0.51	0.52	0.53	0.53	0.54
11.300	0.55	0.56	0.57	0.58	0.59
12.050	0.62	0.68	0.72	0.74	0.75
12.800	0.77	0.78	0.80	0.82	0.84
13.550	0.86	0.89	0.92	0.95	0.98
14.300	1.02	1.07	1.11	1.16	1.23
15.050	1.30	1.41	1.52	1.82	2.12
15.800	2.44	3.07	6.10	4.05	1.97
16.550	1.50	1.27	1.14	1.04	0.96
17.300	0.90	0.85	0.81	0.77	0.74
18.050	0.71	0.61	0.58	0.56	0.54
18.800	0.52	0.51	0.49	0.48	0.47
19.550	0.46	0.45	0.44	0.43	0.42
20.300	0.41	0.41	0.40	0.39	0.38
21.050	0.38	0.37	0.37	0.36	0.36
21.800	0.35	0.35	0.34	0.34	0.33
22.550	0.33	0.32	0.32	0.32	0.31
23.300	0.31	0.31	0.30	0.30	0.30
24.050	0.29	0.14	(N/A)	(N/A)	(N/A)

Thrifty Rialto 100-Year

Subsection: Read Hydrograph
Scenario: Post-Development 100 year
Label: DA 2

Peak Discharge	0.92 ft³/s
Time to Peak	16.140 hours
Hydrograph Volume	7,788.436 ft³

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.040	0.04	0.04	0.04	0.04	0.04
0.540	0.04	0.04	0.04	0.04	0.04
1.040	0.04	0.04	0.04	0.04	0.04
1.540	0.04	0.04	0.04	0.04	0.04
2.040	0.04	0.04	0.05	0.05	0.05
2.540	0.05	0.05	0.05	0.05	0.05
3.040	0.05	0.05	0.05	0.05	0.05
3.540	0.05	0.05	0.05	0.05	0.05
4.040	0.05	0.05	0.05	0.05	0.05
4.540	0.05	0.05	0.05	0.05	0.05
5.040	0.05	0.05	0.05	0.05	0.05
5.540	0.05	0.05	0.05	0.05	0.05
6.040	0.05	0.05	0.05	0.05	0.05
6.540	0.05	0.06	0.06	0.06	0.06
7.040	0.06	0.06	0.06	0.06	0.06
7.540	0.06	0.06	0.06	0.06	0.06
8.040	0.06	0.06	0.06	0.06	0.06
8.540	0.06	0.06	0.06	0.06	0.06
9.040	0.06	0.06	0.07	0.07	0.07
9.540	0.07	0.07	0.07	0.07	0.07
10.040	0.07	0.07	0.07	0.07	0.07
10.540	0.07	0.07	0.07	0.08	0.08
11.040	0.08	0.08	0.08	0.08	0.08
11.540	0.08	0.08	0.08	0.08	0.09
12.040	0.09	0.10	0.10	0.10	0.11
12.540	0.11	0.11	0.11	0.11	0.11
13.040	0.11	0.12	0.12	0.12	0.12
13.540	0.12	0.13	0.13	0.13	0.13
14.040	0.14	0.14	0.15	0.15	0.16
14.540	0.16	0.17	0.17	0.18	0.18
15.040	0.19	0.19	0.21	0.22	0.25
15.540	0.28	0.31	0.34	0.37	0.49
16.040	0.85	0.92	0.35	0.30	0.25
16.540	0.20	0.18	0.17	0.16	0.15
17.040	0.14	0.14	0.13	0.13	0.12
17.540	0.12	0.11	0.11	0.11	0.10
18.040	0.10	0.09	0.08	0.08	0.08

Subsection: Read Hydrograph
Scenario: Post-Development 100 year
Label: DA 2

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.100 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
18.540	0.08	0.08	0.07	0.07	0.07
19.040	0.07	0.07	0.07	0.07	0.07
19.540	0.06	0.06	0.06	0.06	0.06
20.040	0.06	0.06	0.06	0.06	0.06
20.540	0.06	0.06	0.06	0.05	0.05
21.040	0.05	0.05	0.05	0.05	0.05
21.540	0.05	0.05	0.05	0.05	0.05
22.040	0.05	0.05	0.05	0.05	0.05
22.540	0.05	0.05	0.05	0.05	0.05
23.040	0.04	0.04	0.04	0.04	0.04
23.540	0.04	0.04	0.04	0.04	0.04
24.040	0.04	0.00	(N/A)	(N/A)	(N/A)

Thrifty Rialto 100-Year

Subsection: Read Hydrograph
Scenario: Post-Development 100 year
Label: DA 3.1

Peak Discharge	3.78 ft³/s
Time to Peak	16.120 hours
Hydrograph Volume	28,747.851 ft³

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.130 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.130	0.15	0.15	0.16	0.16	0.16
0.780	0.16	0.16	0.16	0.16	0.16
1.430	0.16	0.16	0.16	0.16	0.16
2.080	0.16	0.17	0.17	0.17	0.17
2.730	0.17	0.17	0.17	0.17	0.17
3.380	0.17	0.17	0.18	0.18	0.18
4.030	0.18	0.18	0.18	0.18	0.18
4.680	0.18	0.19	0.19	0.19	0.19
5.330	0.19	0.19	0.19	0.19	0.19
5.980	0.20	0.20	0.20	0.20	0.20
6.630	0.20	0.20	0.21	0.21	0.21
7.280	0.21	0.21	0.21	0.22	0.22
7.930	0.22	0.22	0.22	0.23	0.23
8.580	0.23	0.23	0.23	0.24	0.24
9.230	0.24	0.24	0.25	0.25	0.25
9.880	0.25	0.26	0.26	0.26	0.27
10.530	0.27	0.27	0.28	0.28	0.29
11.180	0.29	0.29	0.29	0.30	0.30
11.830	0.31	0.31	0.34	0.37	0.38
12.480	0.39	0.40	0.40	0.41	0.42
13.130	0.43	0.43	0.45	0.46	0.47
13.780	0.48	0.49	0.51	0.52	0.54
14.430	0.56	0.58	0.60	0.64	0.66
15.080	0.71	0.74	0.82	0.91	1.10
15.730	1.19	1.41	1.79	3.78	1.68
16.380	1.07	0.82	0.70	0.63	0.58
17.030	0.54	0.50	0.47	0.45	0.43
17.680	0.42	0.40	0.39	0.36	0.32
18.330	0.31	0.30	0.29	0.28	0.27
18.980	0.27	0.26	0.25	0.25	0.24
19.630	0.24	0.23	0.23	0.22	0.22
20.280	0.22	0.21	0.21	0.21	0.21
20.930	0.20	0.20	0.20	0.19	0.19
21.580	0.19	0.19	0.18	0.18	0.18
22.230	0.18	0.17	0.17	0.17	0.17
22.880	0.17	0.17	0.16	0.16	0.16
23.530	0.16	0.16	0.16	0.16	0.10

Thrifty Rialto 100-Year

Subsection: Read Hydrograph
Scenario: Post-Development 100 year
Label: DA 3.1

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.130 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
24.180	0.00	(N/A)	(N/A)	(N/A)	(N/A)

Thrifty Rialto 100-Year

Subsection: Read Hydrograph
Scenario: Post-Development 100 year
Label: DA 3.2

Peak Discharge	3.22 ft³/s
Time to Peak	16.140 hours
Hydrograph Volume	25,290.262 ft³

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.120 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.060	0.13	0.14	0.14	0.14	0.14
0.660	0.14	0.14	0.14	0.14	0.14
1.260	0.14	0.14	0.14	0.14	0.14
1.860	0.14	0.14	0.15	0.15	0.15
2.460	0.15	0.15	0.15	0.15	0.15
3.060	0.15	0.15	0.15	0.15	0.15
3.660	0.15	0.15	0.16	0.16	0.16
4.260	0.16	0.16	0.16	0.16	0.16
4.860	0.16	0.16	0.17	0.17	0.17
5.460	0.17	0.17	0.17	0.17	0.17
6.060	0.17	0.17	0.18	0.18	0.18
6.660	0.18	0.18	0.18	0.18	0.18
7.260	0.19	0.19	0.19	0.19	0.19
7.860	0.19	0.19	0.20	0.20	0.20
8.460	0.20	0.20	0.20	0.21	0.21
9.060	0.21	0.21	0.21	0.22	0.22
9.660	0.22	0.22	0.22	0.23	0.23
10.260	0.23	0.23	0.24	0.24	0.24
10.860	0.24	0.25	0.25	0.25	0.26
11.460	0.26	0.26	0.27	0.27	0.28
12.060	0.29	0.32	0.33	0.34	0.34
12.660	0.35	0.36	0.36	0.37	0.38
13.260	0.38	0.39	0.40	0.41	0.42
13.860	0.43	0.44	0.45	0.47	0.49
14.460	0.50	0.52	0.53	0.55	0.58
15.060	0.61	0.65	0.69	0.82	0.90
15.660	1.03	1.10	1.39	2.13	3.22
16.260	1.09	0.88	0.70	0.62	0.56
16.860	0.52	0.48	0.45	0.43	0.41
17.460	0.39	0.38	0.36	0.35	0.34
18.060	0.33	0.28	0.27	0.26	0.26
18.660	0.25	0.24	0.24	0.23	0.23
19.260	0.22	0.22	0.21	0.21	0.20
19.860	0.20	0.20	0.19	0.19	0.19
20.460	0.19	0.18	0.18	0.18	0.18
21.060	0.17	0.17	0.17	0.17	0.17
21.660	0.16	0.16	0.16	0.16	0.16

Thrifty Rialto 100-Year

Subsection: Read Hydrograph
Scenario: Post-Development 100 year
Label: DA 3.2

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.120 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
22.260	0.15	0.15	0.15	0.15	0.15
22.860	0.15	0.15	0.14	0.14	0.14
23.460	0.14	0.14	0.14	0.14	0.14
24.060	0.10	0.00	(N/A)	(N/A)	(N/A)

Summary for Hydrograph Addition at 'O-1'

Upstream Link	Upstream Node
Outlet-1	North

Node Inflows

Inflow Type	Element	Volume (ft^3)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	Outlet-1	51,193.694	16.200	4.95
Flow (In)	O-1	51,193.694	16.200	4.95

Summary for Hydrograph Addition at 'O-2'

Upstream Link	Upstream Node
Outlet-2	South

Node Inflows

Inflow Type	Element	Volume (ft^3)	Time to Peak (hours)	Flow (Peak) (ft^3/s)
Flow (From)	Outlet-2	57,925.607	16.200	6.19
Flow (In)	O-2	57,925.607	16.200	6.19

Thrifty Rialto 100-Year

Subsection: Time vs. Elevation
Scenario: Post-Development 100 year
Label: North (OUT)

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	1,621.00	1,621.00	1,621.01	1,621.03	1,621.06
0.250	1,621.10	1,621.14	1,621.18	1,621.22	1,621.26
0.500	1,621.30	1,621.34	1,621.39	1,621.43	1,621.47
0.750	1,621.51	1,621.53	1,621.55	1,621.57	1,621.59
1.000	1,621.61	1,621.63	1,621.65	1,621.67	1,621.69
1.250	1,621.71	1,621.73	1,621.75	1,621.77	1,621.79
1.500	1,621.81	1,621.83	1,621.85	1,621.87	1,621.89
1.750	1,621.91	1,621.93	1,621.95	1,621.97	1,621.99
2.000	1,622.01	1,622.03	1,622.05	1,622.08	1,622.10
2.250	1,622.12	1,622.14	1,622.16	1,622.18	1,622.20
2.500	1,622.23	1,622.25	1,622.27	1,622.29	1,622.31
2.750	1,622.32	1,622.34	1,622.36	1,622.37	1,622.38
3.000	1,622.40	1,622.41	1,622.42	1,622.43	1,622.44
3.250	1,622.45	1,622.46	1,622.46	1,622.47	1,622.48
3.500	1,622.48	1,622.49	1,622.50	1,622.50	1,622.51
3.750	1,622.51	1,622.51	1,622.51	1,622.52	1,622.52
4.000	1,622.52	1,622.52	1,622.52	1,622.52	1,622.52
4.250	1,622.52	1,622.52	1,622.52	1,622.52	1,622.52
4.500	1,622.52	1,622.52	1,622.52	1,622.52	1,622.52
4.750	1,622.52	1,622.52	1,622.52	1,622.53	1,622.53
5.000	1,622.53	1,622.53	1,622.53	1,622.53	1,622.53
5.250	1,622.53	1,622.53	1,622.53	1,622.53	1,622.53
5.500	1,622.53	1,622.53	1,622.53	1,622.53	1,622.53
5.750	1,622.53	1,622.53	1,622.53	1,622.53	1,622.53
6.000	1,622.53	1,622.53	1,622.53	1,622.53	1,622.53
6.250	1,622.53	1,622.53	1,622.53	1,622.53	1,622.53
6.500	1,622.53	1,622.53	1,622.53	1,622.53	1,622.53
6.750	1,622.53	1,622.54	1,622.54	1,622.54	1,622.54
7.000	1,622.54	1,622.54	1,622.54	1,622.54	1,622.54
7.250	1,622.54	1,622.54	1,622.54	1,622.54	1,622.54
7.500	1,622.54	1,622.54	1,622.54	1,622.54	1,622.54
7.750	1,622.54	1,622.54	1,622.54	1,622.54	1,622.54
8.000	1,622.54	1,622.54	1,622.54	1,622.54	1,622.54
8.250	1,622.54	1,622.54	1,622.55	1,622.55	1,622.55
8.500	1,622.55	1,622.55	1,622.55	1,622.55	1,622.55
8.750	1,622.55	1,622.55	1,622.55	1,622.55	1,622.55
9.000	1,622.55	1,622.55	1,622.55	1,622.55	1,622.55
9.250	1,622.55	1,622.55	1,622.55	1,622.55	1,622.55
9.500	1,622.56	1,622.56	1,622.56	1,622.56	1,622.56
9.750	1,622.56	1,622.56	1,622.56	1,622.56	1,622.56
10.000	1,622.56	1,622.56	1,622.56	1,622.56	1,622.56

Thrifty Rialto 100-Year

Subsection: Time vs. Elevation
Scenario: Post-Development 100 year
Label: North (OUT)

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
10.250	1,622.56	1,622.56	1,622.56	1,622.56	1,622.57
10.500	1,622.57	1,622.57	1,622.57	1,622.57	1,622.57
10.750	1,622.57	1,622.57	1,622.57	1,622.57	1,622.57
11.000	1,622.57	1,622.57	1,622.57	1,622.57	1,622.58
11.250	1,622.58	1,622.58	1,622.58	1,622.58	1,622.58
11.500	1,622.58	1,622.58	1,622.58	1,622.58	1,622.58
11.750	1,622.58	1,622.59	1,622.59	1,622.59	1,622.59
12.000	1,622.59	1,622.59	1,622.59	1,622.60	1,622.60
12.250	1,622.60	1,622.61	1,622.61	1,622.62	1,622.62
12.500	1,622.62	1,622.62	1,622.63	1,622.63	1,622.63
12.750	1,622.63	1,622.63	1,622.63	1,622.64	1,622.64
13.000	1,622.64	1,622.64	1,622.64	1,622.64	1,622.64
13.250	1,622.65	1,622.65	1,622.65	1,622.65	1,622.65
13.500	1,622.66	1,622.66	1,622.66	1,622.66	1,622.66
13.750	1,622.67	1,622.67	1,622.67	1,622.67	1,622.67
14.000	1,622.68	1,622.68	1,622.68	1,622.69	1,622.69
14.250	1,622.69	1,622.69	1,622.70	1,622.70	1,622.71
14.500	1,622.71	1,622.71	1,622.72	1,622.72	1,622.72
14.750	1,622.73	1,622.73	1,622.74	1,622.74	1,622.75
15.000	1,622.75	1,622.76	1,622.77	1,622.77	1,622.78
15.250	1,622.79	1,622.80	1,622.81	1,622.82	1,622.83
15.500	1,622.85	1,622.87	1,622.89	1,622.91	1,622.94
15.750	1,622.96	1,622.99	1,623.02	1,623.05	1,623.08
16.000	1,623.14	1,623.23	1,623.35	1,623.44	1,623.45
16.250	1,623.42	1,623.36	1,623.28	1,623.19	1,623.10
16.500	1,623.04	1,622.99	1,622.96	1,622.92	1,622.89
16.750	1,622.86	1,622.84	1,622.82	1,622.80	1,622.78
17.000	1,622.77	1,622.75	1,622.74	1,622.73	1,622.72
17.250	1,622.71	1,622.70	1,622.70	1,622.69	1,622.68
17.500	1,622.68	1,622.67	1,622.67	1,622.66	1,622.66
17.750	1,622.65	1,622.65	1,622.65	1,622.64	1,622.64
18.000	1,622.64	1,622.64	1,622.63	1,622.63	1,622.62
18.250	1,622.61	1,622.61	1,622.61	1,622.60	1,622.60
18.500	1,622.59	1,622.59	1,622.59	1,622.59	1,622.58
18.750	1,622.58	1,622.58	1,622.58	1,622.58	1,622.57
19.000	1,622.57	1,622.57	1,622.57	1,622.57	1,622.57
19.250	1,622.57	1,622.56	1,622.56	1,622.56	1,622.56
19.500	1,622.56	1,622.56	1,622.56	1,622.56	1,622.56
19.750	1,622.56	1,622.55	1,622.55	1,622.55	1,622.55
20.000	1,622.55	1,622.55	1,622.55	1,622.55	1,622.55
20.250	1,622.55	1,622.55	1,622.54	1,622.54	1,622.54

Thrifty Rialto 100-Year

Subsection: Time vs. Elevation
Scenario: Post-Development 100 year
Label: North (OUT)

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
20.500	1,622.54	1,622.54	1,622.54	1,622.54	1,622.54
20.750	1,622.54	1,622.54	1,622.54	1,622.54	1,622.54
21.000	1,622.54	1,622.53	1,622.53	1,622.53	1,622.53
21.250	1,622.53	1,622.53	1,622.53	1,622.53	1,622.53
21.500	1,622.53	1,622.53	1,622.53	1,622.53	1,622.53
21.750	1,622.53	1,622.53	1,622.53	1,622.53	1,622.53
22.000	1,622.53	1,622.53	1,622.52	1,622.52	1,622.52
22.250	1,622.52	1,622.52	1,622.52	1,622.52	1,622.52
22.500	1,622.52	1,622.52	1,622.52	1,622.52	1,622.52
22.750	1,622.52	1,622.52	1,622.52	1,622.52	1,622.52
23.000	1,622.52	1,622.52	1,622.52	1,622.52	1,622.52
23.250	1,622.52	1,622.52	1,622.52	1,622.52	1,622.51
23.500	1,622.51	1,622.51	1,622.51	1,622.51	1,622.51
23.750	1,622.51	1,622.51	1,622.51	1,622.51	1,622.51
24.000	1,622.51	(N/A)	(N/A)	(N/A)	(N/A)

Thrifty Rialto 100-Year

Subsection: Time vs. Elevation
Scenario: Post-Development 100 year
Label: South (OUT)

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	1,618.00	1,618.00	1,618.02	1,618.05	1,618.10
0.250	1,618.14	1,618.19	1,618.24	1,618.28	1,618.33
0.500	1,618.38	1,618.42	1,618.47	1,618.51	1,618.53
0.750	1,618.55	1,618.58	1,618.60	1,618.62	1,618.64
1.000	1,618.67	1,618.69	1,618.71	1,618.73	1,618.76
1.250	1,618.78	1,618.80	1,618.82	1,618.85	1,618.87
1.500	1,618.89	1,618.91	1,618.94	1,618.96	1,618.98
1.750	1,619.00	1,619.03	1,619.05	1,619.07	1,619.10
2.000	1,619.12	1,619.14	1,619.17	1,619.19	1,619.21
2.250	1,619.24	1,619.26	1,619.29	1,619.31	1,619.34
2.500	1,619.36	1,619.39	1,619.41	1,619.44	1,619.47
2.750	1,619.49	1,619.51	1,619.54	1,619.56	1,619.57
3.000	1,619.59	1,619.60	1,619.61	1,619.62	1,619.63
3.250	1,619.64	1,619.64	1,619.65	1,619.66	1,619.66
3.500	1,619.66	1,619.67	1,619.67	1,619.67	1,619.68
3.750	1,619.68	1,619.68	1,619.68	1,619.68	1,619.69
4.000	1,619.69	1,619.69	1,619.69	1,619.69	1,619.69
4.250	1,619.69	1,619.69	1,619.70	1,619.70	1,619.70
4.500	1,619.70	1,619.70	1,619.70	1,619.70	1,619.70
4.750	1,619.70	1,619.70	1,619.70	1,619.70	1,619.70
5.000	1,619.70	1,619.70	1,619.70	1,619.70	1,619.70
5.250	1,619.70	1,619.71	1,619.71	1,619.71	1,619.71
5.500	1,619.71	1,619.71	1,619.71	1,619.71	1,619.71
5.750	1,619.71	1,619.71	1,619.71	1,619.71	1,619.71
6.000	1,619.71	1,619.71	1,619.71	1,619.71	1,619.71
6.250	1,619.71	1,619.71	1,619.71	1,619.72	1,619.72
6.500	1,619.72	1,619.72	1,619.72	1,619.72	1,619.72
6.750	1,619.72	1,619.72	1,619.72	1,619.72	1,619.72
7.000	1,619.72	1,619.72	1,619.73	1,619.73	1,619.73
7.250	1,619.73	1,619.73	1,619.73	1,619.73	1,619.73
7.500	1,619.73	1,619.73	1,619.73	1,619.73	1,619.73
7.750	1,619.73	1,619.73	1,619.74	1,619.74	1,619.74
8.000	1,619.74	1,619.74	1,619.74	1,619.74	1,619.74
8.250	1,619.74	1,619.74	1,619.74	1,619.74	1,619.75
8.500	1,619.75	1,619.75	1,619.75	1,619.75	1,619.75
8.750	1,619.75	1,619.75	1,619.75	1,619.75	1,619.75
9.000	1,619.75	1,619.75	1,619.76	1,619.76	1,619.76
9.250	1,619.76	1,619.76	1,619.76	1,619.76	1,619.76
9.500	1,619.76	1,619.77	1,619.77	1,619.77	1,619.77
9.750	1,619.77	1,619.77	1,619.77	1,619.77	1,619.77
10.000	1,619.77	1,619.78	1,619.78	1,619.78	1,619.78

Thrifty Rialto 100-Year

Subsection: Time vs. Elevation
Scenario: Post-Development 100 year
Label: South (OUT)

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
10.250	1,619.78	1,619.78	1,619.78	1,619.78	1,619.78
10.500	1,619.79	1,619.79	1,619.79	1,619.79	1,619.79
10.750	1,619.79	1,619.79	1,619.79	1,619.80	1,619.80
11.000	1,619.80	1,619.80	1,619.80	1,619.80	1,619.81
11.250	1,619.81	1,619.81	1,619.81	1,619.81	1,619.81
11.500	1,619.82	1,619.82	1,619.82	1,619.82	1,619.82
11.750	1,619.82	1,619.83	1,619.83	1,619.83	1,619.83
12.000	1,619.83	1,619.84	1,619.84	1,619.85	1,619.85
12.250	1,619.86	1,619.87	1,619.87	1,619.88	1,619.88
12.500	1,619.89	1,619.90	1,619.90	1,619.91	1,619.91
12.750	1,619.91	1,619.92	1,619.92	1,619.93	1,619.93
13.000	1,619.93	1,619.94	1,619.94	1,619.94	1,619.95
13.250	1,619.95	1,619.95	1,619.96	1,619.96	1,619.97
13.500	1,619.97	1,619.97	1,619.98	1,619.98	1,619.99
13.750	1,619.99	1,620.00	1,620.00	1,620.00	1,620.01
14.000	1,620.01	1,620.01	1,620.02	1,620.02	1,620.02
14.250	1,620.03	1,620.03	1,620.03	1,620.03	1,620.04
14.500	1,620.04	1,620.04	1,620.05	1,620.05	1,620.05
14.750	1,620.06	1,620.06	1,620.07	1,620.07	1,620.08
15.000	1,620.08	1,620.09	1,620.09	1,620.10	1,620.10
15.250	1,620.11	1,620.12	1,620.13	1,620.14	1,620.16
15.500	1,620.17	1,620.19	1,620.21	1,620.23	1,620.25
15.750	1,620.27	1,620.29	1,620.32	1,620.36	1,620.41
16.000	1,620.48	1,620.59	1,620.73	1,620.84	1,620.85
16.250	1,620.73	1,620.60	1,620.50	1,620.42	1,620.35
16.500	1,620.30	1,620.25	1,620.21	1,620.17	1,620.15
16.750	1,620.13	1,620.11	1,620.09	1,620.08	1,620.07
17.000	1,620.06	1,620.05	1,620.04	1,620.04	1,620.03
17.250	1,620.03	1,620.02	1,620.02	1,620.01	1,620.01
17.500	1,620.00	1,620.00	1,620.00	1,619.99	1,619.99
17.750	1,619.98	1,619.98	1,619.97	1,619.97	1,619.96
18.000	1,619.96	1,619.95	1,619.94	1,619.94	1,619.93
18.250	1,619.91	1,619.91	1,619.90	1,619.89	1,619.88
18.500	1,619.87	1,619.87	1,619.86	1,619.85	1,619.85
18.750	1,619.84	1,619.84	1,619.83	1,619.83	1,619.82
19.000	1,619.82	1,619.82	1,619.81	1,619.81	1,619.81
19.250	1,619.80	1,619.80	1,619.80	1,619.79	1,619.79
19.500	1,619.79	1,619.78	1,619.78	1,619.78	1,619.78
19.750	1,619.77	1,619.77	1,619.77	1,619.77	1,619.76
20.000	1,619.76	1,619.76	1,619.76	1,619.76	1,619.75
20.250	1,619.75	1,619.75	1,619.75	1,619.75	1,619.75

Thrifty Rialto 100-Year

Subsection: Time vs. Elevation
Scenario: Post-Development 100 year
Label: South (OUT)

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
20.500	1,619.74	1,619.74	1,619.74	1,619.74	1,619.74
20.750	1,619.74	1,619.74	1,619.73	1,619.73	1,619.73
21.000	1,619.73	1,619.73	1,619.73	1,619.72	1,619.72
21.250	1,619.72	1,619.72	1,619.72	1,619.72	1,619.72
21.500	1,619.72	1,619.71	1,619.71	1,619.71	1,619.71
21.750	1,619.71	1,619.71	1,619.71	1,619.71	1,619.71
22.000	1,619.71	1,619.70	1,619.70	1,619.70	1,619.70
22.250	1,619.70	1,619.70	1,619.70	1,619.70	1,619.70
22.500	1,619.70	1,619.70	1,619.69	1,619.69	1,619.69
22.750	1,619.69	1,619.69	1,619.69	1,619.69	1,619.69
23.000	1,619.69	1,619.69	1,619.69	1,619.69	1,619.69
23.250	1,619.68	1,619.68	1,619.68	1,619.68	1,619.68
23.500	1,619.68	1,619.68	1,619.68	1,619.68	1,619.68
23.750	1,619.68	1,619.68	1,619.68	1,619.68	1,619.67
24.000	1,619.67	(N/A)	(N/A)	(N/A)	(N/A)

Thrifty Rialto 100-Year

Subsection: Time vs. Volume
Scenario: Post-Development 100 year
Label: North

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
0.000	0.000	0.000	9.000	36.000	82.000
0.250	133.000	181.000	231.000	286.000	341.000
0.500	397.000	451.000	501.000	552.000	609.000
0.750	665.000	722.000	779.000	835.000	891.000
1.000	941.000	991.000	1,042.000	1,092.000	1,147.000
1.250	1,203.000	1,260.000	1,316.000	1,372.000	1,429.000
1.500	1,486.000	1,544.000	1,597.000	1,648.000	1,699.000
1.750	1,751.000	1,805.000	1,862.000	1,920.000	1,977.000
2.000	2,035.000	2,094.000	2,152.000	2,210.000	2,264.000
2.250	2,315.000	2,367.000	2,420.000	2,476.000	2,535.000
2.500	2,595.000	2,655.000	2,713.000	2,768.000	2,819.000
2.750	2,867.000	2,908.000	2,944.000	2,979.000	3,010.000
3.000	3,040.000	3,068.000	3,095.000	3,122.000	3,148.000
3.250	3,173.000	3,196.000	3,218.000	3,238.000	3,257.000
3.500	3,274.000	3,291.000	3,306.000	3,320.000	3,332.000
3.750	3,341.000	3,349.000	3,355.000	3,359.000	3,364.000
4.000	3,367.000	3,370.000	3,371.000	3,373.000	3,374.000
4.250	3,375.000	3,376.000	3,376.000	3,377.000	3,377.000
4.500	3,378.000	3,378.000	3,379.000	3,380.000	3,381.000
4.750	3,382.000	3,383.000	3,384.000	3,384.000	3,384.000
5.000	3,385.000	3,385.000	3,385.000	3,386.000	3,387.000
5.250	3,388.000	3,389.000	3,390.000	3,390.000	3,391.000
5.500	3,391.000	3,392.000	3,393.000	3,394.000	3,395.000
5.750	3,396.000	3,397.000	3,398.000	3,398.000	3,399.000
6.000	3,399.000	3,399.000	3,399.000	3,400.000	3,401.000
6.250	3,402.000	3,403.000	3,404.000	3,405.000	3,405.000
6.500	3,406.000	3,406.000	3,407.000	3,408.000	3,409.000
6.750	3,410.000	3,411.000	3,412.000	3,412.000	3,413.000
7.000	3,413.000	3,414.000	3,415.000	3,416.000	3,417.000
7.250	3,418.000	3,419.000	3,420.000	3,420.000	3,421.000
7.500	3,422.000	3,423.000	3,424.000	3,425.000	3,426.000
7.750	3,427.000	3,428.000	3,429.000	3,431.000	3,432.000
8.000	3,433.000	3,434.000	3,434.000	3,435.000	3,435.000
8.250	3,436.000	3,437.000	3,439.000	3,440.000	3,441.000
8.500	3,442.000	3,443.000	3,444.000	3,445.000	3,447.000
8.750	3,448.000	3,449.000	3,450.000	3,451.000	3,453.000
9.000	3,454.000	3,455.000	3,456.000	3,457.000	3,459.000
9.250	3,460.000	3,461.000	3,462.000	3,463.000	3,465.000
9.500	3,466.000	3,468.000	3,469.000	3,470.000	3,471.000
9.750	3,472.000	3,474.000	3,475.000	3,477.000	3,479.000
10.000	3,481.000	3,483.000	3,484.000	3,485.000	3,486.000

Thrifty Rialto 100-Year

Subsection: Time vs. Volume
Scenario: Post-Development 100 year
Label: North

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
10.250	3,488.000	3,490.000	3,491.000	3,492.000	3,493.000
10.500	3,494.000	3,496.000	3,498.000	3,500.000	3,502.000
10.750	3,504.000	3,506.000	3,508.000	3,510.000	3,512.000
11.000	3,513.000	3,514.000	3,516.000	3,518.000	3,519.000
11.250	3,522.000	3,524.000	3,526.000	3,528.000	3,531.000
11.500	3,533.000	3,535.000	3,537.000	3,539.000	3,541.000
11.750	3,543.000	3,546.000	3,548.000	3,550.000	3,552.000
12.000	3,556.000	3,560.000	3,565.000	3,572.000	3,581.000
12.250	3,590.000	3,599.000	3,608.000	3,616.000	3,623.000
12.500	3,629.000	3,635.000	3,640.000	3,644.000	3,649.000
12.750	3,653.000	3,657.000	3,660.000	3,664.000	3,667.000
13.000	3,671.000	3,675.000	3,678.000	3,682.000	3,686.000
13.250	3,691.000	3,695.000	3,699.000	3,703.000	3,707.000
13.500	3,712.000	3,716.000	3,721.000	3,725.000	3,730.000
13.750	3,735.000	3,740.000	3,746.000	3,753.000	3,759.000
14.000	3,766.000	3,773.000	3,781.000	3,788.000	3,796.000
14.250	3,805.000	3,813.000	3,822.000	3,831.000	3,840.000
14.500	3,850.000	3,860.000	3,870.000	3,881.000	3,892.000
14.750	3,903.000	3,915.000	3,927.000	3,941.000	3,955.000
15.000	3,970.000	3,985.000	4,002.000	4,021.000	4,041.000
15.250	4,064.000	4,087.000	4,111.000	4,141.000	4,180.000
15.500	4,221.000	4,268.000	4,318.000	4,370.000	4,431.000
15.750	4,496.000	4,564.000	4,640.000	4,723.000	4,807.000
16.000	4,937.000	5,175.000	5,474.000	5,669.000	5,700.000
16.250	5,618.000	5,479.000	5,283.000	5,049.000	4,855.000
16.500	4,704.000	4,580.000	4,478.000	4,386.000	4,312.000
16.750	4,245.000	4,188.000	4,134.000	4,084.000	4,040.000
17.000	4,001.000	3,966.000	3,935.000	3,906.000	3,881.000
17.250	3,858.000	3,837.000	3,817.000	3,800.000	3,783.000
17.500	3,768.000	3,753.000	3,740.000	3,729.000	3,719.000
17.750	3,710.000	3,701.000	3,693.000	3,685.000	3,678.000
18.000	3,670.000	3,663.000	3,655.000	3,643.000	3,629.000
18.250	3,615.000	3,603.000	3,592.000	3,582.000	3,573.000
18.500	3,566.000	3,559.000	3,553.000	3,547.000	3,541.000
18.750	3,536.000	3,531.000	3,526.000	3,521.000	3,517.000
19.000	3,513.000	3,509.000	3,504.000	3,500.000	3,496.000
19.250	3,493.000	3,490.000	3,487.000	3,484.000	3,481.000
19.500	3,478.000	3,475.000	3,473.000	3,470.000	3,467.000
19.750	3,465.000	3,462.000	3,460.000	3,457.000	3,455.000
20.000	3,452.000	3,450.000	3,447.000	3,445.000	3,443.000
20.250	3,440.000	3,438.000	3,436.000	3,434.000	3,433.000

Thrifty Rialto 100-Year

Subsection: Time vs. Volume
Scenario: Post-Development 100 year
Label: North

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
20.500	3,431.000	3,430.000	3,428.000	3,426.000	3,424.000
20.750	3,422.000	3,420.000	3,417.000	3,415.000	3,413.000
21.000	3,412.000	3,410.000	3,409.000	3,408.000	3,406.000
21.250	3,405.000	3,403.000	3,402.000	3,401.000	3,400.000
21.500	3,398.000	3,397.000	3,396.000	3,395.000	3,394.000
21.750	3,392.000	3,391.000	3,390.000	3,388.000	3,387.000
22.000	3,386.000	3,385.000	3,383.000	3,382.000	3,381.000
22.250	3,380.000	3,379.000	3,377.000	3,376.000	3,375.000
22.500	3,374.000	3,372.000	3,371.000	3,370.000	3,369.000
22.750	3,367.000	3,367.000	3,366.000	3,365.000	3,364.000
23.000	3,364.000	3,363.000	3,362.000	3,361.000	3,360.000
23.250	3,359.000	3,358.000	3,358.000	3,357.000	3,356.000
23.500	3,355.000	3,354.000	3,353.000	3,352.000	3,351.000
23.750	3,351.000	3,350.000	3,350.000	3,349.000	3,348.000
24.000	3,347.000	(N/A)	(N/A)	(N/A)	(N/A)

Thrifty Rialto 100-Year

Subsection: Time vs. Volume
Scenario: Post-Development 100 year
Label: South

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
0.000	0.000	4.000	24.000	71.000	130.000
0.250	185.000	243.000	306.000	369.000	433.000
0.500	489.000	547.000	610.000	674.000	739.000
0.750	803.000	868.000	926.000	983.000	1,040.000
1.000	1,097.000	1,160.000	1,224.000	1,287.000	1,351.000
1.250	1,415.000	1,478.000	1,542.000	1,600.000	1,657.000
1.500	1,713.000	1,769.000	1,831.000	1,894.000	1,957.000
1.750	2,020.000	2,084.000	2,149.000	2,213.000	2,273.000
2.000	2,330.000	2,388.000	2,447.000	2,512.000	2,580.000
2.250	2,648.000	2,717.000	2,786.000	2,855.000	2,922.000
2.500	2,983.000	3,044.000	3,105.000	3,172.000	3,241.000
2.750	3,310.000	3,376.000	3,437.000	3,490.000	3,536.000
3.000	3,574.000	3,605.000	3,632.000	3,655.000	3,676.000
3.250	3,694.000	3,710.000	3,723.000	3,735.000	3,745.000
3.500	3,754.000	3,763.000	3,770.000	3,778.000	3,785.000
3.750	3,792.000	3,798.000	3,804.000	3,810.000	3,815.000
4.000	3,819.000	3,823.000	3,826.000	3,829.000	3,832.000
4.250	3,834.000	3,836.000	3,838.000	3,839.000	3,840.000
4.500	3,841.000	3,842.000	3,843.000	3,844.000	3,845.000
4.750	3,846.000	3,847.000	3,848.000	3,849.000	3,851.000
5.000	3,853.000	3,855.000	3,857.000	3,859.000	3,861.000
5.250	3,863.000	3,865.000	3,867.000	3,868.000	3,869.000
5.500	3,870.000	3,871.000	3,872.000	3,872.000	3,873.000
5.750	3,873.000	3,874.000	3,874.000	3,875.000	3,877.000
6.000	3,878.000	3,880.000	3,881.000	3,883.000	3,884.000
6.250	3,886.000	3,888.000	3,890.000	3,892.000	3,894.000
6.500	3,895.000	3,896.000	3,898.000	3,900.000	3,902.000
6.750	3,904.000	3,906.000	3,908.000	3,911.000	3,913.000
7.000	3,916.000	3,918.000	3,919.000	3,921.000	3,923.000
7.250	3,925.000	3,927.000	3,929.000	3,931.000	3,933.000
7.500	3,935.000	3,936.000	3,937.000	3,939.000	3,941.000
7.750	3,943.000	3,945.000	3,947.000	3,948.000	3,950.000
8.000	3,951.000	3,953.000	3,955.000	3,958.000	3,960.000
8.250	3,963.000	3,966.000	3,968.000	3,971.000	3,973.000
8.500	3,974.000	3,976.000	3,977.000	3,979.000	3,980.000
8.750	3,982.000	3,984.000	3,986.000	3,989.000	3,992.000
9.000	3,994.000	3,997.000	3,999.000	4,002.000	4,005.000
9.250	4,007.000	4,010.000	4,013.000	4,016.000	4,019.000
9.500	4,023.000	4,027.000	4,031.000	4,034.000	4,037.000
9.750	4,039.000	4,041.000	4,043.000	4,044.000	4,047.000
10.000	4,050.000	4,053.000	4,057.000	4,060.000	4,063.000

Thrifty Rialto 100-Year

Subsection: Time vs. Volume
Scenario: Post-Development 100 year
Label: South

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
10.250	4,065.000	4,068.000	4,070.000	4,073.000	4,076.000
10.500	4,080.000	4,083.000	4,087.000	4,090.000	4,093.000
10.750	4,096.000	4,100.000	4,104.000	4,108.000	4,113.000
11.000	4,118.000	4,123.000	4,128.000	4,132.000	4,136.000
11.250	4,141.000	4,145.000	4,149.000	4,153.000	4,157.000
11.500	4,161.000	4,165.000	4,169.000	4,173.000	4,178.000
11.750	4,182.000	4,186.000	4,191.000	4,196.000	4,201.000
12.000	4,208.000	4,216.000	4,226.000	4,239.000	4,254.000
12.250	4,270.000	4,285.000	4,300.000	4,314.000	4,328.000
12.500	4,342.000	4,354.000	4,366.000	4,377.000	4,388.000
12.750	4,398.000	4,407.000	4,416.000	4,426.000	4,435.000
13.000	4,445.000	4,454.000	4,464.000	4,475.000	4,486.000
13.250	4,495.000	4,504.000	4,514.000	4,524.000	4,534.000
13.500	4,545.000	4,555.000	4,566.000	4,578.000	4,589.000
13.750	4,600.000	4,612.000	4,623.000	4,635.000	4,644.000
14.000	4,652.000	4,660.000	4,668.000	4,676.000	4,683.000
14.250	4,691.000	4,699.000	4,707.000	4,716.000	4,724.000
14.500	4,732.000	4,741.000	4,749.000	4,758.000	4,767.000
14.750	4,777.000	4,788.000	4,799.000	4,810.000	4,822.000
15.000	4,835.000	4,846.000	4,859.000	4,873.000	4,888.000
15.250	4,905.000	4,923.000	4,947.000	4,977.000	5,012.000
15.500	5,050.000	5,097.000	5,150.000	5,206.000	5,258.000
15.750	5,308.000	5,364.000	5,433.000	5,515.000	5,629.000
16.000	5,813.000	6,090.000	6,413.000	6,683.000	6,688.000
16.250	6,413.000	6,099.000	5,854.000	5,661.000	5,510.000
16.500	5,368.000	5,242.000	5,139.000	5,055.000	4,992.000
16.750	4,942.000	4,901.000	4,866.000	4,836.000	4,808.000
17.000	4,783.000	4,761.000	4,741.000	4,724.000	4,707.000
17.250	4,692.000	4,678.000	4,666.000	4,654.000	4,643.000
17.500	4,633.000	4,623.000	4,613.000	4,602.000	4,590.000
17.750	4,577.000	4,565.000	4,552.000	4,538.000	4,524.000
18.000	4,509.000	4,493.000	4,475.000	4,453.000	4,426.000
18.250	4,400.000	4,377.000	4,356.000	4,337.000	4,318.000
18.500	4,302.000	4,287.000	4,272.000	4,259.000	4,245.000
18.750	4,231.000	4,218.000	4,206.000	4,194.000	4,182.000
19.000	4,171.000	4,161.000	4,151.000	4,142.000	4,133.000
19.250	4,124.000	4,115.000	4,107.000	4,099.000	4,092.000
19.500	4,084.000	4,076.000	4,068.000	4,061.000	4,054.000
19.750	4,047.000	4,040.000	4,034.000	4,028.000	4,022.000
20.000	4,017.000	4,011.000	4,006.000	4,000.000	3,995.000
20.250	3,991.000	3,987.000	3,983.000	3,979.000	3,976.000

Thrifty Rialto 100-Year

Subsection: Time vs. Volume
Scenario: Post-Development 100 year
Label: South

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
20.500	3,972.000	3,968.000	3,963.000	3,959.000	3,956.000
20.750	3,952.000	3,949.000	3,945.000	3,940.000	3,936.000
21.000	3,931.000	3,926.000	3,922.000	3,918.000	3,914.000
21.250	3,910.000	3,906.000	3,902.000	3,899.000	3,896.000
21.500	3,893.000	3,891.000	3,888.000	3,885.000	3,882.000
21.750	3,879.000	3,876.000	3,873.000	3,870.000	3,867.000
22.000	3,865.000	3,863.000	3,861.000	3,860.000	3,858.000
22.250	3,856.000	3,853.000	3,850.000	3,847.000	3,844.000
22.500	3,841.000	3,839.000	3,836.000	3,834.000	3,833.000
22.750	3,831.000	3,830.000	3,829.000	3,828.000	3,827.000
23.000	3,825.000	3,822.000	3,819.000	3,815.000	3,811.000
23.250	3,807.000	3,804.000	3,801.000	3,798.000	3,796.000
23.500	3,794.000	3,792.000	3,791.000	3,789.000	3,788.000
23.750	3,787.000	3,786.000	3,785.000	3,784.000	3,782.000
24.000	3,774.000	(N/A)	(N/A)	(N/A)	(N/A)

Thrifty Rialto 100-Year

Subsection: Elevation vs. Volume Curve
Scenario: Post-Development 100 year
Label: North

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ft^3)
1,621.00	0.000
1,621.08	108.350
1,621.17	216.700
1,621.25	325.050
1,621.33	433.400
1,621.42	541.750
1,621.50	650.100
1,621.58	877.560
1,621.67	1,104.050
1,621.75	1,329.650
1,621.83	1,554.350
1,621.92	1,778.030
1,622.00	2,000.720
1,622.08	2,222.510
1,622.17	2,443.330
1,622.25	2,663.160
1,622.33	2,881.970
1,622.42	3,099.730
1,622.50	3,316.470
1,622.58	3,532.150
1,622.67	3,746.760
1,622.75	3,960.170
1,622.83	4,172.450
1,622.92	4,383.530
1,623.00	4,593.390
1,623.08	4,801.910
1,623.17	5,009.260
1,623.25	5,214.980
1,623.33	5,419.030
1,623.42	5,621.530
1,623.50	5,822.250
1,623.58	6,021.100
1,623.67	6,218.060
1,623.75	6,412.940
1,623.83	6,605.650
1,623.92	6,796.150
1,624.00	6,984.250
1,624.08	7,169.830
1,624.17	7,352.840
1,624.25	7,533.030
1,624.33	7,710.270
1,624.42	7,884.200
1,624.50	8,054.540

Thrifty Rialto 100-Year

Subsection: Elevation vs. Volume Curve
Scenario: Post-Development 100 year
Label: North

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ft^3)
1,624.58	8,220.890
1,624.67	8,382.580
1,624.75	8,539.000
1,624.83	8,689.140
1,624.92	8,831.170
1,625.00	8,960.180
1,625.08	9,083.070
1,625.17	9,201.660
1,625.25	9,315.930
1,625.33	9,424.280
1,625.42	9,532.630
1,625.50	9,640.980
1,625.58	9,749.330
1,625.67	9,857.680
1,625.75	9,966.030

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ft³)
1,618.00	0.000
1,618.08	108.070
1,618.17	216.150
1,618.25	324.220
1,618.33	432.300
1,618.42	540.370
1,618.50	648.450
1,618.58	877.760
1,618.67	1,106.120
1,618.75	1,333.540
1,618.83	1,560.030
1,618.92	1,785.500
1,619.00	2,009.990
1,619.08	2,233.540
1,619.17	2,456.130
1,619.25	2,677.720
1,619.33	2,898.300
1,619.42	3,117.830
1,619.50	3,336.340
1,619.58	3,553.790
1,619.67	3,770.160
1,619.75	3,985.370
1,619.83	4,199.440
1,619.92	4,412.310
1,620.00	4,623.960
1,620.08	4,834.300
1,620.17	5,043.450
1,620.25	5,250.950
1,620.33	5,456.840
1,620.42	5,661.120
1,620.50	5,863.640
1,620.58	6,064.290
1,620.67	6,263.010
1,620.75	6,459.670
1,620.83	6,654.150
1,620.92	6,846.370
1,621.00	7,036.190
1,621.08	7,223.460
1,621.17	7,408.110
1,621.25	7,589.920
1,621.33	7,768.700
1,621.42	7,944.120
1,621.50	8,115.870

Thrifty Rialto 100-Year

Subsection: Elevation vs. Volume Curve
Scenario: Post-Development 100 year
Label: South

Elevation-Volume

Pond Elevation (ft)	Pond Volume (ft^3)
1,621.58	8,283.510
1,621.67	8,446.440
1,621.75	8,603.980
1,621.83	8,755.080
1,621.92	8,897.810
1,622.00	9,027.110
1,622.08	9,150.160
1,622.17	9,268.810
1,622.25	9,383.030
1,622.33	9,491.100
1,622.42	9,599.180
1,622.50	9,707.250
1,622.58	9,815.330
1,622.67	9,923.400
1,622.75	10,031.480

Requested Pond Water Surface Elevations	
Minimum (Headwater)	1,621.00 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	1,625.75 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice - 1	Forward	TW	1,622.25	1,625.75
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Orifice - 1 Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	1,622.25 ft
Orifice Diameter	18.0 in
Orifice Coefficient	0.600

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

RATING TABLE FOR ONE OUTLET TYPE
Structure ID = Orifice - 1 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,621.00	0.00	(N/A)	0.00
1,621.50	0.00	(N/A)	0.00
1,622.00	0.00	(N/A)	0.00
1,622.25	0.00	(N/A)	0.00
1,622.50	0.26	(N/A)	0.00
1,623.00	2.11	(N/A)	0.00
1,623.50	5.25	(N/A)	0.00
1,624.00	8.51	(N/A)	0.00
1,624.50	10.42	(N/A)	0.00
1,625.00	12.03	(N/A)	0.00
1,625.50	13.45	(N/A)	0.00
1,625.75	14.10	(N/A)	0.00

Computation Messages
HW & TW below invert
HW & TW below invert
HW & TW below invert
Upstream HW & DNstream TW < Inv.El
CRIT.DEPTH CONTROL Vh= .064ft Dcr= .186ft
CRIT.DEPTH Hev= .00ft
CRIT.DEPTH CONTROL Vh= .202ft Dcr= .548ft
CRIT.DEPTH Hev= .00ft
CRIT.DEPTH CONTROL Vh= .366ft Dcr= .883ft
CRIT.DEPTH Hev= .00ft
H =1.00
H =1.50
H =2.00
H =2.50
H =2.75

Thrifty Rialto 100-Year

Subsection: Composite Rating Curve
Scenario: Post-Development 100 year
Label: Composite Outlet Structure - 1

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,621.00	0.00	(N/A)	0.00
1,621.50	0.00	(N/A)	0.00
1,622.00	0.00	(N/A)	0.00
1,622.25	0.00	(N/A)	0.00
1,622.50	0.26	(N/A)	0.00
1,623.00	2.11	(N/A)	0.00
1,623.50	5.25	(N/A)	0.00
1,624.00	8.51	(N/A)	0.00
1,624.50	10.42	(N/A)	0.00
1,625.00	12.03	(N/A)	0.00
1,625.50	13.45	(N/A)	0.00
1,625.75	14.10	(N/A)	0.00

Contributing Structures
None Contributing
None Contributing
None Contributing
None Contributing
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1

Requested Pond Water Surface Elevations	
Minimum (Headwater)	1,618.00 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	1,622.75 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice - 1	Forward	TW	1,619.50	1,622.75
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Orifice - 1 Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	1,619.50 ft
Orifice Diameter	18.0 in
Orifice Coefficient	0.600

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

RATING TABLE FOR ONE OUTLET TYPE
Structure ID = Orifice - 1 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,618.00	0.00	(N/A)	0.00
1,618.50	0.00	(N/A)	0.00
1,619.00	0.00	(N/A)	0.00
1,619.50	0.00	(N/A)	0.00
1,620.00	0.98	(N/A)	0.00
1,620.50	3.55	(N/A)	0.00
1,621.00	7.37	(N/A)	0.00
1,621.50	9.51	(N/A)	0.00
1,622.00	11.25	(N/A)	0.00
1,622.50	12.76	(N/A)	0.00
1,622.75	13.45	(N/A)	0.00

Computation Messages
HW & TW below invert
HW & TW below invert
HW & TW below invert
Upstream HW & DNstream TW < Inv.El
CRIT.DEPTH CONTROL Vh= .130ft Dcr= .369ft
CRIT.DEPTH Hev= .00ft
CRIT.DEPTH CONTROL Vh= .279ft Dcr= .720ft
CRIT.DEPTH Hev= .00ft
H =.75
H =1.25
H =1.75
H =2.25
H =2.50

Thrifty Rialto 100-Year

Subsection: Composite Rating Curve
Scenario: Post-Development 100 year
Label: Composite Outlet Structure - 2

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,618.00	0.00	(N/A)	0.00
1,618.50	0.00	(N/A)	0.00
1,619.00	0.00	(N/A)	0.00
1,619.50	0.00	(N/A)	0.00
1,620.00	0.98	(N/A)	0.00
1,620.50	3.55	(N/A)	0.00
1,621.00	7.37	(N/A)	0.00
1,621.50	9.51	(N/A)	0.00
1,622.00	11.25	(N/A)	0.00
1,622.50	12.76	(N/A)	0.00
1,622.75	13.45	(N/A)	0.00

Contributing Structures
None Contributing
None Contributing
None Contributing
None Contributing
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1

Thrifty Rialto 100-Year

Subsection: Elevation-Volume-Flow Table (Pond) Scenario: Post-Development 100 year

Label: North

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,621.00 ft
Volume (Initial)	0.000 ft³
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft³/s)	Storage (ft³)	Area (acres)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
1,621.00	0.00	0.000	0.000	0.00	0.00	0.00
1,621.50	0.00	650.100	0.000	0.00	0.00	7.22
1,622.00	0.00	2,000.720	0.000	0.00	0.00	22.23
1,622.25	0.00	2,663.160	0.000	0.00	0.00	29.59
1,622.50	0.26	3,316.470	0.000	0.00	0.26	37.11
1,623.00	2.11	4,593.390	0.000	0.00	2.11	53.15
1,623.50	5.25	5,822.250	0.000	0.00	5.25	69.94
1,624.00	8.51	6,984.250	0.000	0.00	8.51	86.11
1,624.50	10.42	8,054.540	0.000	0.00	10.42	99.91
1,625.00	12.03	8,960.180	0.000	0.00	12.03	111.59
1,625.50	13.45	9,640.980	0.000	0.00	13.45	120.57
1,625.75	14.10	9,966.030	0.000	0.00	14.10	124.84

Subsection: Detention Time
Label: North (IN)

Scenario: Post-Development 100 year

Infiltration	
Infiltration Method (Computed)	No Infiltration

Approximate Detention Times	
Time to Peak (Outflow + Infiltration, Peak to Peak Detention Time)	16.200 hours
Time to Peak (Inflow, Peak to Peak Detention Time)	16.100 hours
Detention Time (Peak to Peak)	0.100 hours
Time to Centroid (Outflow)	14.430 hours
Time to Centroid (Inflow)	13.553 hours
Detention Time (Centroid to Centroid)	0.877 hours
Weighted Average Plug Time	1.466 hours
Maximum Plug Volume Plug Time	0.443 hours
Maximum Inflow Plug Volume	1,036.500 ft^3
Time (Maximum Plug Volume, Start)	16.100 hours
Time (Maximum Plug Volume, End)	16.150 hours

Thrifty Rialto 100-Year

Subsection: Level Pool Pond Routing Summary
Scenario: Post-Development 100 year
Label: North (IN)

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,621.00 ft
Volume (Initial)	0.000 ft³
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	6.10 ft³/s	Time to Peak (Flow, In)	16.100 hours
Flow (Peak Outlet)	4.95 ft³/s	Time to Peak (Flow, Outlet)	16.200 hours

Elevation (Water Surface, Peak)	1,623.45 ft
Volume (Peak)	5,700.174 ft³

Mass Balance (ft³)	
Volume (Initial)	0.000 ft³
Volume (Total Inflow)	54,539.000 ft³
Volume (Total Infiltration)	0.000 ft³
Volume (Total Outlet Outflow)	51,194.000 ft³
Volume (Retained)	3,295.000 ft³
Volume (Unrouted)	-50.000 ft³
Error (Mass Balance)	0.1 %

Thrifty Rialto 100-Year

Subsection: Pond Routed Hydrograph (total out) Scenario: Post-Development 100 year
Label: North (OUT)

Peak Discharge	4.95 ft³/s
Time to Peak	16.200 hours
Hydrograph Volume	51,193.694 ft³

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
2.550	0.00	0.02	0.04	0.06	0.08
2.800	0.09	0.11	0.12	0.14	0.15
3.050	0.16	0.17	0.18	0.19	0.20
3.300	0.21	0.22	0.23	0.23	0.24
3.550	0.25	0.25	0.26	0.28	0.29
3.800	0.30	0.31	0.31	0.32	0.32
4.050	0.33	0.33	0.33	0.33	0.34
4.300	0.34	0.34	0.34	0.34	0.34
4.550	0.34	0.34	0.34	0.34	0.35
4.800	0.35	0.35	0.35	0.35	0.35
5.050	0.35	0.35	0.35	0.35	0.35
5.300	0.35	0.36	0.36	0.36	0.36
5.550	0.36	0.36	0.36	0.36	0.36
5.800	0.37	0.37	0.37	0.37	0.37
6.050	0.37	0.37	0.37	0.37	0.37
6.300	0.37	0.38	0.38	0.38	0.38
6.550	0.38	0.38	0.38	0.38	0.38
6.800	0.39	0.39	0.39	0.39	0.39
7.050	0.39	0.39	0.39	0.39	0.40
7.300	0.40	0.40	0.40	0.40	0.40
7.550	0.40	0.40	0.40	0.41	0.41
7.800	0.41	0.41	0.41	0.41	0.42
8.050	0.42	0.42	0.42	0.42	0.42
8.300	0.42	0.42	0.42	0.43	0.43
8.550	0.43	0.43	0.43	0.43	0.44
8.800	0.44	0.44	0.44	0.44	0.44
9.050	0.45	0.45	0.45	0.45	0.45
9.300	0.45	0.46	0.46	0.46	0.46
9.550	0.46	0.46	0.47	0.47	0.47
9.800	0.47	0.47	0.48	0.48	0.48
10.050	0.48	0.49	0.49	0.49	0.49
10.300	0.49	0.49	0.50	0.50	0.50
10.550	0.50	0.50	0.51	0.51	0.51
10.800	0.52	0.52	0.52	0.52	0.53
11.050	0.53	0.53	0.53	0.53	0.54
11.300	0.54	0.54	0.55	0.55	0.55
11.550	0.56	0.56	0.56	0.57	0.57

Thrifty Rialto 100-Year

Subsection: Pond Routed Hydrograph (total out) Scenario: Post-Development 100 year
Label: North (OUT)

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
11.800	0.57	0.58	0.58	0.58	0.59
12.050	0.59	0.60	0.61	0.63	0.64
12.300	0.66	0.67	0.68	0.69	0.70
12.550	0.71	0.72	0.73	0.73	0.74
12.800	0.74	0.75	0.76	0.76	0.77
13.050	0.77	0.78	0.78	0.79	0.80
13.300	0.80	0.81	0.82	0.82	0.83
13.550	0.84	0.84	0.85	0.86	0.87
13.800	0.88	0.88	0.89	0.90	0.91
14.050	0.92	0.93	0.94	0.95	0.97
14.300	0.98	0.99	1.00	1.02	1.03
14.550	1.04	1.06	1.07	1.09	1.10
14.800	1.12	1.14	1.15	1.17	1.19
15.050	1.22	1.24	1.27	1.29	1.33
15.300	1.36	1.39	1.43	1.49	1.56
15.550	1.63	1.71	1.79	1.88	1.97
15.800	2.07	2.22	2.42	2.62	2.98
16.050	3.58	4.33	4.87	4.95	4.74
16.300	4.35	3.85	3.27	2.76	2.37
16.550	2.09	1.94	1.82	1.70	1.59
16.800	1.50	1.42	1.35	1.29	1.24
17.050	1.19	1.15	1.11	1.07	1.04
17.300	1.01	0.98	0.96	0.94	0.91
17.550	0.89	0.88	0.86	0.84	0.83
17.800	0.81	0.80	0.79	0.78	0.77
18.050	0.76	0.74	0.72	0.70	0.68
18.300	0.66	0.64	0.63	0.62	0.60
18.550	0.59	0.58	0.57	0.57	0.56
18.800	0.55	0.54	0.54	0.53	0.53
19.050	0.52	0.51	0.51	0.50	0.50
19.300	0.49	0.49	0.48	0.48	0.48
19.550	0.47	0.47	0.47	0.46	0.46
19.800	0.46	0.45	0.45	0.45	0.44
20.050	0.44	0.44	0.43	0.43	0.43
20.300	0.42	0.42	0.42	0.42	0.41
20.550	0.41	0.41	0.41	0.40	0.40
20.800	0.40	0.39	0.39	0.39	0.39
21.050	0.38	0.38	0.38	0.38	0.38
21.300	0.37	0.37	0.37	0.37	0.37
21.550	0.37	0.36	0.36	0.36	0.36
21.800	0.36	0.36	0.35	0.35	0.35
22.050	0.35	0.35	0.35	0.34	0.34

Thrifty Rialto 100-Year

Subsection: Pond Routed Hydrograph (total out) Scenario: Post-Development 100 year
Label: North (OUT)

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
22.300	0.34	0.34	0.34	0.34	0.33
22.550	0.33	0.33	0.33	0.33	0.33
22.800	0.32	0.32	0.32	0.32	0.32
23.050	0.32	0.32	0.32	0.31	0.31
23.300	0.31	0.31	0.31	0.31	0.31
23.550	0.31	0.31	0.30	0.30	0.30
23.800	0.30	0.30	0.30	0.30	0.30

Thrifty Rialto 100-Year

Subsection: Pond Inflow Summary
Scenario: Post-Development 100 year
Label: North (IN)

Summary for Hydrograph Addition at 'North'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	DA 1

Node Inflows

Inflow Type	Element	Volume (ft³)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	DA 1	54,706.089	16.100	6.10
Flow (In)	North	54,538.899	16.100	6.10

Thrifty Rialto 100-Year

Subsection: Diverted Hydrograph
Scenario: Post-Development 100 year
Label: Outlet-1

Peak Discharge	4.95 ft³/s
Time to Peak	16.200 hours
Hydrograph Volume	51,193.694 ft³

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
2.550	0.00	0.02	0.04	0.06	0.08
2.800	0.09	0.11	0.12	0.14	0.15
3.050	0.16	0.17	0.18	0.19	0.20
3.300	0.21	0.22	0.23	0.23	0.24
3.550	0.25	0.25	0.26	0.28	0.29
3.800	0.30	0.31	0.31	0.32	0.32
4.050	0.33	0.33	0.33	0.33	0.34
4.300	0.34	0.34	0.34	0.34	0.34
4.550	0.34	0.34	0.34	0.34	0.35
4.800	0.35	0.35	0.35	0.35	0.35
5.050	0.35	0.35	0.35	0.35	0.35
5.300	0.35	0.36	0.36	0.36	0.36
5.550	0.36	0.36	0.36	0.36	0.36
5.800	0.37	0.37	0.37	0.37	0.37
6.050	0.37	0.37	0.37	0.37	0.37
6.300	0.37	0.38	0.38	0.38	0.38
6.550	0.38	0.38	0.38	0.38	0.38
6.800	0.39	0.39	0.39	0.39	0.39
7.050	0.39	0.39	0.39	0.39	0.40
7.300	0.40	0.40	0.40	0.40	0.40
7.550	0.40	0.40	0.40	0.41	0.41
7.800	0.41	0.41	0.41	0.41	0.42
8.050	0.42	0.42	0.42	0.42	0.42
8.300	0.42	0.42	0.42	0.43	0.43
8.550	0.43	0.43	0.43	0.43	0.44
8.800	0.44	0.44	0.44	0.44	0.44
9.050	0.45	0.45	0.45	0.45	0.45
9.300	0.45	0.46	0.46	0.46	0.46
9.550	0.46	0.46	0.47	0.47	0.47
9.800	0.47	0.47	0.48	0.48	0.48
10.050	0.48	0.49	0.49	0.49	0.49
10.300	0.49	0.49	0.50	0.50	0.50
10.550	0.50	0.50	0.51	0.51	0.51
10.800	0.52	0.52	0.52	0.52	0.53
11.050	0.53	0.53	0.53	0.53	0.54
11.300	0.54	0.54	0.55	0.55	0.55
11.550	0.56	0.56	0.56	0.57	0.57

Thrifty Rialto 100-Year

Subsection: Diverted Hydrograph
Scenario: Post-Development 100 year
Label: Outlet-1

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
11.800	0.57	0.58	0.58	0.58	0.59
12.050	0.59	0.60	0.61	0.63	0.64
12.300	0.66	0.67	0.68	0.69	0.70
12.550	0.71	0.72	0.73	0.73	0.74
12.800	0.74	0.75	0.76	0.76	0.77
13.050	0.77	0.78	0.78	0.79	0.80
13.300	0.80	0.81	0.82	0.82	0.83
13.550	0.84	0.84	0.85	0.86	0.87
13.800	0.88	0.88	0.89	0.90	0.91
14.050	0.92	0.93	0.94	0.95	0.97
14.300	0.98	0.99	1.00	1.02	1.03
14.550	1.04	1.06	1.07	1.09	1.10
14.800	1.12	1.14	1.15	1.17	1.19
15.050	1.22	1.24	1.27	1.29	1.33
15.300	1.36	1.39	1.43	1.49	1.56
15.550	1.63	1.71	1.79	1.88	1.97
15.800	2.07	2.22	2.42	2.62	2.98
16.050	3.58	4.33	4.87	4.95	4.74
16.300	4.35	3.85	3.27	2.76	2.37
16.550	2.09	1.94	1.82	1.70	1.59
16.800	1.50	1.42	1.35	1.29	1.24
17.050	1.19	1.15	1.11	1.07	1.04
17.300	1.01	0.98	0.96	0.94	0.91
17.550	0.89	0.88	0.86	0.84	0.83
17.800	0.81	0.80	0.79	0.78	0.77
18.050	0.76	0.74	0.72	0.70	0.68
18.300	0.66	0.64	0.63	0.62	0.60
18.550	0.59	0.58	0.57	0.57	0.56
18.800	0.55	0.54	0.54	0.53	0.53
19.050	0.52	0.51	0.51	0.50	0.50
19.300	0.49	0.49	0.48	0.48	0.48
19.550	0.47	0.47	0.47	0.46	0.46
19.800	0.46	0.45	0.45	0.45	0.44
20.050	0.44	0.44	0.43	0.43	0.43
20.300	0.42	0.42	0.42	0.42	0.41
20.550	0.41	0.41	0.41	0.40	0.40
20.800	0.40	0.39	0.39	0.39	0.39
21.050	0.38	0.38	0.38	0.38	0.38
21.300	0.37	0.37	0.37	0.37	0.37
21.550	0.37	0.36	0.36	0.36	0.36
21.800	0.36	0.36	0.35	0.35	0.35
22.050	0.35	0.35	0.35	0.34	0.34

Thrifty Rialto 100-Year

Subsection: Diverted Hydrograph
Scenario: Post-Development 100 year
Label: Outlet-1

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
22.300	0.34	0.34	0.34	0.34	0.33
22.550	0.33	0.33	0.33	0.33	0.33
22.800	0.32	0.32	0.32	0.32	0.32
23.050	0.32	0.32	0.32	0.31	0.31
23.300	0.31	0.31	0.31	0.31	0.31
23.550	0.31	0.31	0.30	0.30	0.30
23.800	0.30	0.30	0.30	0.30	0.30

Thrifty Rialto 100-Year

Subsection: Diverted Hydrograph
Scenario: Post-Development 100 year
Label: Outlet-2

Peak Discharge	6.19 ft³/s
Time to Peak	16.200 hours
Hydrograph Volume	57,925.607 ft³

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
2.750	0.00	0.03	0.07	0.11	0.14
3.000	0.17	0.20	0.22	0.24	0.26
3.250	0.27	0.28	0.29	0.30	0.31
3.500	0.32	0.33	0.33	0.34	0.34
3.750	0.35	0.35	0.36	0.36	0.37
4.000	0.37	0.37	0.37	0.38	0.38
4.250	0.38	0.38	0.38	0.38	0.38
4.500	0.38	0.39	0.39	0.39	0.39
4.750	0.39	0.39	0.39	0.39	0.39
5.000	0.39	0.39	0.40	0.40	0.40
5.250	0.40	0.40	0.40	0.40	0.40
5.500	0.41	0.41	0.41	0.41	0.41
5.750	0.41	0.41	0.41	0.41	0.41
6.000	0.41	0.41	0.41	0.41	0.42
6.250	0.42	0.42	0.42	0.42	0.42
6.500	0.42	0.42	0.43	0.43	0.43
6.750	0.43	0.43	0.43	0.43	0.44
7.000	0.44	0.44	0.44	0.44	0.44
7.250	0.45	0.45	0.45	0.45	0.45
7.500	0.45	0.45	0.45	0.46	0.46
7.750	0.46	0.46	0.46	0.46	0.46
8.000	0.46	0.47	0.47	0.47	0.47
8.250	0.47	0.47	0.48	0.48	0.48
8.500	0.48	0.48	0.48	0.48	0.49
8.750	0.49	0.49	0.49	0.49	0.49
9.000	0.50	0.50	0.50	0.50	0.50
9.250	0.51	0.51	0.51	0.51	0.51
9.500	0.52	0.52	0.52	0.52	0.53
9.750	0.53	0.53	0.53	0.53	0.53
10.000	0.54	0.54	0.54	0.54	0.55
10.250	0.55	0.55	0.55	0.55	0.56
10.500	0.56	0.56	0.56	0.57	0.57
10.750	0.57	0.57	0.58	0.58	0.58
11.000	0.59	0.59	0.59	0.60	0.60
11.250	0.60	0.61	0.61	0.61	0.61
11.500	0.62	0.62	0.62	0.63	0.63
11.750	0.63	0.64	0.64	0.64	0.65

Thrifty Rialto 100-Year

Subsection: Diverted Hydrograph
Scenario: Post-Development 100 year
Label: Outlet-2

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
12.000	0.65	0.66	0.67	0.68	0.69
12.250	0.70	0.72	0.73	0.74	0.75
12.500	0.76	0.77	0.78	0.79	0.80
12.750	0.81	0.82	0.82	0.83	0.84
13.000	0.85	0.85	0.86	0.87	0.88
13.250	0.88	0.89	0.90	0.90	0.91
13.500	0.92	0.93	0.94	0.94	0.95
13.750	0.96	0.97	0.98	1.00	1.02
14.000	1.03	1.05	1.06	1.08	1.09
14.250	1.11	1.13	1.14	1.16	1.17
14.500	1.19	1.21	1.22	1.24	1.26
14.750	1.28	1.30	1.32	1.34	1.37
15.000	1.39	1.42	1.44	1.48	1.51
15.250	1.55	1.59	1.64	1.71	1.78
15.500	1.87	1.96	2.07	2.18	2.28
15.750	2.38	2.49	2.63	2.81	3.07
16.000	3.45	4.25	5.31	6.17	6.19
16.250	5.31	4.28	3.53	3.14	2.80
16.500	2.50	2.25	2.04	1.88	1.74
16.750	1.63	1.54	1.46	1.39	1.34
17.000	1.29	1.25	1.21	1.17	1.14
17.250	1.11	1.08	1.06	1.04	1.02
17.500	1.00	0.98	0.97	0.96	0.95
17.750	0.94	0.93	0.92	0.91	0.90
18.000	0.89	0.88	0.87	0.85	0.83
18.250	0.81	0.79	0.78	0.76	0.74
18.500	0.73	0.72	0.71	0.69	0.68
18.750	0.67	0.66	0.65	0.64	0.63
19.000	0.63	0.62	0.61	0.60	0.60
19.250	0.59	0.58	0.58	0.57	0.57
19.500	0.56	0.56	0.55	0.54	0.54
19.750	0.53	0.53	0.52	0.52	0.52
20.000	0.51	0.51	0.50	0.50	0.50
20.250	0.49	0.49	0.49	0.48	0.48
20.500	0.48	0.48	0.47	0.47	0.47
20.750	0.47	0.46	0.46	0.46	0.45
21.000	0.45	0.45	0.44	0.44	0.44
21.250	0.43	0.43	0.43	0.43	0.42
21.500	0.42	0.42	0.42	0.42	0.41
21.750	0.41	0.41	0.41	0.41	0.40
22.000	0.40	0.40	0.40	0.40	0.40
22.250	0.39	0.39	0.39	0.39	0.39

Thrifty Rialto 100-Year

Subsection: Diverted Hydrograph
Scenario: Post-Development 100 year
Label: Outlet-2

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
22.500	0.38	0.38	0.38	0.38	0.38
22.750	0.38	0.38	0.38	0.37	0.37
23.000	0.37	0.37	0.37	0.36	0.36
23.250	0.36	0.36	0.35	0.35	0.35
23.500	0.35	0.35	0.35	0.35	0.35
23.750	0.34	0.34	0.34	0.34	0.34
24.000	0.34	(N/A)	(N/A)	(N/A)	(N/A)

Thrifty Rialto 100-Year

Subsection: Elevation-Volume-Flow Table (Pond) Scenario: Post-Development 100 year

Label: South

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,618.00 ft
Volume (Initial)	0.000 ft³
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Elevation (ft)	Outflow (ft³/s)	Storage (ft³)	Area (acres)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
1,618.00	0.00	0.000	0.000	0.00	0.00	0.00
1,618.50	0.00	648.450	0.000	0.00	0.00	7.21
1,619.00	0.00	2,009.990	0.000	0.00	0.00	22.33
1,619.50	0.00	3,336.340	0.000	0.00	0.00	37.07
1,620.00	0.98	4,623.960	0.000	0.00	0.98	52.36
1,620.50	3.55	5,863.640	0.000	0.00	3.55	68.70
1,621.00	7.37	7,036.190	0.000	0.00	7.37	85.55
1,621.50	9.51	8,115.870	0.000	0.00	9.51	99.69
1,622.00	11.25	9,027.110	0.000	0.00	11.25	111.55
1,622.50	12.76	9,707.250	0.000	0.00	12.76	120.62
1,622.75	13.45	10,031.480	0.000	0.00	13.45	124.91

Subsection: Detention Time
Label: South (IN)

Scenario: Post-Development 100 year

Infiltration	
Infiltration Method (Computed)	No Infiltration

Approximate Detention Times	
Time to Peak (Outflow + Infiltration, Peak to Peak Detention Time)	16.200 hours
Time to Peak (Inflow, Peak to Peak Detention Time)	16.100 hours
Detention Time (Peak to Peak)	0.100 hours
Time to Centroid (Outflow)	14.454 hours
Time to Centroid (Inflow)	13.523 hours
Detention Time (Centroid to Centroid)	0.930 hours
Weighted Average Plug Time	1.517 hours
Maximum Plug Volume Plug Time	0.527 hours
Maximum Inflow Plug Volume	1,297.938 ft^3
Time (Maximum Plug Volume, Start)	16.100 hours
Time (Maximum Plug Volume, End)	16.150 hours

Thrifty Rialto 100-Year

Subsection: Level Pool Pond Routing Summary
Scenario: Post-Development 100 year
Label: South (IN)

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,618.00 ft
Volume (Initial)	0.000 ft³
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	0.050 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	7.22 ft³/s	Time to Peak (Flow, In)	16.100 hours
Flow (Peak Outlet)	6.19 ft³/s	Time to Peak (Flow, Outlet)	16.200 hours

Elevation (Water Surface, Peak)	1,620.85 ft
Volume (Peak)	6,687.608 ft³

Mass Balance (ft³)	
Volume (Initial)	0.000 ft³
Volume (Total Inflow)	61,703.000 ft³
Volume (Total Infiltration)	0.000 ft³
Volume (Total Outlet Outflow)	57,926.000 ft³
Volume (Retained)	3,721.000 ft³
Volume (Unrouted)	-57.000 ft³
Error (Mass Balance)	0.1 %

Thrifty Rialto 100-Year

Subsection: Pond Routed Hydrograph (total out) Scenario: Post-Development 100 year
Label: South (OUT)

Peak Discharge	6.19 ft³/s
Time to Peak	16.200 hours
Hydrograph Volume	57,925.607 ft³

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
2.750	0.00	0.03	0.07	0.11	0.14
3.000	0.17	0.20	0.22	0.24	0.26
3.250	0.27	0.28	0.29	0.30	0.31
3.500	0.32	0.33	0.33	0.34	0.34
3.750	0.35	0.35	0.36	0.36	0.37
4.000	0.37	0.37	0.37	0.38	0.38
4.250	0.38	0.38	0.38	0.38	0.38
4.500	0.38	0.39	0.39	0.39	0.39
4.750	0.39	0.39	0.39	0.39	0.39
5.000	0.39	0.39	0.40	0.40	0.40
5.250	0.40	0.40	0.40	0.40	0.40
5.500	0.41	0.41	0.41	0.41	0.41
5.750	0.41	0.41	0.41	0.41	0.41
6.000	0.41	0.41	0.41	0.41	0.42
6.250	0.42	0.42	0.42	0.42	0.42
6.500	0.42	0.42	0.43	0.43	0.43
6.750	0.43	0.43	0.43	0.43	0.44
7.000	0.44	0.44	0.44	0.44	0.44
7.250	0.45	0.45	0.45	0.45	0.45
7.500	0.45	0.45	0.45	0.46	0.46
7.750	0.46	0.46	0.46	0.46	0.46
8.000	0.46	0.47	0.47	0.47	0.47
8.250	0.47	0.47	0.48	0.48	0.48
8.500	0.48	0.48	0.48	0.48	0.49
8.750	0.49	0.49	0.49	0.49	0.49
9.000	0.50	0.50	0.50	0.50	0.50
9.250	0.51	0.51	0.51	0.51	0.51
9.500	0.52	0.52	0.52	0.52	0.53
9.750	0.53	0.53	0.53	0.53	0.53
10.000	0.54	0.54	0.54	0.54	0.55
10.250	0.55	0.55	0.55	0.55	0.56
10.500	0.56	0.56	0.56	0.57	0.57
10.750	0.57	0.57	0.58	0.58	0.58
11.000	0.59	0.59	0.59	0.60	0.60
11.250	0.60	0.61	0.61	0.61	0.61
11.500	0.62	0.62	0.62	0.63	0.63
11.750	0.63	0.64	0.64	0.64	0.65

Thrifty Rialto 100-Year

Subsection: Pond Routed Hydrograph (total out) Scenario: Post-Development 100 year
Label: South (OUT)

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
12.000	0.65	0.66	0.67	0.68	0.69
12.250	0.70	0.72	0.73	0.74	0.75
12.500	0.76	0.77	0.78	0.79	0.80
12.750	0.81	0.82	0.82	0.83	0.84
13.000	0.85	0.85	0.86	0.87	0.88
13.250	0.88	0.89	0.90	0.90	0.91
13.500	0.92	0.93	0.94	0.94	0.95
13.750	0.96	0.97	0.98	1.00	1.02
14.000	1.03	1.05	1.06	1.08	1.09
14.250	1.11	1.13	1.14	1.16	1.17
14.500	1.19	1.21	1.22	1.24	1.26
14.750	1.28	1.30	1.32	1.34	1.37
15.000	1.39	1.42	1.44	1.48	1.51
15.250	1.55	1.59	1.64	1.71	1.78
15.500	1.87	1.96	2.07	2.18	2.28
15.750	2.38	2.49	2.63	2.81	3.07
16.000	3.45	4.25	5.31	6.17	6.19
16.250	5.31	4.28	3.53	3.14	2.80
16.500	2.50	2.25	2.04	1.88	1.74
16.750	1.63	1.54	1.46	1.39	1.34
17.000	1.29	1.25	1.21	1.17	1.14
17.250	1.11	1.08	1.06	1.04	1.02
17.500	1.00	0.98	0.97	0.96	0.95
17.750	0.94	0.93	0.92	0.91	0.90
18.000	0.89	0.88	0.87	0.85	0.83
18.250	0.81	0.79	0.78	0.76	0.74
18.500	0.73	0.72	0.71	0.69	0.68
18.750	0.67	0.66	0.65	0.64	0.63
19.000	0.63	0.62	0.61	0.60	0.60
19.250	0.59	0.58	0.58	0.57	0.57
19.500	0.56	0.56	0.55	0.54	0.54
19.750	0.53	0.53	0.52	0.52	0.52
20.000	0.51	0.51	0.50	0.50	0.50
20.250	0.49	0.49	0.49	0.48	0.48
20.500	0.48	0.48	0.47	0.47	0.47
20.750	0.47	0.46	0.46	0.46	0.45
21.000	0.45	0.45	0.44	0.44	0.44
21.250	0.43	0.43	0.43	0.43	0.42
21.500	0.42	0.42	0.42	0.42	0.41
21.750	0.41	0.41	0.41	0.41	0.40
22.000	0.40	0.40	0.40	0.40	0.40
22.250	0.39	0.39	0.39	0.39	0.39

Thrifty Rialto 100-Year

Subsection: Pond Routed Hydrograph (total out) Scenario: Post-Development 100 year
Label: South (OUT)

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
22.500	0.38	0.38	0.38	0.38	0.38
22.750	0.38	0.38	0.38	0.37	0.37
23.000	0.37	0.37	0.37	0.36	0.36
23.250	0.36	0.36	0.35	0.35	0.35
23.500	0.35	0.35	0.35	0.35	0.35
23.750	0.34	0.34	0.34	0.34	0.34
24.000	0.34	(N/A)	(N/A)	(N/A)	(N/A)

Summary for Hydrograph Addition at 'South'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	DA 3.2
<Catchment to Outflow Node>	DA 2
<Catchment to Outflow Node>	DA 3.1

Node Inflows

Inflow Type	Element	Volume (ft³)	Time to Peak (hours)	Flow (Peak) (ft³/s)
Flow (From)	DA 3.2	25,290.262	16.140	3.22
Flow (From)	DA 2	7,788.436	16.140	0.92
Flow (From)	DA 3.1	28,747.851	16.120	3.78
Flow (In)	South	61,703.475	16.100	7.22

Index

C

Composite Outlet Structure - 1 (Composite Rating Curve)...

Composite Outlet Structure - 1 (Individual Outlet Curves)...

Composite Outlet Structure - 1 (Outlet Input Data)...

Composite Outlet Structure - 2 (Composite Rating Curve)...

Composite Outlet Structure - 2 (Individual Outlet Curves)...

Composite Outlet Structure - 2 (Outlet Input Data)...

Composite Rating Curve...32, 36

D

DA 1 (Read Hydrograph)...

DA 2 (Read Hydrograph)...

DA 3.1 (Read Hydrograph)...

DA 3.2 (Read Hydrograph)...

Detention Time...38, 51

Diverted Hydrograph...44, 45, 46, 47, 48, 49

M

Master Network Summary...3

N

North (Elevation vs. Volume Curve)...

North (Elevation-Volume-Flow Table (Pond))...

North (IN) (Detention Time)...

North (IN) (Level Pool Pond Routing Summary)...

North (IN) (Pond Inflow Summary)...

North (OUT) (Pond Routed Hydrograph (total out))...

North (OUT) (Time vs. Elevation)...

North (Time vs. Volume)...

O

O-1 (Addition Summary)...

O-2 (Addition Summary)...

Outlet Input Data...29, 30, 33, 34

Outlet-1 (Diverted Hydrograph)...

Outlet-2 (Diverted Hydrograph)...

S

South (Elevation vs. Volume Curve)...

South (Elevation-Volume-Flow Table (Pond))...

South (IN) (Detention Time)...

South (IN) (Level Pool Pond Routing Summary)...

South (IN) (Pond Inflow Summary)...

South (OUT) (Pond Routed Hydrograph (total out))...

South (OUT) (Time vs. Elevation)...

South (Time vs. Volume)...

U

User Notifications...2

APPENDIX I

RESULTS OF INFILTRATION TESTING

GEOTECHNICAL INVESTIGATION

PROPOSED INDUSTRIAL DEVELOPMENT
NWC OF LOCUST AVENUE AND LOWELL STREET
RIALTO, CALIFORNIA

GEOCON
WEST, INC.

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

BEST CALIFORNIA GAS, LTD
SANTA FE SPRINGS, CALIFORNIA

PROJECT NO. W1393-99-01

AUGUST 31, 2021

Project No. W1393-99-01
August 31, 2021

Best California Gas, Ltd
13116 Imperial Highway
Santa Fe Springs, California 90670

Attention: Ms. Jaime Jones

Subject: GEOTECHNICAL INVESTIGATION
PROPOSED INDUSTRIAL DEVELOPMENT
NWC OF LOCUST AVENUE AND LOWELL STREET
RIALTO, CALIFORNIA

Dear Ms. Jones:

In accordance with your authorization of our proposal dated May 3, 2021, we have prepared this geotechnical investigation report for the proposed industrial development located at the northwest corner of Locust Avenue and Lowell Street in the City of Rialto, California. The accompanying report presents the findings of our study and our conclusions and recommendations pertaining to the geotechnical aspects of proposed design and construction. Based on the results of our investigation, it is our opinion that the site can be developed as proposed, provided the recommendations of this report are followed and implemented during design and construction.

If you have any questions regarding this report, or if we may be of further service, please contact the undersigned.

Very truly yours,

GEOCON WEST, INC.

REGISTERED PROFESSIONAL ENGINEER
PETRINA ZEN
C87489
CIVIL
STATE OF CALIFORNIA

PROFESSIONAL GEOLOGIST
GERALD KASMAN
NO. 2251
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
JELISA THOMAS ADAMS
GE3092
GEOTECHNICAL
STATE OF CALIFORNIA

Petrina Zen	Gerald A. Kasman	Jelisa Thomas Adams
PE 89489	CEG 2251	GE 3092

(EMAIL) Addressee

TABLE OF CONTENTS

1. PURPOSE AND SCOPE 1
2. SITE CONDITIONS & PROJECT DESCRIPTION 1
3. GEOLOGIC SETTING 2
4. GEOLOGIC MATERIALS 2
   - 4.1 Artificial Fill 2
   - 4.2 Alluvium 3
5. GROUNDWATER 3
6. GEOLOGIC HAZARDS 4
   - 6.1 Surface Fault Rupture 4
   - 6.2 Seismicity 5
   - 6.3 Seismic Design Criteria 5
   - 6.4 Liquefaction Potential 7
   - 6.5 Slope Stability 8
   - 6.6 Earthquake-Induced Flooding 8
   - 6.7 Tsunamis, Seiches and Flooding 8
   - 6.8 Oil Fields & Methane 8
   - 6.9 Subsidence 9
7. CONCLUSIONS AND RECOMMENDATIONS 10
   - 7.1 General 10
   - 7.2 Soil and Excavation Characteristics 12
   - 7.3 Minimum Resistivity, pH and Water-Soluble Sulfate 12
   - 7.4 Grading 13
   - 7.5 Shrinkage 16
   - 7.6 Foundation Design 16
   - 7.7 Foundation Settlement 17
   - 7.8 Miscellaneous Foundations 18
   - 7.9 Lateral Design 18
   - 7.10 Concrete Slabs-on-Grade 18
   - 7.11 Preliminary Pavement Recommendations 20
   - 7.12 Retaining Wall Design 22
   - 7.13 Retaining Wall Drainage 23
   - 7.14 Temporary Excavations 24
   - 7.15 Stormwater Infiltration 25
   - 7.16 Surface Drainage 26
   - 7.17 Plan Review 27

LIMITATIONS AND UNIFORMITY OF CONDITIONS

LIST OF REFERENCES

TABLE OF CONTENTS (Continued)

MAPS, TABLES, AND ILLUSTRATIONS
- Figure 1, Vicinity Map
- Figure 2, Site Plan
- Figure 3, Regional Fault Map
- Figure 4, Regional Seismicity Map
- Figures 5 and 6, Retaining Wall Drain Detail
- Figure 7, Percolation Test Results

APPENDIX A
- FIELD INVESTIGATION
- Figures A1 through A10, Boring Logs

APPENDIX B
- LABORATORY TESTING
- Figures B1 and B2, Direct Shear Test Results
- Figures B3 through B8, Consolidation Test Results
- Figure B9, Modified Compaction Test Results
- Figure B10, Corrosivity Test Results

GEOTECHNICAL INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of a geotechnical investigation for a proposed industrial development located at the northwest corner of Locust Avenue and Lowell Street in the City of Rialto, California (see Vicinity Map, Figure 1). The purpose of this investigation was to evaluate subsurface soil and geologic conditions underlying the property, and based on conditions encountered, to provide conclusions and recommendations pertaining to the geotechnical aspects of proposed design and construction.

The scope of this investigation included a site reconnaissance, field exploration, laboratory testing, engineering analysis, and the preparation of this report. The site was explored on July 22, 2021 by excavating six 8-inch diameter borings using a truck-mounted hollow stem auger drilling machine. Borings B1 and B2 had several attempts but the planned depths were not reached due to refusal on cobbles. The borings were excavated to depths between 9 and 20½ feet below existing ground surface. The approximate locations of the exploratory borings are depicted on the Site Plan (Figure 2). A detailed discussion of the field investigation, including boring logs, is presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to determine pertinent physical and chemical soil properties. Appendix B presents a summary of the laboratory test results.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions. References reviewed to prepare this report are provided in the *List of References* section.

If project details vary significantly from those described herein, Geocon should be contacted to determine the necessity for review and possible revision of this report.

2. SITE CONDITIONS & PROJECT DESCRIPTION

The subject site is located on the northwest corner of Locust Avenue and Lowell Street in the City of Rialto, California. The site consists of an approximately 4.4-acre square shaped parcel currently occupied by an unpaved lot used for equipment storage. The site is bounded by a single-story high-ceiling warehouse structure to the north, by W. Lowell Street to the south, by N. Locust Avenue to the east, and by a 2-story office building, a 1-story warehouse, and a parking lot to the west. The site is relatively level, with no pronounced highs or lows. Surface water drainage at the site appears to be by sheet flow along the existing contours with no discernable pattern. Vegetation is nonexistent.

Based on the preliminary information provided to us by the client, it is our understanding that the proposed project will consist of an approximately 95,850 square foot industrial building. The structure will be constructed at or near present site grade. Other site improvements will consist of paving and driveways.

Based on the preliminary nature of the design at this time, wall and column loads were not available. It is anticipated that column loads for the proposed structure will be up to 300 kips, and wall loads are estimated to be up to 3 kips per linear foot.

Once the design phase and foundation loading configuration proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Any changes in the design, location or elevation of any structure, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

3. GEOLOGIC SETTING

The site is located in the Rialto-Colton basin, which underlies a portion of the upper Santa Ana Valley in southwestern San Bernardino County and northwestern Riverside County. The Rialto-Colton basin is bounded by the San Gabriel Mountains to the north, the San Jacinto Fault to the east, the Box Spring Mountains on the south, and the Rialto-Colton Fault to the west. Lytle Creek drains this part of the valley southeastward to its confluence with the Santa Ana River in the southern part of the basin. The alluvial deposits within the Rialto-Colton Basin are primarily composed of cobbles, gravel, sand, and silt derived from the nearby San Gabriel Mountains and range from Holocene age (last 11,700 years) and Pleistocene age (11,700 to 2 million years). Holocene age deposits are found beneath the current courses of the Lytle and Cajon Creeks and the Santa Ana River.

4. GEOLOGIC MATERIALS

Based on our field investigation and published geologic maps, the soils underlying the site consist of undocumented artificial fill material over Holocene age alluvial fan deposits consisting of cobbles, gravel, and sand. Detailed stratigraphic profiles are provided in the boring logs in Appendix A.

4.1 Artificial Fill

The site is partially mantled by artificial fill to a maximum depth of 4 feet below existing ground surface. The artificial fill generally consists of brown to dark brown sand to gravelly sand and is characterized as fine- to medium grained, slightly moist to moist, and medium dense. The fill is likely the result of past grading and construction activities at the site. Deeper fill may exist between excavations and in other portions of the site that were not directly explored.

4.2 Alluvium

The fill materials are underlain by unconsolidated Holocene age alluvial fan deposits. The alluvium generally consists of yellowish brown to brown well-graded gravelly sand and sandy gravel with locally abundant cobbles. The alluvium is characterized as slightly moist to moist and medium dense to dense. Although not directly observed in our borings, boulders are common in this geologic environment.

5. GROUNDWATER

A review of data provided by the U.S. Geologic Survey Current Water Data for California (USGS, 2021) indicates that several wells have historically been drilled in the site vicinity. The closest wells to the site are Well No. 001N005W27D002S and Well No. 001N005W28J002S, located approximately 0.8 miles southeast and 1 mile southeast of the site, respectively. The State well numbering system is based on the township, range, section, and tract in which the well is located. Based on a review of available monitoring data from these two wells, the depth to groundwater in July 2021 was recorded at 439.06 and 423.34 feet below the existing ground surface, respectively.

Groundwater was not encountered in our field explorations, drilled to a maximum depth of 20½ feet below the ground surface. Based on the recent groundwater levels from wells located in the site vicinity, the lack of groundwater encountered in our borings, and the depth of proposed construction, static groundwater is neither expected to be encountered during construction, nor have a detrimental effect on the project. However, groundwater seepage may be encountered during construction. It is not uncommon for groundwater levels to vary seasonally or for groundwater seepage conditions to develop where none previously existed, especially in impermeable fine-grained soils which are heavily irrigated or after seasonal rainfall. In addition, recent requirements for stormwater infiltration could result in shallower seepage conditions in the immediate site vicinity. Proper surface drainage of irrigation and precipitation will be critical for future performance of the project. Recommendations for drainage are provided in the S*urface Drainage* section of this report (see Section 7.16).

6. GEOLOGIC HAZARDS

6.1 Surface Fault Rupture

The numerous faults in Southern California include Holocene-active, pre-Holocene, and inactive faults. The criteria for these major groups are based on criteria developed by the California Geological Survey (CGS, formerly known as CDMG) for the Alquist-Priolo Earthquake Fault Zone Program (CGS, 2018a). By definition, a Holocene-active fault is one that has had surface displacement within Holocene time (about the last 11,700 years). A pre-Holocene fault has demonstrated surface displacement during Quaternary time (approximately the last 1.6 million years) but has had no known Holocene movement. Faults that have not moved in the last 1.6 million years are considered inactive.

The site is not within a state-designated Alquist-Priolo Earthquake Fault Zone (CGS, 2021a; 2021b) for surface fault rupture hazards. No Holocene-active or pre-Holocene faults with the potential for surface fault rupture are known to pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low. However, the site is located in the seismically active Southern California region and could be subjected to moderate to strong ground shaking in the event of an earthquake on one of the many active Southern California faults. The faults in the vicinity of the site are shown in Figure 3, Regional Fault Map.

The closest active fault to the site is the San Jacinto Fault Zone located approximately 1.6 miles to the east-northeast (Ziony and Jones, 1989). Other nearby active faults are the Cucamonga Fault, the San Andreas Fault Zone, and the Red Hill Fault located 2.6 miles northwest, 4.9 miles northeast, and 5.9 miles west of the site, respectively (Ziony and Jones, 1989).

Several buried thrust faults, commonly referred to as “blind" thrusts, underlie the Los Angeles Basin and the Orange County Coastal Plain, at depth. These faults are not exposed at the ground surface and are typically identified at depths greater than three kilometers. The October 1, 1987 M_w 5.9 Whittier Narrows Earthquake and the January 17, 1994 M_w 6.7 Northridge Earthquake were a result of movement on the Puente Hills Blind Thrust and the Northridge Thrust, respectively. These blind thrusts and others in the Southern California area are not exposed at the surface and do not present a potential surface fault rupture hazard. However, these buried faults are considered active features and are capable of generating future earthquakes.

6.2 Seismicity

As with all of Southern California, the site has experienced historic earthquakes from various regional faults. The seismicity of the region surrounding the site was formulated based on research of an electronic database of earthquake data. The epicenters of recorded earthquakes with magnitudes equal to or greater than 5.0 in the site vicinity are depicted on Figure 4, Regional Seismicity Map. A partial list of moderate to major magnitude earthquakes that have occurred in the Southern California area within the last 100 years is included in the following table.

LIST OF HISTORIC EARTHQUAKES

Earthquake (Oldest to Youngest)	Date of Earthquake	Magnitude	Distance to Epicenter (Miles)	Direction to Epicenter
Near Redlands	July 23, 1923	6.3	14	SE
Long Beach	March 10, 1933	6.4	49	SW
Tehachapi	July 21, 1952	7.5	108	WNW
San Fernando	February 9, 1971	6.6	59	WNW
Whittier Narrows	October 1, 1987	5.9	39	W
Sierra Madre	June 28, 1991	5.8	35	WNW
Landers	June 28, 1992	7.3	56	E
Big Bear	June 28, 1992	6.4	33	E
Northridge	January 17, 1994	6.7	64	W
Hector Mine	October 16, 1999	7.1	72	ENE
Ridgecrest	July 5, 2019	7.1	112	N

The site could be subjected to strong ground shaking in the event of an earthquake. However, this hazard is common in Southern California and the effects of ground shaking can be mitigated if the proposed structures are designed and constructed in conformance with current building codes and engineering practices.

6.3 Seismic Design Criteria

The following table summarizes the site-specific design criteria obtained from the 2019 California Building Code (CBC; Based on the 2018 International Building Code [IBC] and ASCE 7-16), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The data was calculated using the online application *Seismic Design Maps*, provided by OSHPD. The short spectral response uses a period of 0.2 second. We evaluated the Site Class based on the discussion in Section 1613.2.2 of the 2019 CBC and Table 20.3-1 of ASCE 7-16. The values presented on the following page are for the risk-targeted maximum considered earthquake (MCE_R).

2019 CBC SEISMIC DESIGN PARAMETERS

Parameter	Value	2019 CBC Reference
Site Class	D	Section 1613.2.2
MCE_R Ground Motion Spectral Response Acceleration – Class B (short), S_S	2.241g	Figure 1613.2.1(1)
MCE_R Ground Motion Spectral Response Acceleration – Class B (1 sec), S_1	0.806g	Figure 1613.2.1(2)
Site Coefficient, F_A	1	Table 1613.2.3(1)
Site Coefficient, F_V	1.7*	Table 1613.2.3(2)
Site Class Modified MCE_R Spectral Response Acceleration (short), S_{MS}	2.241g	Section 1613.2.3 (Eqn 16-36)
Site Class Modified MCE_R Spectral Response Acceleration – (1 sec), S_{M1}	1.37g*	Section 1613.2.3 (Eqn 16-37)
5% Damped Design Spectral Response Acceleration (short), S_{DS}	1.494g	Section 1613.2.4 (Eqn 16-38)
5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	0.914g*	Section 1613.2.4 (Eqn 16-39)

Note:

*Per Section 11.4.8 of ASCE/SEI 7-16, a ground motion hazard analysis shall be performed for projects for Site Class "E" sites with Ss greater than or equal to 1.0g and for Site Class "D" and "E" sites with S1 greater than 0.2g. Section 11.4.8 also provides exceptions which indicates that the ground motion hazard analysis may be waived provided the exceptions are followed. Using the code-based values presented in the table above, in lieu of a performing a ground motion hazard analysis, requires the exceptions outlined in ASCE 7-16 Section 11.4.8 be followed.

The table below presents the mapped maximum considered geometric mean (MCE_G) seismic design parameters for projects located in Seismic Design Categories of D through F in accordance with ASCE 7-16.

ASCE 7-16 PEAK GROUND ACCELERATION

Parameter	Value	ASCE 7-16 Reference
Mapped MCE_G Peak Ground Acceleration, PGA	0.919g	Figure 22-7
Site Coefficient, F_{PGA}	1.1	Table 11.8-1
Site Class Modified MCE_G Peak Ground Acceleration, PGA_M	1.011g	Section 11.8.3 (Eqn 11.8-1)

The Maximum Considered Earthquake Ground Motion (MCE) is the level of ground motion that has a 2 percent chance of exceedance in 50 years, with a statistical return period of 2,475 years. According to the 2019 California Building Code and ASCE 7-16, the MCE is to be utilized for the evaluation of liquefaction, lateral spreading, seismic settlements, and it is our understanding that the intent of the Building code is to maintain "Life Safety" during a MCE event. The Design Earthquake Ground Motion (DE) is the level of ground motion that has a 10 percent chance of exceedance in 50 years, with a statistical return period of 475 years.

Deaggregation of the MCE peak ground acceleration was performed using the USGS online Unified Hazard Tool, 2014 Conterminous U.S. Dynamic edition (v4.2.0). The result of the deaggregation analysis indicates that the predominant earthquake contributing to the MCE peak ground acceleration is characterized as a 7.44 magnitude event occurring at a hypocentral distance of 6.17 kilometers from the site.

Deaggregation was also performed for the Design Earthquake (DE) peak ground acceleration, and the result of the analysis indicates that the predominant earthquake contributing to the DE peak ground acceleration is characterized as a 7.16 magnitude occurring at a hypocentral distance of 7.95 kilometers from the site.

Conformance to the criteria in the above tables for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

6.4 Liquefaction Potential

Liquefaction is a phenomenon in which loose, saturated, relatively cohesionless soil deposits lose shear strength during strong ground motions. Primary factors controlling liquefaction include intensity and duration of ground motion, gradation characteristics of the subsurface soils, in-situ stress conditions, and the depth to groundwater. Liquefaction is typified by a loss of shear strength in the liquefied layers due to rapid increases in pore water pressure generated by earthquake accelerations.

The current standard of practice, as outlined in the "Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California" and "Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California" requires liquefaction analysis to a depth of 50 feet below the lowest portion of the proposed structure. Liquefaction typically occurs in areas where the soils below the water table are composed of poorly consolidated, fine to medium-grained, primarily sandy soil. In addition to the requisite soil conditions, the ground acceleration and duration of the earthquake must also be of a sufficient level to induce liquefaction.

According to the County of San Bernardino General Plan (2005) and the City of Rialto General Plan (2010) the site is not located in an area designated as "liquefiable". Based on the historic high groundwater levels in the site vicinity, the lack of groundwater encountered in our borings, and water depth recorded in nearby water wells in the vicinity, it is our opinion that the potential for liquefaction of the soils underlying the site is very low.

6.5 Slope Stability

The topography of the site is generally level and the topography of the vicinity gently slopes to the south. According to the County of San Bernardino General Plan (2005), the site is not located within an area identified as having a potential for slope instability. The site and surrounding vicinity is relatively level to gently sloping to the south with no pronounced slopes. There are no known landslides near the site, nor is the site in the path of any known or potential landslides. The potential for slope instability or landslides adversely affecting the proposed project is considered low.

6.6 Earthquake-Induced Flooding

Earthquake-induced flooding is inundation caused by failure of dams or other water-retaining structures due to earthquakes. A review of the County of San Bernardino General Plan (2005) indicates that the site is not located within a potential inundation area for an earthquake-induced dam failure. Therefore, the probability of earthquake-induced flooding is considered very low.

6.7 Tsunamis, Seiches and Flooding

The site is not located within a coastal area. Therefore, tsunamis, seismic sea waves, are not considered a significant hazard at the site.

Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Flooding from a seismically induced seiche is considered unlikely.

The site is not within a 100-year flood zone or a 500-year flood zone. The potential for flooding to adversely impact the site is low (City of Rialto General Plan, 2010; FEMA, 2008).

6.8 Oil Fields & Methane

Based on a review of the California Geologic Energy Management Division (CalGEM) Well Finder website, the site is not located within the boundary of a known oil field and no oil wells are located in the immediate site vicinity. However, due to the voluntary nature of record reporting by the oil well drilling companies, wells may be improperly located or not shown on the location map and undocumented wells could be encountered during construction. Any wells encountered during construction will need to be properly abandoned in accordance with the current requirements of the CalGEM.

The site is not located within the boundaries of a known oil field; therefore, the potential for the presence of methane is considered low. However, should it be determined that a methane study is required for the proposed development it is recommended that a qualified methane consultant be retained to perform the study and provide mitigation measures as necessary.

6.9 Subsidence

Subsidence occurs when a large portion of land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. Soils that are particularly subject to subsidence include those with high silt or clay content. The site is not located within an area of known ground subsidence. No large-scale extraction of groundwater, gas, oil, or geothermal energy is occurring or planned at the site. There appears to be little or no potential for ground subsidence due to withdrawal of fluid or gas at the site.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 General

7.1.1 It is our opinion that neither soil nor geologic conditions were encountered during the investigation that would preclude the construction of the proposed project provided the recommendations presented herein are followed and implemented during design and construction.

7.1.2 Up to 4 feet of existing artificial fill was encountered during site exploration. Deeper fill may exist in other areas of the site that were not directly explored. It is our opinion that the existing fill, in its present condition, is not suitable for direct support of proposed foundations or slabs. The existing fill and site soils are suitable for re-use as engineered fill provided the recommendations in the Grading section of this report are followed (see Section 7.4).

7.1.3 Based on our observations onsite and our knowledge of the geologic setting, cobbles should be anticipated during earthwork at the subject site. Additionally, boulders may be encountered in the existing fill or alluvial soils. The contractor should be prepared for difficult excavation conditions. The presence of these materials and their impact on construction methods and equipment selection should be considered by both the developer and contractor prior to construction.

7.1.4 Screening of the earth materials will likely be required to remove oversize (greater than 6 inches) rock, prior to placement and compaction. Generation of oversized material (greater than 6 inches) should be anticipated.

7.1.5 Based on these considerations, it is recommended that the upper 5 feet of existing earth materials within the building footprint area be excavated and properly compacted for foundation and slab support. Deeper excavations should be conducted as needed to remove any encountered fill or soft soils as necessary at the direction of the Geotechnical Engineer (a representative of Geocon). Proposed foundations should be underlain by a minimum of 3 feet of newly placed engineered fill. The limits of existing fill and/or soft soil removal will be verified by the Geocon representative during site grading activities. The excavation should extend laterally a minimum distance of three feet beyond the building footprint areas, including building appurtenances, or a distance equal to the depth of fill below the foundation, whichever is greater. Recommendations for earthwork are provided in the *Grading* section of this report (see Section 7.4).

7.1.6 Subsequent to the recommended grading, the proposed structure may be supported on a conventional shallow spread foundation system deriving support in newly placed engineered fill. Recommendations for the design of a conventional foundation system are provided in Section 7.6.

7.1.7 All excavations must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).

7.1.8 It is anticipated that stable excavations for the recommended grading associated with the proposed structure can be achieved with sloping measures. However, if excavations in close proximity to an adjacent property line and/or structure are required, special excavation measures may be necessary in order to maintain lateral support of offsite improvements. Excavation recommendations are provided in the *Temporary Excavations* section of this report (Section 7.14).

7.1.9 Foundations for small outlying structures, such as block walls up to 6 feet high, planter walls or trash enclosures, which will not be tied to the proposed structure, may be supported on conventional foundations bearing on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and proper compaction cannot be performed or is undesirable, foundations may derive support directly in the undisturbed alluvial soils at and below a depth of 24 inches and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative.

7.1.10 Where new paving is to be placed, it is recommended that all existing fill and soft alluvial soils be excavated and properly compacted for paving support. The client should be aware that excavation and compaction of all existing fill and soft alluvial soils in the area of new paving is not required; however, paving constructed over existing uncertified fill or unsuitable alluvial soil may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper twelve inches of subgrade soil should be scarified and properly compacted for paving support. Paving recommendations are provided in *Preliminary Pavement Recommendations* section of this report (see Section 7.11).

7.1.11 Based on the results of percolation testing performed at the site, a stormwater infiltration system is considered feasible for this project. Recommendations for infiltration are provided in the *Stormwater Infiltration* section of this report (see Section 7.15).

7.1.12 Once the design and foundation loading configuration proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. If the proposed building loads will exceed those presented herein, the potential for settlement should be reevaluated by this office.

7.1.13 Any changes in the design, location or elevation of improvements, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

7.2 Soil and Excavation Characteristics

7.2.1 The in-situ soils can be excavated with moderate effort using conventional excavation equipment. Due to the granular nature of the soils, moderate to excessive caving should be anticipated in vertical excavations, especially where granular soils are encountered. Formwork may be required to prevent caving of foundation excavations. In addition, due to the presence of cobbles and possible boulders, the contractor should be prepared for difficult excavation conditions during drilling and earthwork activities.

7.2.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable OSHA rules and regulations to maintain safety and maintain the stability of adjacent existing improvements.

7.2.3 All onsite excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load. Penetrations below this 1:1 projection will require special excavation measures such as sloping and shoring. Excavation recommendations are provided in the *Temporary Excavations* section of this report (see Section 7.14).

7.2.4 The upper 5 feet of existing site soils encountered during this investigation are primarily granular in nature and are considered to be "non-expansive". Recommendations presented herein assume that proposed foundations and slabs will derive support in these materials.

7.3 Minimum Resistivity, pH and Water-Soluble Sulfate

7.3.1 Potential of Hydrogen (pH) and resistivity testing as well as chloride content testing were performed on representative samples of soil to generally evaluate the corrosion potential to surface utilities. The tests were performed in accordance with California Test Method Nos. 643 and 422 and indicate that the soils are considered "moderately corrosive" with respect to corrosion of buried ferrous metals on site. The results are presented in Appendix B (Figure B10) and should be considered for design of underground structures.

7.3.2 Laboratory tests were performed on representative samples of the site soils to measure the percentage of water-soluble sulfate content. Results from the laboratory water-soluble sulfate tests are presented in Appendix B (Figure B10) and indicate that the on-site materials possess a sulfate exposure class of "S0" to concrete structures as defined by 2019 CBC Section 1904 and ACI 318-19 Table 19.3.1.1.

7.3.3 Geocon West, Inc. does not practice in the field of corrosion engineering and mitigation. If corrosion sensitive improvements are planned, it is recommended that a corrosion engineer be retained to evaluate corrosion test results and incorporate the necessary precautions to avoid premature corrosion of buried metal pipes and concrete structures in direct contact with the soils.

7.4 Grading

7.4.1 A preconstruction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer, geotechnical engineer, and, if applicable, building official in attendance. Special soil handling requirements can be discussed at that time.

7.4.2 Earthwork should be observed, and compacted fill tested by representatives of Geocon West, Inc. The existing fill encountered during exploration is suitable for re-use as an engineered fill, provided any encountered oversize material (greater than 6 inches) and any encountered deleterious debris is removed.

7.4.3 Screening of the earth materials will likely be required to remove oversize (greater than 6 inches) rock, prior to placement and compaction. Generation of oversized material (greater than 6 inches) should be anticipated. The contractor should be prepared for difficult excavation conditions. The presence of these materials and their impact on construction methods and equipment selection should be considered by both the owner and contractor prior to construction.

7.4.4 Rocks larger than 6 inches but less than 4 feet in maximum dimension may be incorporated into the engineered fill provided the oversized material (larger than 6 inches) is placed so that voids between the rocks are not created. It is recommended that placement of oversized materials be performed in non-building areas, if available. Consideration should be given to placing oversized material at least 3 feet below the deepest foundation or utility.

7.4.5 The acceptability of placing rock materials greater than 4 feet in maximum dimension shall be evaluated during grading as specific cases arise and shall be approved in writing by the Geotechnical Engineer prior to placement.

7.4.6 Grading should commence with the removal of all existing vegetation and existing improvements from the area to be graded. Deleterious debris such as wood and root structures should be exported from the site and should not be mixed with the fill soils. Asphalt and concrete should not be mixed with the fill soils unless approved by the Geotechnical Engineer. All existing underground improvements planned for removal should be completely excavated and the resulting depressions properly backfilled in accordance with the procedures described herein. Once a clean excavation bottom has been established it must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.).

7.4.7 As a minimum, it is recommended that the upper 5 feet of existing site soils within the proposed building footprint area be excavated and properly compacted for foundation and slab support. Deeper excavation should be conducted as necessary to completely remove all existing artificial fill or soft soil at the direction of the Geotechnical Engineer (a representative of Geocon). Proposed foundations should be underlain by a minimum of 3 feet of newly placed engineered fill. It is recommended that the grading contractor verify the depth of all building foundations prior to commencement of site grading activities in order to correctly determine the required grading overexcavations for foundations. The excavation should extend laterally a minimum distance of 3 feet beyond the building footprint area or a distance equal to the depth of fill below the foundation, whichever is greater. The limits of existing fill and/or soft fill soils removal will be verified by the Geocon representative during site grading activities.

7.4.8 All excavations must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).

7.4.9 All fill and backfill soils should be placed in horizontal loose layers approximately 6 to 8 inches thick, moisture conditioned to near optimum moisture content, and properly compacted to a minimum 90 percent of the maximum dry density in accordance with ASTM D 1557 (latest edition).

7.4.10 Foundations for small outlying structures, such as block walls up to 6 feet high, planter walls or trash enclosures, which will not be tied to the proposed buildings, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and proper compaction cannot be performed or is undesirable, foundations may derive support directly in the undisturbed alluvial soils at or below a depth of 24 inches, and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative.

7.4.11 Where new paving is to be placed, it is recommended that all existing fill and soft alluvial soils be excavated and properly compacted for paving support. The client should be aware that excavation and compaction of all existing fill and soft soils in the area of new paving is not required; however, paving constructed over existing uncertified fill or unsuitable alluvial soil may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of soil should be scarified, moisture conditioned to near optimum moisture content, and compacted to at least 95 percent relative compaction for paving support. Paving recommendations are provided in *Preliminary Pavement Recommendations* section of this report (see Section 7.11).

7.4.12 All imported fill shall be observed, tested, and approved by Geocon West, Inc. prior to bringing soil to the site. Rocks larger than 6 inches in diameter shall not be used in the fill. If necessary, import soils used as structural fill should have an expansion index less than 20 and corrosivity properties that are equally or less detrimental to that of the existing onsite soils (see Figure B10). Import soils must be placed uniformly and at equal thickness or in a manner that is approved by the Geotechnical Engineer (a representative of Geocon).

7.4.13 Utility trenches should be properly backfilled in accordance with the requirements of the Green Book (latest edition). The pipe should be bedded with clean sands (Sand Equivalent greater than 30) to a depth of at least 1 foot over the pipe, and the bedding material must be inspected and approved in writing by the Geotechnical Engineer (a representative of Geocon). The use of gravel is not acceptable unless used in conjunction with filter fabric to prevent the gravel from having direct contact with soil. The remainder of the trench backfill may be derived from onsite soil or approved import soil, compacted as necessary, until the required compaction is obtained. The use of minimum 2-sack slurry as backfill is also acceptable. Prior to placing any bedding materials or pipes, the trench excavation bottom must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).

7.4.14 All trench and foundation excavation bottoms must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to placing bedding sands, fill, steel, gravel, or concrete.

7.5 Shrinkage

7.5.1 Shrinkage results when a volume of material removed at one density is compacted to a higher density. A shrinkage factor between 10 and 15 percent should be anticipated when excavating and compacting the upper 5 feet of existing earth materials on the site to an average relative compaction of 92 percent. The shrinkage factor does not include the removal of oversized material.

7.4.2 If import soils will be utilized in the building pad, the soils must be placed uniformly and at equal thickness at the direction of the Geotechnical Engineer (a representative of Geocon West, Inc.). Soils can be borrowed from non-building pad areas and later replaced with imported soils.

7.6 Foundation Design

7.6.1 Subsequent to the recommended grading, a conventional shallow spread foundation system may be utilized for support of the proposed structures provided foundations derive support in newly placed engineered fill. Proposed foundations should be underlain by a minimum of 3 feet of newly placed engineered fill.

7.6.2 Continuous footings may be designed for an allowable bearing capacity of 2,000 pounds per square foot (psf), and should be a minimum of 12 inches in width, 18 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.

7.6.3 Isolated spread foundations may be designed for an allowable bearing capacity of 2,500 psf, and should be a minimum of 24 inches in width, 18 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.

7.6.4 The allowable soil bearing pressure above may be increased by 250 psf and 500 psf for each additional foot of foundation width and depth, respectively, up to a maximum allowable soil bearing pressure of 4,000 psf.

7.6.5 The allowable bearing pressures may be increased by one-third for transient loads due to wind or seismic forces.

7.6.6 If depth increases are utilized for the exterior wall footings, this office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary. Additional grading should be conducted as needed in order to maintain the recommended 3-foot-thick blanket of engineered fill below proposed foundations.

7.6.7 Continuous footings should be reinforced with four No. 4 steel reinforcing bars, two placed near the top of the footing and two near the bottom. Reinforcement for spread footings should be designed by the project structural engineer.

7.6.8 The above foundation dimensions and minimum reinforcement recommendations are based on soil conditions and building code requirements only, and are not intended to be used in lieu of those required for structural purposes.

7.6.9 No special subgrade presaturation is required prior to placement of concrete. However, the moisture in the foundation subgrade should be sprinkled as necessary to maintain a moist condition at the time of concrete placement

7.6.10 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated. If unanticipated soil conditions are encountered, foundation modifications may be required.

7.6.11 This office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary.

7.7 Foundation Settlement

7.7.1 The maximum expected static settlement for a structure supported on a conventional foundation system designed with a maximum bearing pressure of 4,000 psf, and deriving support in the recommended bearing materials is estimated to be less than 1 inch and occur below the heaviest loaded structural element. Settlement of the foundation system is expected to occur on initial application of loading. Differential settlement is not expected to exceed ½ inch over a distance of 20 feet.

7.7.2 Once the design and foundation loading configurations for the proposed structures proceeds to a more finalized plan, the estimated settlements presented in this report should be reviewed and revised, if necessary. If the final foundation loading configurations are greater than the assumed loading conditions, the potential for settlement should be reevaluated by this office.

7.8 Miscellaneous Foundations

7.8.1 Foundations for small outlying structures, such as block walls up to 6 feet in height, planter walls or trash enclosures which will not be tied to the proposed structures may be supported on conventional foundations bearing on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and compaction cannot be performed or is undesirable, such as adjacent to property lines, foundations may derive support in the undisturbed alluvial soils at and below a depth of 24 inches below the existing ground surface, and should be deepened as necessary to maintain a minimum 12-inch embedment into undisturbed alluvial soils and must be observed and approved by a Geocon representative.

7.8.2 If the soils exposed in the excavation bottom are soft, compaction of the soft soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative. Miscellaneous foundations may be designed for a bearing value of 1,500 psf, and should be a minimum of 12 inches in width, 18 inches in depth below the lowest adjacent grade and 12 inches into the recommended bearing material. The allowable bearing pressure may be increased by up to one-third for transient loads due to wind or seismic forces.

7.8.3 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated.

7.9 Lateral Design

7.9.1 Resistance to lateral loading may be provided by friction acting at the base of foundations, slabs and by passive earth pressure. An allowable coefficient of friction of 0.4 may be used with the dead load forces in the new placed engineered fill or competent alluvial soils.

7.9.2 Passive earth pressure for the sides of foundations and slabs poured against newly placed engineered fill or the alluvial soils may be computed as an equivalent fluid having a density of 260 pcf with a maximum earth pressure of 2,600 pcf. When combining passive and friction for lateral resistance, the passive component should be reduced by one-third.

7.10 Concrete Slabs-on-Grade

7.10.1 Concrete slabs-on-grade near the ground surface that are subject to vehicle loading should be designed in accordance with the recommendations in the *Preliminary Pavement Recommendations* section of this report (Section 7.11).

7.10.2 Subsequent to the recommended grading, concrete slab-on-grade, not subject to vehicle or equipment loading, should be a minimum of 4 inches thick and minimum slab reinforcement should consist of No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions. Steel reinforcing should be positioned vertically near the slab midpoint.

7.10.3 It is our understanding that unreinforced slabs-on-grade are being considered as a design alternative for this project. While our typical recommendations provide minimum reinforcement for slabs-on-grade, the slabs may be designed by a qualified Structural Engineer. The structural engineer may design the slab thickness and reinforcing or eliminate the reinforcing if they so choose. The design provided by the structural engineer may supersede those provided herein.

7.10.4 Slabs-on-grade at the ground surface that may receive moisture-sensitive floor coverings or may be used to store moisture-sensitive materials should be underlain by a vapor retarder placed directly beneath the slab. The vapor retarder and acceptable permeance should be specified by the project architect or developer based on the type of floor covering that will be installed. The vapor retarder design should be consistent with the guidelines presented in Section 9.3 of the American Concrete Institute's (ACI) Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials (ACI 302.2R-06) and should be installed in general conformance with ASTM E 1643 (latest edition) and the manufacturer's recommendations. A minimum thickness of 15 mils extruded polyolefin plastic is recommended; vapor retarders which contain recycled content or woven materials are not recommended. The vapor retarder should have a permeance of less than 0.01 perms demonstrated by testing before and after mandatory conditioning. At the direction of the client, it is our understanding that a product by Stego Industries, LLC is preferred. Geocon does not object to the use of Stego. The vapor retarder should be installed in direct contact with the concrete slab with proper perimeter seal. If the California Green Building Code requirements apply to this project, the vapor retarder should be underlain by 4 inches of clean aggregate. It is important that the vapor retarder be puncture resistant since it will be in direct contact with angular gravel. As an alternative to the clean aggregate suggested in the Green Building Code, it is our opinion that the concrete slab-on-grade may be underlain by a vapor retarder over 4 inches of clean sand (sand equivalent greater than 30), since the sand will serve a capillary break and will minimize the potential for punctures and damage to the vapor barrier.

7.10.5 For seismic design purposes, a coefficient of friction of 0.4 may be utilized between concrete slabs and subgrade soils without a moisture barrier, and 0.15 for slabs underlain by a moisture barrier.

7.10.6 Unless designed and evaluated by the project structural engineer, exterior slabs for walkways or flatwork, not subject to traffic loads, should be at least 4 inches thick and reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions, positioned near the slab midpoint. Prior to construction of slabs, the upper 12 inches of subgrade should be moistened to near optimum moisture content and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition). Crack control joints should be spaced at intervals not greater than 10 feet and should be constructed using saw-cuts or other methods as soon as practical following concrete placement. Crack control joints should extend a minimum depth of one-fourth the slab thickness. The project structural engineer should design construction joints as necessary.

7.10.7 The recommendations of this report are intended to reduce the potential for cracking of slabs due to settlement. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade may exhibit some cracking due to minor soil movement and/or concrete shrinkage. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement and curing, and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.

7.11 Preliminary Pavement Recommendations

7.11.1 Where new paving is to be placed, it is recommended that all existing fill and soft or unsuitable materials be excavated and properly recompacted for paving support. The client should be aware that excavation and compaction of all existing artificial fill and soft soils in the area of new paving is not required; however, paving constructed over existing unsuitable material may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of paving subgrade should be scarified, moisture conditioned to near optimum moisture content, and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition).

7.11.2 The following pavement sections are based on an assumed R-Value of 35. Once site grading activities are complete an R-Value should be obtained by laboratory testing to confirm the properties of the soils serving as paving subgrade, prior to placing pavement.

7.11.3 The Traffic Indices listed below are estimates. Geocon does not practice in the field of traffic engineering. The actual Traffic Index for each area should be determined by the project civil engineer. If pavement sections for Traffic Indices other than those listed below are required, Geocon should be contacted to provide additional recommendations. Asphalt concrete pavement thicknesses were determined following procedures outlined in the *California Highway Design Manual* (Caltrans). Concrete pavement sections were determined using AASHTO design procedures. It is anticipated that the majority of traffic will consist of automobile and large truck traffic.

PRELIMINARY ASPHALT PAVEMENT DESIGN SECTIONS

Location	Estimated Traffic Index (TI)	Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)
Automobile Parking And Driveways	4.0	3.0	4.0
Trash Truck & Fire Lanes (Intermittent Heavy Use)	7.0	4.0	9.0
Truck Drive Aisles (Regular Heavy Use)	8.0	4.5	10.5

PRELIMINARY CONCRETE PAVEMENT DESIGN SECTIONS

Location	Traffic Index	Concrete (inches)	Class 2 Aggregate Base (inches)	Minimum Reinforcement*
Pedestrian Walkways (No Traffic)	--	4.0	None (on native)	No. 3, 18" O.C. Both Ways
Automobile Parking And Driveways	4.0	4.0	4.0	No. 3, 18" O.C. Both Ways
Trash Truck & Fire Lanes (Intermittent Heavy Use)	7.0	6.5	4.0	--
Truck Drive Aisles (Regular Heavy Use)	8.0	8.0	4.0	--
Building Slab (No vehicle/equipment loading)	--	4.0	None (on native, after over-ex)	No. 3, 18" O.C. Both Ways
*Note: Optional provided it is evaluated and designed by the project structural engineer.				

7.11.4 Asphalt concrete should conform to Section 203-6 of the "*Standard Specifications for Public Works Construction"* (Green Book). Class 2 aggregate base materials should conform to Section 26-1.02A of the "*Standard Specifications of the State of California, Department of Transportation"* (Caltrans). The use of Crushed Miscellaneous Base in lieu of Class 2 aggregate base is acceptable. Crushed Miscellaneous Base should conform to Section 200-2.4 of the "*Standard Specifications for Public Works Construction"* (Green Book).

7.11.5 Concrete paving supporting vehicular traffic should be underlain by a minimum of 4 inches of aggregate base and a properly compacted subgrade. The subgrade and base material should be compacted to 95 percent relative compaction as determined by ASTM Test Method D 1557 (latest edition).

7.11.6 A thickened edge or integral curb should be constructed on the outside of concrete slabs subjected to wheel loads. The thickened edge should be 1.2 times the slab thickness or a minimum thickness of 2 inches, whichever results in a thicker edge, and taper back to the recommended slab thickness 4 feet behind the face of the slab (e.g., 6-inch and 7.5-inch-thick slabs would have an 8- and 9.5-inch-thick edge, respectively).

7.11.7 In order to control the location and spread of concrete shrinkage cracks, crack-control joints (weakened plane joints) should be included in the design of the concrete pavement slab in accordance with applicable design standards.

7.11.8 The performance of pavements is highly dependent upon providing positive surface drainage away from the edge of pavements. Ponding of water on or adjacent to the pavement will likely result in saturation of the subgrade materials and subsequent cracking, subsidence and pavement distress. If planters are planned adjacent to paving, it is recommended that the perimeter curb be extended at least 12 inches below the bottom of the aggregate base to minimize the introduction of water beneath the paving.

7.12 Retaining Wall Design

7.12.1 The recommendations presented below are generally applicable to the design of rigid concrete or masonry retaining walls having a maximum height of 5 feet. In the event that walls higher than 5 feet are planned, Geocon should be contacted for additional recommendations.

7.12.2 Retaining wall foundations may be designed in accordance with the recommendations provided in the *Foundation Design* section of this report (see Section 7.6).

7.12.3 Retaining walls with a level backfill surface that are not restrained at the top should be designed utilizing a triangular distribution of pressure (active pressure) of 30 pcf.

7.12.4 Restrained walls are those that are not allowed to rotate more than 0.001H (where H equals the height of the retaining portion of the wall in feet) at the top of the wall. Assuming that proper drainage and permanent dewatering is maintained, where walls are restrained from movement at the top, walls may be designed utilizing a triangular distribution of pressure (at-rest pressure) of 61 pcf.

7.12.5 The wall pressures provided above assume that the retaining wall will be properly drained preventing the buildup of hydrostatic pressure. If retaining wall drainage is not implemented, the equivalent fluid pressure to be used in design of undrained walls is 93 pcf. The value includes hydrostatic pressures plus buoyant lateral earth pressures.

7.12.6 The wall pressures provided above assume that the proposed retaining walls will support relatively undisturbed alluvial soils or engineered fill derived from onsite soils. If import soil will be used to backfill proposed retaining walls, revised earth pressures may be required to account for the geotechnical properties of the import soil used as engineered fill. This should be evaluated once the use of import soil is established. All imported fill shall be observed, tested, and approved by Geocon West, Inc. prior to bringing soil to the site.

7.12.7 Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic or adjacent structures and should be designed for each condition as the project progresses.

7.13 Retaining Wall Drainage

7.13.1 Unless designed for hydrostatic pressures, retaining walls should be provided with a drainage system extended at least two-thirds the height of the wall. At the base of the drain system, a subdrain covered with a minimum of 12 inches of gravel should be installed, and a compacted fill blanket or other seal placed at the surface (see Figure 5). The clean bottom and subdrain pipe, behind a retaining wall, should be observed by the Geotechnical Engineer (a representative of Geocon), prior to placement of gravel or compacting backfill.

7.13.2 As an alternative, a plastic drainage composite such as Miradrain or equivalent may be installed in continuous, 4-foot wide columns along the entire back face of the wall, at 8 feet on center. The top of these drainage composite columns should terminate approximately 18 inches below the ground surface, where either hardscape or a minimum of 18 inches of relatively cohesive material should be placed as a cap (see Figure 6). These vertical columns of drainage material would then be connected at the bottom of the wall to a collection panel or a 1-cubic-foot rock pocket drained by a 4-inch subdrain pipe.

7.13.3 Subdrainage pipes at the base of the retaining wall drainage system should outlet to an acceptable location via controlled drainage structures. Drainage should not be allowed to flow uncontrolled over descending slopes.

7.13.4 Moisture affecting below grade walls is one of the most common post-construction complaints. Poorly applied or omitted waterproofing can lead to efflorescence or standing water. Particular care should be taken in the design and installation of waterproofing to avoid moisture problems, or actual water seepage into the structure through any normal shrinkage cracks which may develop in the concrete walls, floor slab, foundations and/or construction joints. The design and inspection of the waterproofing is not the responsibility of the geotechnical engineer. A waterproofing consultant should be retained in order to recommend a product or method, which would provide protection to subterranean walls, floor slabs and foundations.

7.14 Temporary Excavations

7.14.1 Excavations on the order of 5 feet in height may be required during grading and construction activities. The excavations are expected to expose fill and alluvial soils, which may be subject to caving. Due to the presence of cobbles, the contractor should be prepared for difficult excavation conditions. Vertical excavations up to 5 feet in height may be attempted where not surcharged; however, the contractor should be prepared for caving, sloughing, and raveling in open excavations. Due to the granular nature of soils and potential for caving, the contractor should also be prepared to form foundation excavations at the excavation bottom.

7.14.2 Vertical excavations greater than 5 feet will require sloping or shoring measures in order to provide a stable excavation. It is anticipated that stable excavations for construction of the proposed improvements can be achieved and maintained with sloping measures. Where sufficient space is available, temporary unsurcharged embankments could be sloped back at a uniform 1:1 slope gradient or flatter, up to a maximum height of 10 feet. A uniform slope does not have a vertical portion.

7.14.3 Where temporary slopes are utilized, the top of the slope should be barricaded to prevent vehicles and storage loads at the top of the slope within a horizontal distance equal to the height of the slope. If the temporary slopes are to be maintained during the rainy season, berms are suggested along the tops of the slopes where necessary to prevent runoff water from entering the excavation and eroding the slope faces. Geocon personnel should inspect the soils exposed in the cut slopes during excavation so that modifications of the slopes can be made if variations in the soil conditions occur. All excavations should be stabilized within 30 days of initial excavation.

7.15 Stormwater Infiltration

7.15.1 During the July 22, 2021 site exploration, boring B6 was utilized to perform percolation testing. The boring was advanced to the depth listed in the table below. Slotted casing was placed in the boring, and the annular space between the casing and excavation was filled with gravel. The boring was then filled with water to pre-saturate the soils. The casing was refilled with water and percolation test readings were performed after repeated flooding of the cased excavation. Based on the test results, the average infiltration rate (adjusted percolation rate), for the earth materials encountered, is provided in the following table. The field-measured percolation rate has been adjusted to infiltration rates in accordance with the County of San Bernardino Technical Guidance Document for Water Quality Management Plans (June 2013). Additional correction factors may be required and should be applied by the engineer in responsible charge of the design of the stormwater infiltration system and based on applicable guidelines. Percolation test field data and calculation of the measured percolation rate and design infiltration rate are provided on Figure 7.

Boring	Soil Type	Infiltration Depth (ft)	Average Infiltration Rate (in / hour)
B6	Sand (SP)	5 – 10½	16.9

7.15.2 The results of the percolation testing indicate that the soils are conducive to infiltration. It is our opinion that the soil zones encountered at the depths and locations as listed in the table above are suitable for infiltration of stormwater.

7.15.3 It is our further opinion that infiltration of stormwater and will not induce excessive hydro-consolidation (see Figures B3 through B8), will not create a perched groundwater condition, will not affect soil structure interaction of existing or proposed foundations due to expansive soils, will not saturate soils supported by existing or proposed retaining walls, and will not increase the potential for liquefaction. Resulting settlements are anticipated to be less than ¼ inch, if any.

7.15.4 Where infiltration systems will be utilized, it is recommended that a minimum 10-foot horizontal and vertical setback be maintained from existing or proposed foundations. Additional setbacks may be required by the governing jurisdiction and should be incorporated into the stormwater infiltration system design as necessary.

7.15.5 Where the 10-foot horizontal setback cannot be maintained between the infiltration system and an adjacent footing, and the infiltration system penetrates below the foundation influence line, the proposed stormwater infiltration system must be designed to resist the surcharge from the adjacent foundation. The foundation surcharge line may be assumed to project down away from the bottom of the foundation at a 1:1 gradient. The stormwater infiltration system must still be sufficiently deep to maintain the 10-foot vertical offset between the bottom of the footing and the zone of saturation.

7.15.6 Subsequent to the placement of the infiltration system, it is acceptable to backfill the resulting void space between the excavation sidewalls and the infiltration system with minimum two-sack slurry provided the slurry is not placed in the infiltration zone. It is recommended that pea gravel be utilized adjacent to the infiltration zone so communication of water to the soil is not hindered.

7.15.7 Due to the preliminary nature of the project at this time, the location of the stormwater infiltration system has not yet been determined. The design drawings should be reviewed and approved by the Geotechnical Engineer. The installation of the stormwater infiltration system should be observed and approved by the Geotechnical Engineer (a representative of Geocon).

7.16 Surface Drainage

7.16.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change in the original designed engineering properties. Proper drainage should be maintained at all times.

7.16.2 All site drainage should be collected and controlled in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with 2019 CBC 1804.4 or other applicable standards. In addition, drainage should not be allowed to flow uncontrolled over any descending slope. Discharge from downspouts, roof drains and scuppers are not recommended onto unprotected soils within 5 feet of the building perimeter. Planters which are located adjacent to foundations should be sealed to prevent moisture intrusion into the soils providing foundation support. Landscape irrigation is not recommended within 5 feet of the building perimeter footings except when enclosed in protected planters.

7.16.3 Positive site drainage should be provided away from structures, pavement, and the tops of slopes to swales or other controlled drainage structures. The building pad and pavement areas should be fine graded such that water is not allowed to pond.

7.16.4 Landscaping planters immediately adjacent to paved areas are not recommended due to the potential for surface or irrigation water to infiltrate the pavement's subgrade and base course. Either a subdrain, which collects excess irrigation water and transmits it to drainage structures, or an impervious above-grade planter boxes should be used. In addition, where landscaping is planned adjacent to the pavement, it is recommended that consideration be given to providing a cutoff wall along the edge of the pavement that extends at least 12 inches below the base material.

7.17 Plan Review

7.17.1 Grading, foundation, and, if applicable, shoring plans should be reviewed by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to finalization to verify that the plans have been prepared in substantial conformance with the recommendations of this report and to provide additional analyses or recommendations.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon West, Inc. should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon West, Inc.

2. This report is issued with the understanding that it is the responsibility of the owner, or of his representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

3. The findings of this report are valid as of the date of this report. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.

4. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

LIST OF REFERENCES

California Division of Mines and Geology, 1998, *State of California Seismic Hazard Zone Map for the Devore Quadrangle,* Official Map, Revised: June 1, 1995

California Geologic Energy Management Division, 2021, Geologic Energy Management Division Well Finder, http://maps.conservation.ca.gov.doggr/index.html#close.

California Geological Survey, 2021a, CGS Information Warehouse, Regulatory Map Portal, http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps.

California Geological Survey, 2021b, Earthquake Zones of Required Investigation, https://maps.conservation.ca.gov/cgs/EQZApp/app/.

California Geological Survey, 2018a, *Earthquake Fault Zones, A Guide for Government Agencies, Property Owners/Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California,* Special Publication 42, Revised 2018.

Jennings, C. W. and Bryant, W. A., 2010, *Fault Activity Map of California,* California Geological Survey Geologic Data Map No. 6.

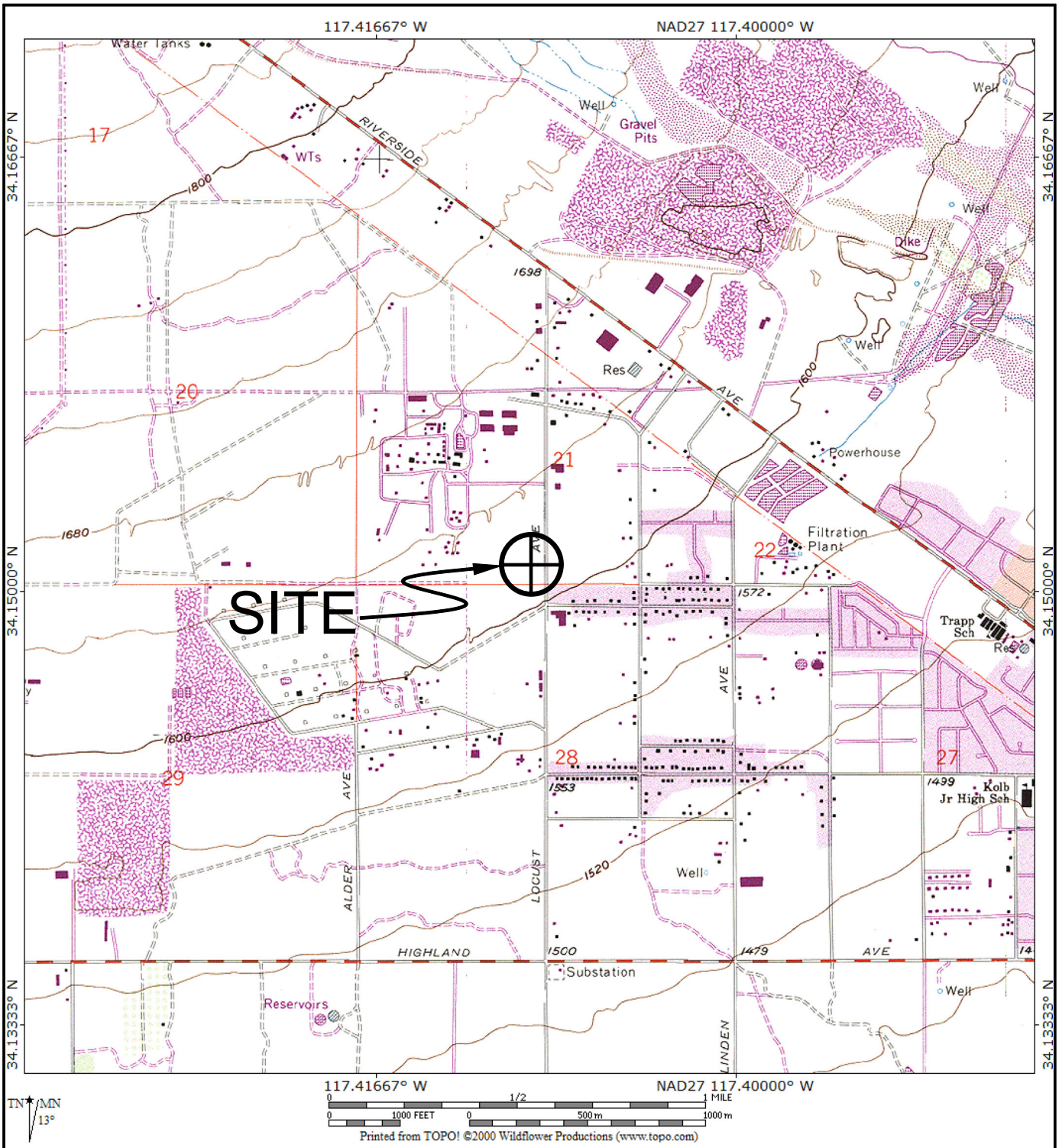
Morton, D. M. and Miller, F. K., 2003, *Preliminary Geologic Map of the San Bernardino 30' x 60' Quadrangle, California,* Scale 1:100,000, U. S. Geological Survey Open-File Report 03-293, Sheet 1 of 5.

Rialto, City of, 2010, General Plan Update, Safety and Noise Chapter.

San Bernardino County General Plan, Safety Element, 2005.

U.S. Geological Survey, 2021, *National Water Information System: Web Interface,* Web Site Address: http://waterdata.usgs.gov/nwis/gw

Ziony, J. I., and Jones, L. M., 1989, *Map Showing Late Quaternary Faults and 1978–1984 Seismicity of the Los Angeles Region, California*, U.S. Geological Survey Miscellaneous Field Studies Map MF-1964.



REFERENCE: U.S.G.S. TOPOGRAPHIC MAPS, 7.5 MINUTE SERIES, SAN BERNARDINO, CA QUADRANGLE

GEOCON WEST, INC.

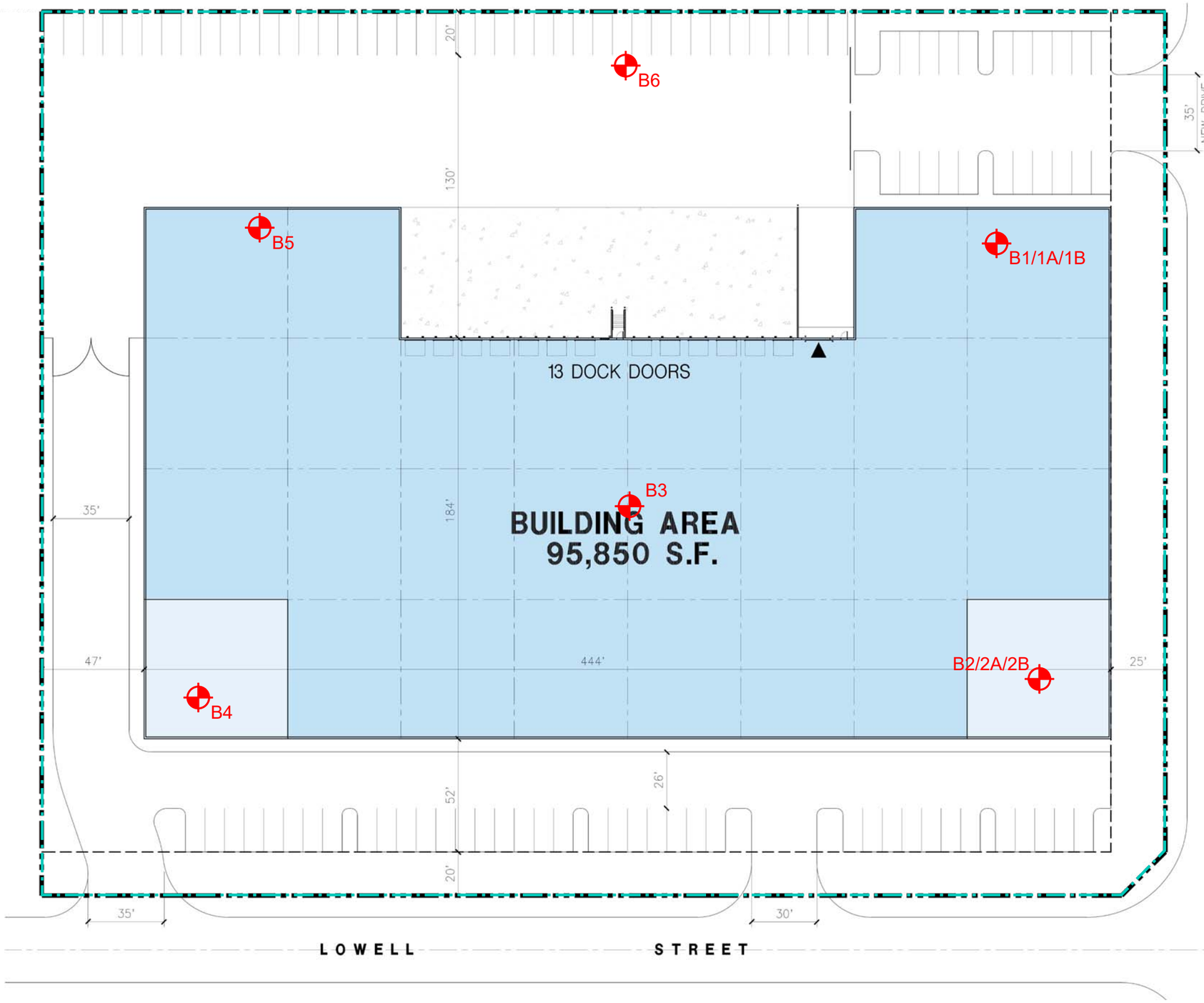
ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: RA	CHECKED BY: SFK

VICINITY MAP

NW CORNER LOCUST AVENUE
AND LOWELL STREET
RIALTO, CALIFORNIA

AUGUST 2021	PROJECT NO. W1393-99-01	FIG. 1



LEGEND

B6 Approximate Location of Boring

Approximate Location of Property Line

0 50' 100'

GEOCON
WEST, INC.
ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: PZ	CHECKED BY: JTA

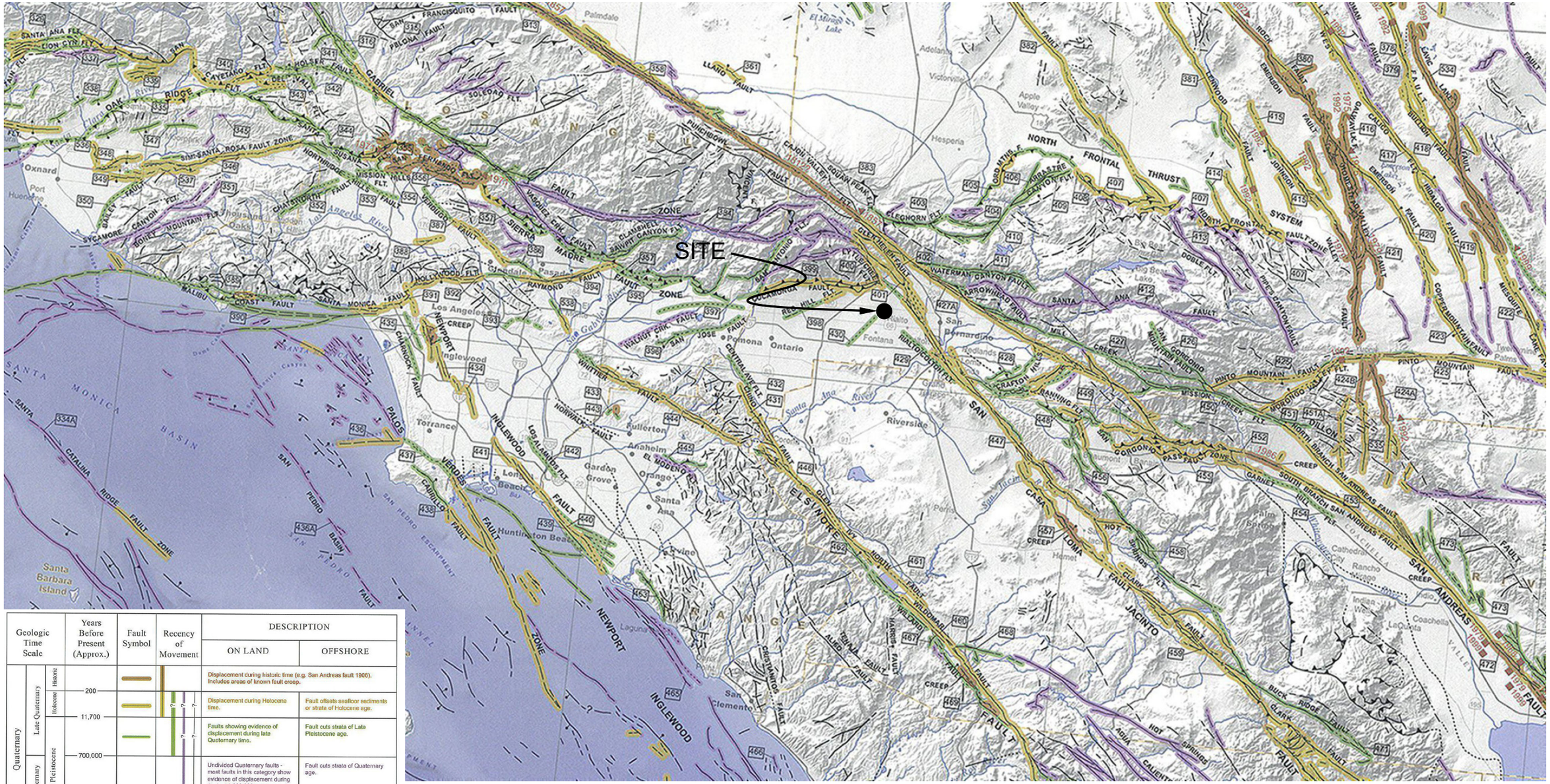
SITE PLAN

NW CORNER OF LOCUST AVENUE
AND LOWELL STREET
RIALTO, CALIFORNIA

AUGUST 2021	PROJECT NO. W1393-99-01	FIG. 2

1516

Reference: Jennings, C.W. and Bryant, W. A., 2010, Fault Activity Map of California, California Geological Survey Geologic Data Map No. 6.



Geologic Time Scale			Years Before Present (Approx.)	Fault Symbol	Recency of Movement	DESCRIPTION: ON LAND	DESCRIPTION: OFFSHORE
Quaternary	Late Quaternary	Historic	200			Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault creep.	
		Holocene	11,700			Displacement during Holocene time.	Fault offsets seafloor sediments or strata of Holocene age.
	Early Quaternary	Pleistocene	700,000			Faults showing evidence of displacement during late Quaternary time.	Fault cuts strata of Late Pleistocene age.
			1,600,000*			Undivided Quaternary faults - most faults in this category show evidence of displacement during the last 1,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age.	Fault cuts strata of Quaternary age.
Pre-Quaternary			4.5 billion (Age of Earth)			Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive.	Fault cuts strata of Pliocene or older age.

* Quaternary now recognized as extending to 2.6 Ma (Walker and Geissman, 2009). Quaternary faults in this map were established using the previous 1.6 Ma criterion.

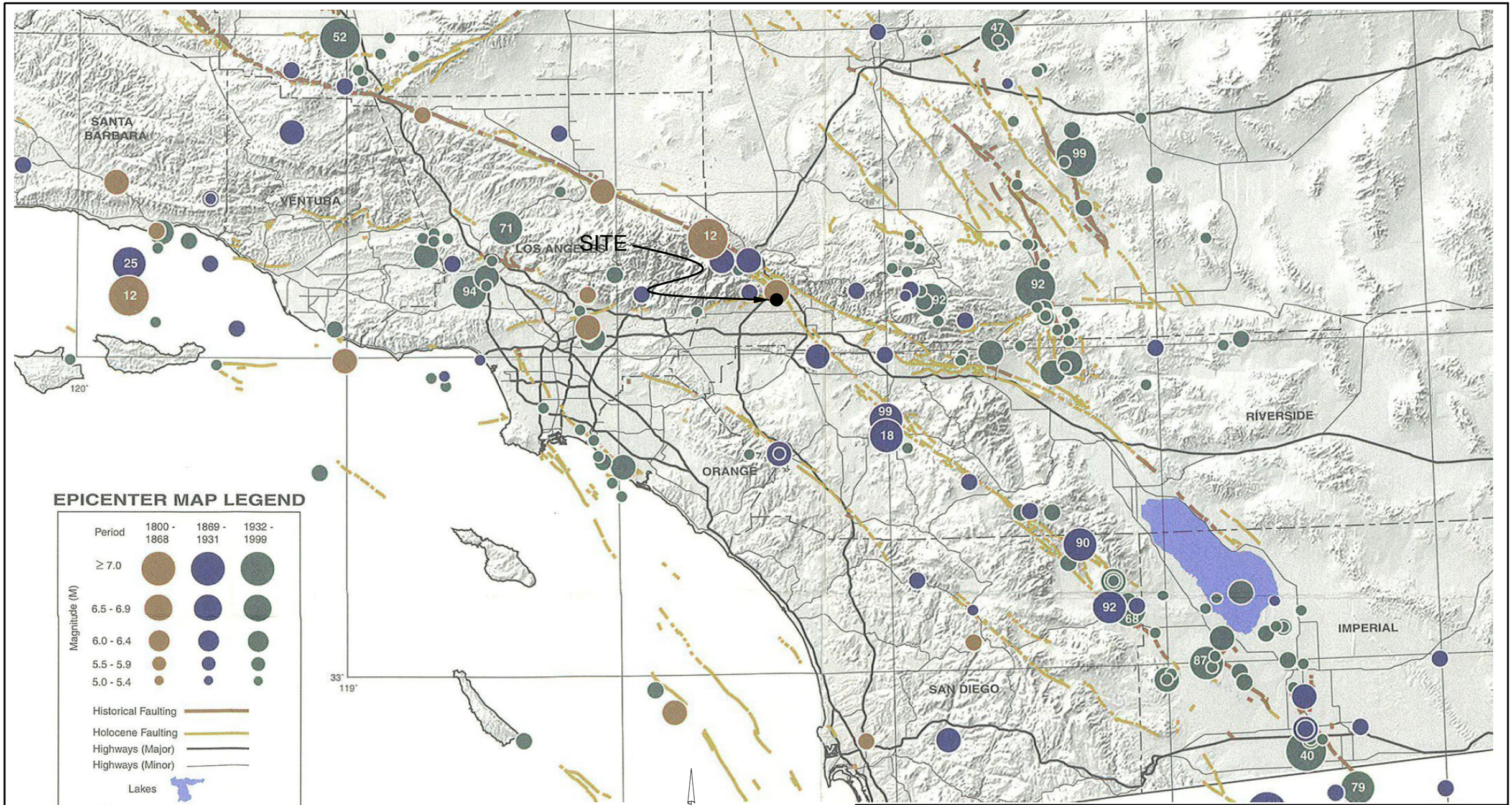
GEOCON WEST, INC.
ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: RA | CHECKED BY: SFK

REGIONAL FAULT MAP

NW CORNER OF LOCUST AVENUE AND LOWELL STREET
RIALTO, CALIFORNIA

AUGUST 2021 | PROJECT NO. W1393-99-01 | FIG. 3



EPICENTER MAP LEGEND

Period	1800 - 1868	1869 - 1931	1932 - 1999
≥ 7.0			
6.5 - 6.9			
6.0 - 6.4			
5.5 - 5.9			
5.0 - 5.4			

Magnitude (M)

Historical Faulting

Holocene Faulting

Highways (Major)

Highways (Minor)

Lakes

65 Last two digits of M ≥ 6.5 earthquake year

Reference: Toppozada, T., Branum, D., Petersen, M., Hallstrom, C., Cramer, C., and Reichle, M., 2000, Epicenters and Areas Damaged by M≥5 California Earthquakes, 1800 - 1999, California Geological Survey, Map Sheet 49.

0 20 40 Miles

GEOCON WEST, INC.
ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

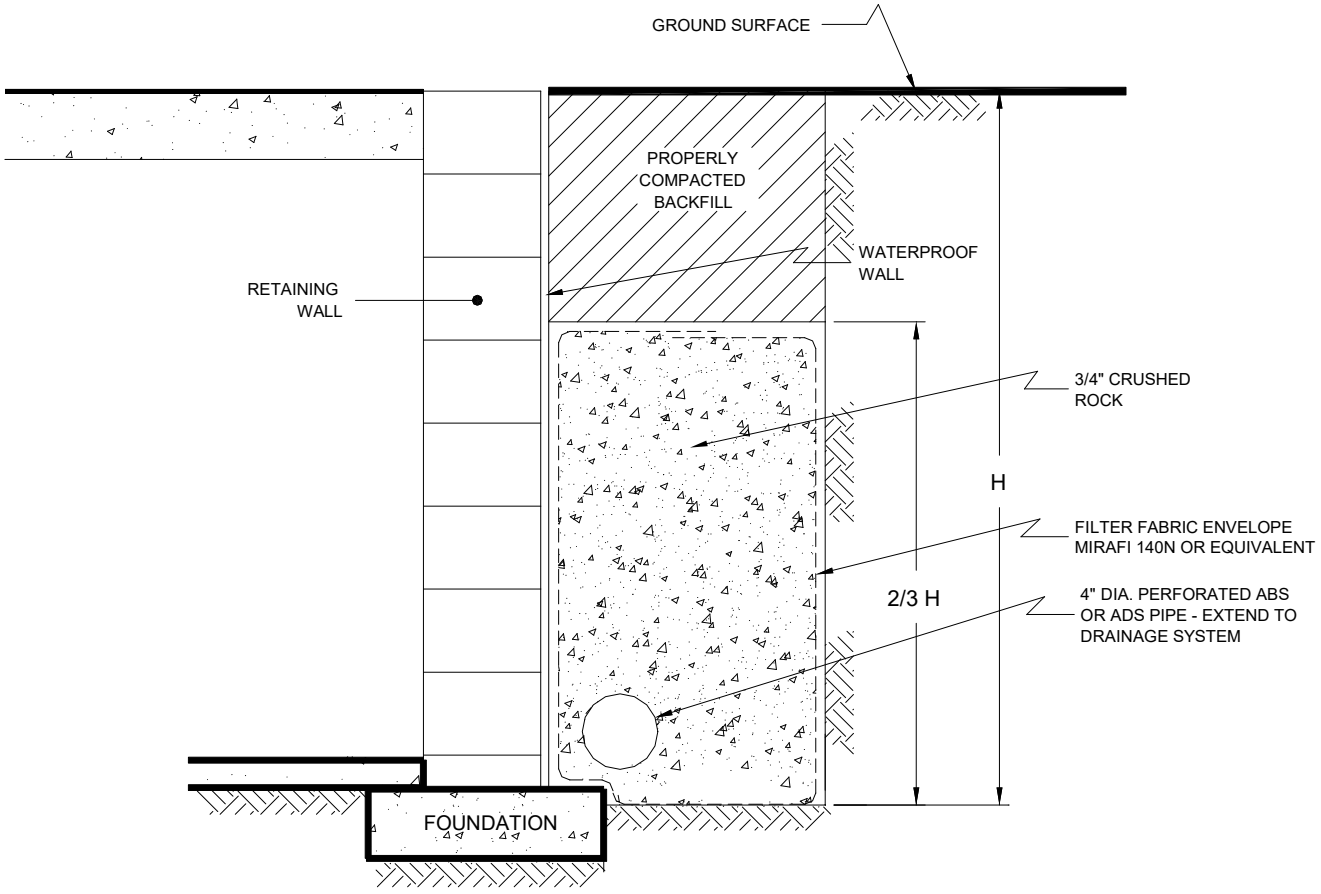
DRAFTED BY: RA | CHECKED BY: SFK

REGIONAL SEISMICITY MAP

NW CORNER OF LOCUST AVENUE AND LOWELL STREET
RIALTO, CALIFORNIA

AUGUST 2021 | PROJECT NO. W1393-99-01 | FIG.4

1518



NO SCALE

GEOCON WEST, INC.

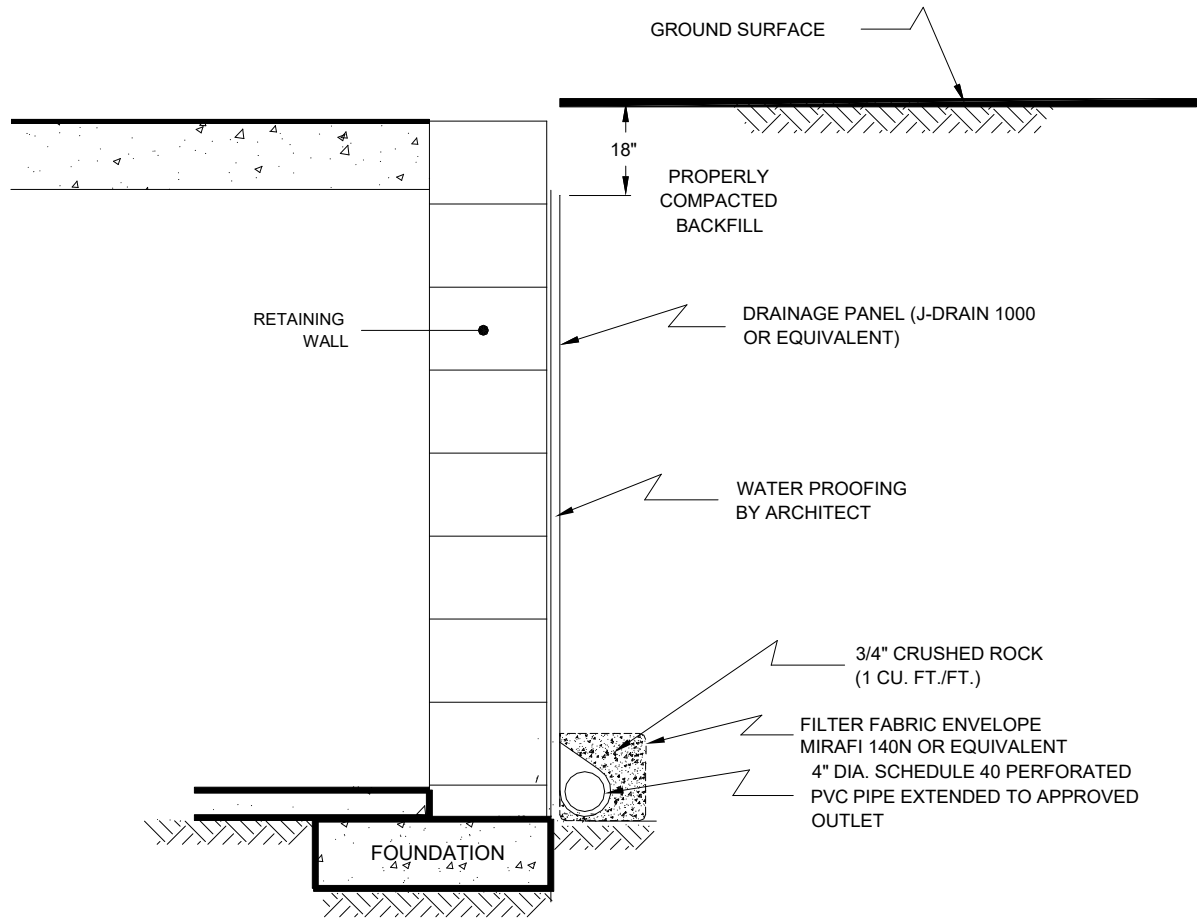
ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: PZ	CHECKED BY: JTA

RETAINING WALL DRAIN DETAIL

NW CORNER OF LOCUST AVENUE
AND LOWELL STREET
RIALTO, CALIFORNIA

AUGUST 2021	PROJECT NO. W1393-99-01	FIG. 5



NO SCALE

GEOCON
W E S T, I N C.

ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: PZ	CHECKED BY: JTA

RETAINING WALL DRAIN DETAIL

NW CORNER OF LOCUST AVENUE
AND LOWELL STREET
RIALTO, CALIFORNIA

AUGUST 2021	PROJECT NO. W1393-99-01	FIG. 6

PERCOLATION TEST DATA SHEET

Project:	Locust/Lowell	Project No:	W1393-99-01	Date:	7/22/2021
Test Hole No:	B6	Tested By:	JS		
Depth of Test Hole, D_T:	10.5	USCS Soil Classification:	SP		
Test Hole Dimensions (inches)			Length	Width	
Diameter (if round) =	8	Sides (if rectangular) =	---	---	

Sandy Soil Criteria Test*

Trial No.	Start Time	Stop Time	Δt Time Interval (min)	D_0 Initial Depth to Water (in)	D_f Final Depth to Water (in)	ΔD Change in Water Level (in)	Greater than or Equal to 6"? (y/n)
1	14:30	14:37	7	60.0	114.6	54.6	y
2	14:38	14:42	4	60.0	106.8	46.8	y

*If two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements, taken every 10 minutes. Otherwise, pre-soak (fill) overnight. Obtain at least twelve measurements per hole over at least six hours (approximately 30 minute intervals) with a precision of at least 0.25".

Trial No.	Start Time	Stop Time	Δt Time Interval (min)	D_0 Initial Depth to Water (in)	D_f Final Depth to Water (in)	ΔD Change in Water Level (in)	Percolation Rate (min/in)
1	14:44	14:54	10	60.0	117.0	57.0	0.18
2	14:55	15:05	10	60.0	115.8	55.8	0.18
3	15:05	15:15	10	60.0	116.3	56.3	0.18
4	15:16	15:26	10	60.0	116.2	56.2	0.18
5	15:27	15:37	10	60.0	116.5	56.5	0.18
6	15:38	15:48	10	60.0	116.2	56.2	0.18
7							
8							

Infiltration Rate Calculation:

Time Interval, Δt =	10	minutes	Ho =	66.0	inches
Final Depth to Water, Df =	116.2	inches	Hf =	9.8	inches
Test Hole Radius, r =	4	inches	ΔH =	56.2	inches
Initial Depth to Water, Do =	60.0	inches	Havg =	37.9	inches
Total Depth of Test Hole, DT =	126.0	inches			

$$I_t = \frac{\Delta H(60r)}{\Delta t(r + 2H_{avg})}$$

Infiltration Rate, It = **16.9** inches/hour

Figure 7

APPENDIX A

APPENDIX A

FIELD INVESTIGATION

The site was explored on July 22, 2021 by excavating six 8-inch diameter borings utilizing a truck-mounted hollow stem auger drilling machine. Borings B1 and B2 had several attempts but the planned boring depths were not reached due to refusal on cobbles. The borings were excavated to depths between 9 and 20½ feet below existing ground surface. Representative and relatively undisturbed samples were obtained by driving a 3 inch O. D., California Modified Sampler into the "undisturbed" soil mass with blows from a 140-pound auto-hammer falling 30 inches. The California Modified Sampler was equipped with 1-inch high by 2⅜-inch diameter brass sampler rings to facilitate soil removal and testing. Bulk samples were also obtained.

The soil conditions encountered in the borings were visually examined, classified and logged in general accordance with the Unified Soil Classification System (USCS). The logs of the borings are presented on Figures A1 through A10. The logs depict the soil and geologic conditions encountered and the depth at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the logs were revised based on subsequent laboratory testing. The locations of the borings are shown on Figure 2.

PROJECT NO. W1393-99-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 1** ELEV. (MSL.) -- DATE COMPLETED **7/22/2021** EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0	BULK 0-5'				**ARTIFICIAL FILL** Sand with Gravel, medium dense, slightly moist, brown, fine- to medium-grained, fine gravel, concrete fragments.			
2	B1@2.5'			SP	**ALLUVIUM** Sand with Gravel and Cobbles, very dense, slightly moist to moist, brown, fine- to medium-grained, up to 35% gravel and cobbles, fine to coarse gravel, cobbles (to 7"). - no recovery, medium dense	50 (4")	--	--
4								
6	B1@5'				- no recovery		--	--
8	B1@7.5'					50 (5.5")	--	--
					Total depth of boring: 9 feet (refusal) Fill to 1.5 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A1,
Log of Boring 1, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 1A** ELEV. (MSL.) -- DATE COMPLETED **7/22/2021** EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**ARTIFICIAL FILL** Sand, poorly-graded, medium dense, moist, dark brown, fine- to medium-grained, trace fine gravel.			
2					**ALLUVIUM** Sand with Gravel and Cobbles, well-graded, very dense, slightly moist, brown, fine- to coarse-grained, up to 35% gravel and cobbles, fine to coarse gravel.			
4				SW				
6					- large cobble/boulder			
					Total depth of boring: 7 feet (refusal) Fill to 2 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A2,
Log of Boring 1A, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 1B** ELEV. (MSL.) -- DATE COMPLETED **7/22/2021** EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**ARTIFICIAL FILL** Sand, poorly graded, medium dense, moist, brown, fine- to medium-grained, trace fine gravel.			
2					**ALLUVIUM** Sand with Gravel and Cobbles, poorly-graded, very dense, slightly moist, light brown, fine- to medium-grained, up to 35% gravel and cobbles, fine to coarse gravel.			
4								
6								
8				SP				
10	B1B@10'					50 (1")		
12								
14								
16	B1B@15'				- medium dense, no recovery	37		
					Total depth of boring: 17.5 feet (refusal) Fill to 1.5 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A3,
Log of Boring 1B, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. W1393-99-01

BORING 2

ELEV. (MSL.) -- DATE COMPLETED 7/22/2021

EQUIPMENT HOLLOW STEM AUGER BY: JS

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	BULK 0-5'			SP	**ALLUVIUM** Sand with gravel, poorly-graded, dense, slightly moist to moist, brown, fine- to medium-grained, up to 30% gravel, fine to medium gravel.			
2								
4	B2@3'				- cobbles, no recovery, dense	86	--	--
6	B2@6'			GP	Gravel with Sand and Cobbles, very dense, slightly moist, light brown, fine- to coarse-grained, up to 30% sand, up to 15% cobbles, medium to coarse gravel, cobbles (to 8").	50 (6")	126.0	0.9
8								
10	B2@9'					50 (6")	--	--
12					Total depth of boring: 12 feet (refusal) No fill. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A4,
Log of Boring 2, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 2A** ELEV. (MSL.) -- DATE COMPLETED **7/22/2021** EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SP	**ALLUVIUM** Sand with Gravel, dense, slightly moist to moist, brown, fine- to medium-grained, fine gravel.			
2								
4				GP	Gravel with Sand and Cobbles, very dense, slightly moist, brown, fine- to medium-grained, up to 30% sand, up to 20% cobbles, medium to coarse gravel.			
6								
8				SP	Sand with Gravel, poorly-graded, very dense, slightly moist, brown, fine- to medium-grained, up to 30% gravel, medium to coarse gravel.			
10								
12					- some cobbles			
					Total depth of boring: 12.5 feet (refusal) No fill. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A5,
Log of Boring 2A, Page 1 of 1

SAMPLE SYMBOLS

☐ ... SAMPLING UNSUCCESSFUL ◧ ... STANDARD PENETRATION TEST ■ ... DRIVE SAMPLE (UNDISTURBED)

⊠ ... DISTURBED OR BAG SAMPLE ◥ ... CHUNK SAMPLE ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

BORING 2B

ELEV. (MSL.) -- DATE COMPLETED 7/22/2021

EQUIPMENT HOLLOW STEM AUGER BY: JS

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ALLUVIUM**			
2					Sand with Gravel, medium dense to dense, slightly moist to moist, brown, fine- to medium-grained, up to 30% gravel, medium to coarse gravel.			
4					- cobbles			
6								
8								
10				SP				
12					- cobbles (to 5")			
14								
16	B2B@15'				- very dense, increase in gravel and cobbles	50 (1")	--	--
18								
20	B2B@20'					50 (5")	129.2	1.4
					Total depth of boring: 20.5 feet (refusal) No fill. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A6,
Log of Boring 2B, Page 1 of 1

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

BORING 3

ELEV. (MSL.) -- DATE COMPLETED **7/22/2021**

EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	BULK 0-5'				**ARTIFICIAL FILL** Sand, poorly graded, medium dense, moist, very dark brown, fine- to meidum-grained, trace fine gravel.			
2	B3@2.5'					26	107.8	6.7
4					**ALLUVIUM** Sand with Gravel and Cobbles, well-graded, very dense, slightly moist, light brown, fine-to coarse-grained, up to 35% gravel, up to 10% cobbles, fine to coarse gravel.			
6	B3@5'					50 (5")	130.4	1.2
8	B3@7.5'				- no recovery	50 (5.5")	--	--
10	B3@10'				- no recovery	50 (6")	--	--
12	B3@12.5'			SW	- dense	57	132.3	1.9
14	B3@15'				- very dense, yellowish brown, decrease in gravel content	50 (5")	110.0	3.5
16								
18								
20	B3@20'					50 (5.5")	90.7	1.4
					Total depth of boring: 20.5 feet Fill to 4 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A7,
Log of Boring 3, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

BORING 4

ELEV. (MSL.) -- DATE COMPLETED 7/22/2021

EQUIPMENT HOLLOW STEM AUGER BY: JS

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	BULK 0-5'				**ALLUVIUM** Sand with Gravel and Cobbles, well-graded, dense, slightly moist, light brown to brown, fine- to coarse-grained, up to 35% gravel, up to 20% cobbles, fine to coarse gravel.			
2	B4@2.5'					55	129.4	0.9
4								
6	B4@5'					50 (6")	122.9	1.6
8	B4@7.5'			SW	- very dense, grades to cobbly/gravelly sand	50 (4")	--	--
10	B4@10'					50 (6")	124.1	1.9
12	B4@12.5'				- dense	60	133.4	1.3
14					- very dense, increase in cobbles			
16	B4@15'					50 (5.5")	--	--
18								
20	B4@20'					50 (5")	128.5	2.3

Total depth of boring: 20.5 feet
No fill.
No groundwater encountered.
Backfilled with soil cuttings and tamped.

*Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.

NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.

W1393-99-01 BORING LOGS.GPJ

Figure A8,
Log of Boring 4, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

BORING 5

ELEV. (MSL.) -- DATE COMPLETED **7/22/2021**

EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	BULK 0-5'				**ARTIFICIAL FILL** Sand, poorly graded, medium dense, moist, dark brown, fine- to medium-grained.			
2					**ALLUVIUM**			
4	B5@3'				Sand with Gravel, well-graded, dense, slightly moist, light brown to brown, fine- to coarse-grained, up to 35% gravel, up to 10% cobbles, fine to coarse gravel, some cobbles.	63	121.3	1.3
6	B5@6'				- very dense	50 (4")	139.7	2.4
8	B5@9'			SW		50 (6")	124.6	1.6
10								
12	B5@12'				- no recovery	50 (5")	--	--
14								
16	B5@15'					50 (6")	--	--
18								
20	B5@20'				- moist, dark yellowish brown	50 (2")	121.2	2.0

Total depth of boring: 20.5 feet
Fill to 2 feet.
No groundwater encountered.
Backfilled with soil cuttings and tamped.

*Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.

NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.

W1393-99-01 BORING LOGS.GPJ

Figure A9,
Log of Boring 5, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

BORING 6

ELEV. (MSL.) -- DATE COMPLETED **7/22/2021**

EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ARTIFICIAL FILL** Sand, poorly graded, medium dense, slightly moist, dark brown, fine- to medium-grained, trace fine gravel.			
2	B6@2.5'					15	106.3	2.7
4					**ALLUVIUM** Sand with Gravel and Cobbles, well-graded, very dense, slightly moist, brown, fine- to coarse-grained, up to 35% gravel, up to 15% cobbles, fine to coarse gravel.			
6	B6@5'			SW		50 (5")	--	--
8								
10	B6@10'					50 (6")	125.7	1.1
					Total depth of boring: 10.5 feet Fill to 3 feet. No groundwater encountered. Percolation testing performed. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A10,
Log of Boring 6, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

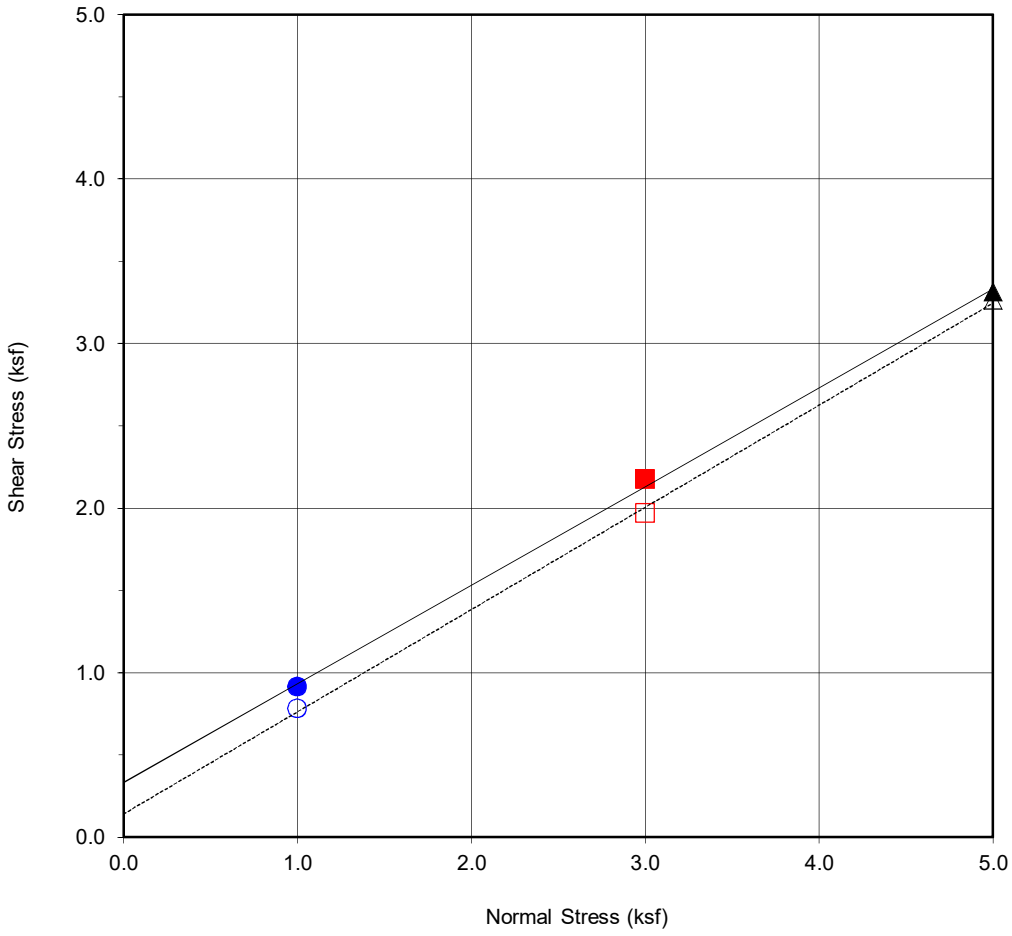
NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

APPENDIX B

APPENDIX B

LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM), or other suggested procedures. Selected samples were tested for direct shear strength, consolidation characteristics, corrosivity, in-place dry density and moisture content. The results of the laboratory tests are summarized in Figures B1 through B10. The in-place dry density and moisture content of the samples tested are presented in the boring logs, Appendix A.



Boring No.	**B1+B4**
Sample No.	**B1+B4@0-5'**
Depth (ft)	**0-5'**
Sample Type:	Ring

Soil Identification:

Brown Sand with Gravel (SP)

Strength Parameters

	C (psf)	ϕ (^{o})
Peak	332	31.0
Ultimate	141	31.8

Normal Strest (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.91	■ 2.17	▲ 3.31
Shear Stress @ End of Test (ksf)	○ 0.78	□ 1.97	△ 3.26
Deformation Rate (in./min.)	0.01	0.01	0.01
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	10.1	10.2	11.2
Initial Dry Density (pcf)	114.9	115.0	113.7
Initial Degree of Saturation (%)	58.2	58.8	62.5
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	14.6	13.9	13.8

GEOCON

DIRECT SHEAR TEST RESULTS

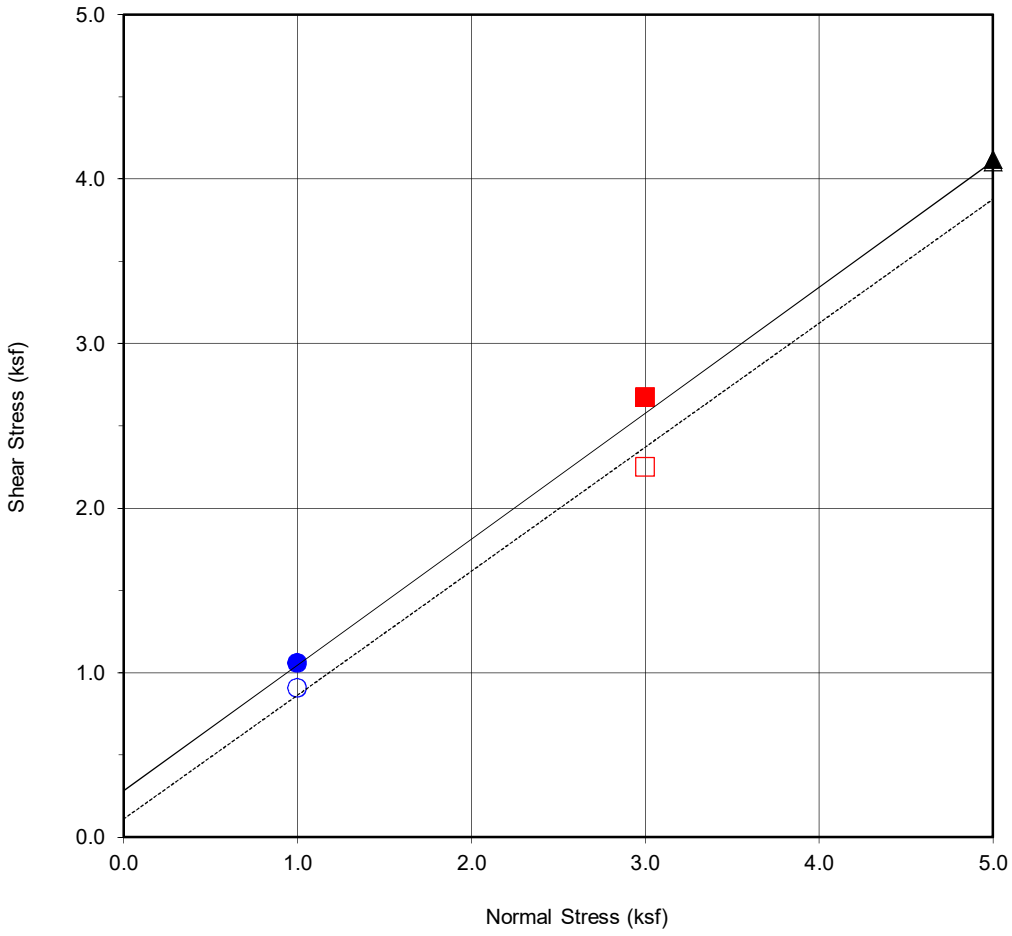
Consolidated Drained ASTM D-3080

Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B1



Boring No.	**B-4**
Sample No.	**B4@2.5'**
Depth (ft)	**2.5'**
Sample Type:	Ring

Soil Identification:

Brown Sand with Gravel (SW)

Strength Parameters

	C (psf)	ϕ (^{o})
Peak	281	37.4
Ultimate	110	37.0

Normal Strest (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 1.06	■ 2.67	▲ 4.12
Shear Stress @ End of Test (ksf)	○ 0.91	□ 2.25	△ 4.10
Deformation Rate (in./min.)	0.01	0.01	0.01
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	6.1	7.8	6.0
Initial Dry Density (pcf)	121.1	121.0	123.4
Initial Degree of Saturation (%)	41.8	53.5	44.6
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	10.7	13.5	11.4

GEOCON

DIRECT SHEAR TEST RESULTS

Consolidated Drained ASTM D-3080

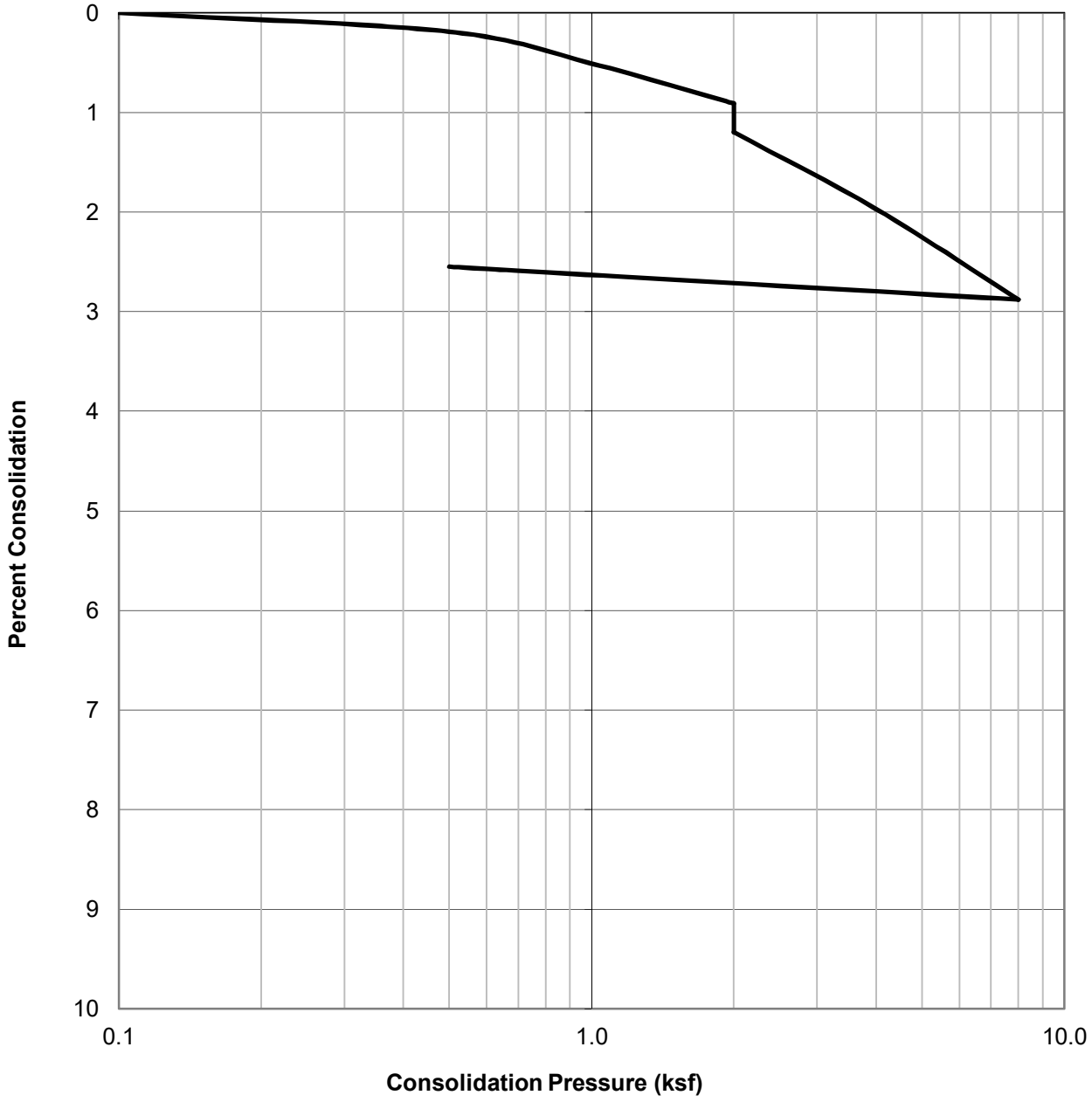
Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B2

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B2@6'	Gravel with Sand and Cobbles (GP)	122.9	2.2	11.7

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

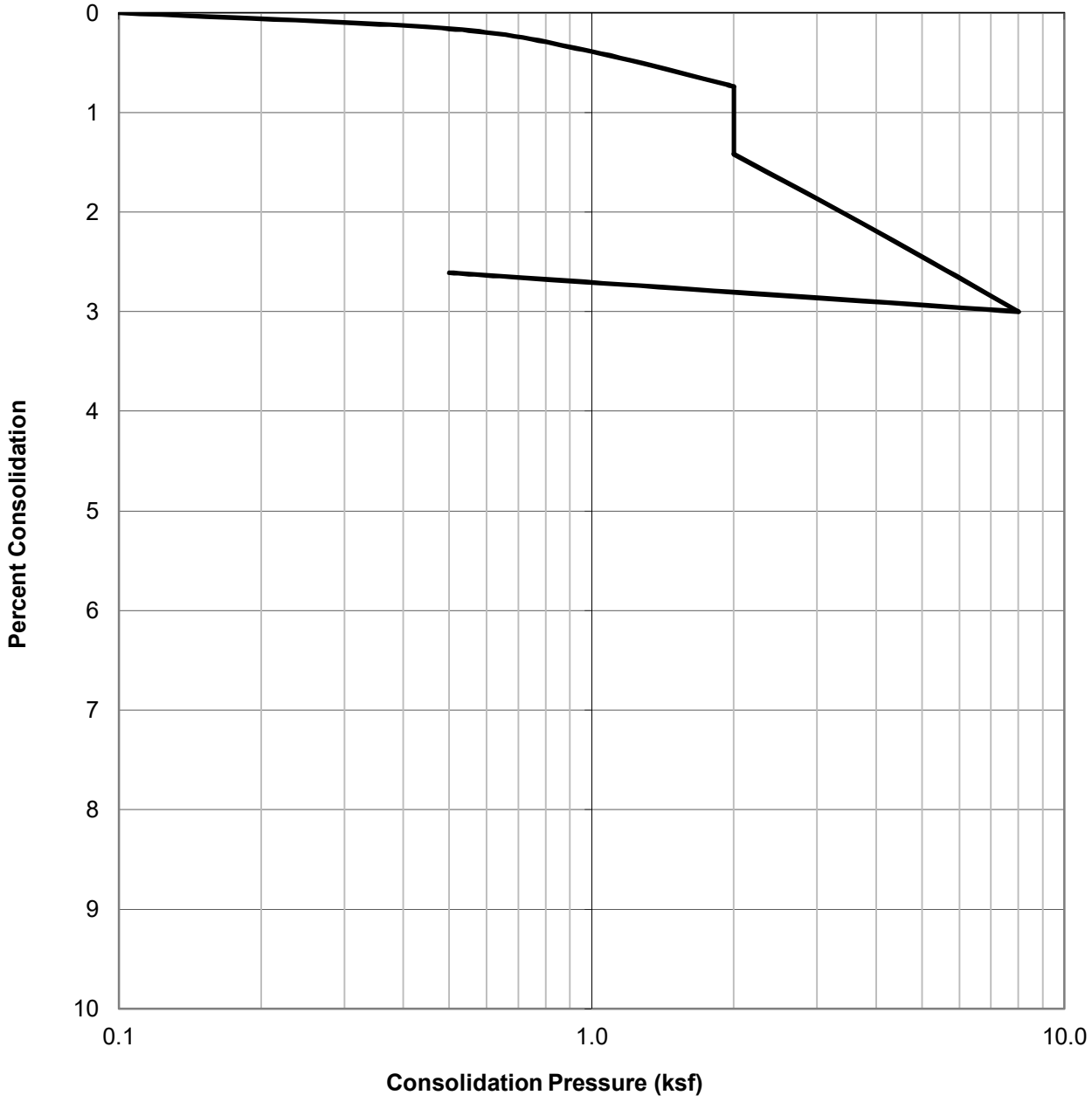
Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B3

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@6'	Brown Sand with Gravel (SP)	127.8	2.9	11.3

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

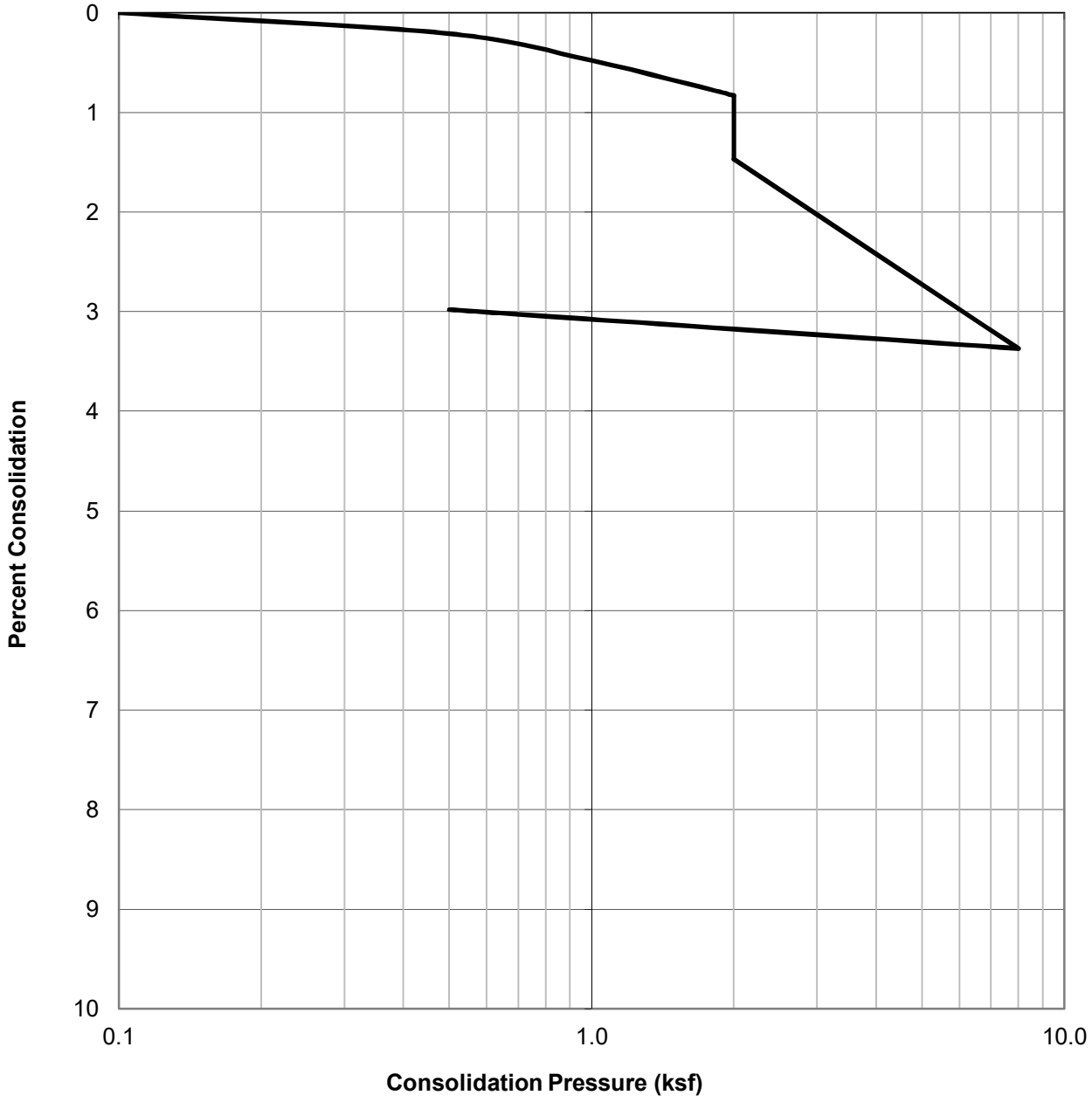
Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B4

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@9'	Brown Sand with Gravel (SW)	121.6	2.4	13.0

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

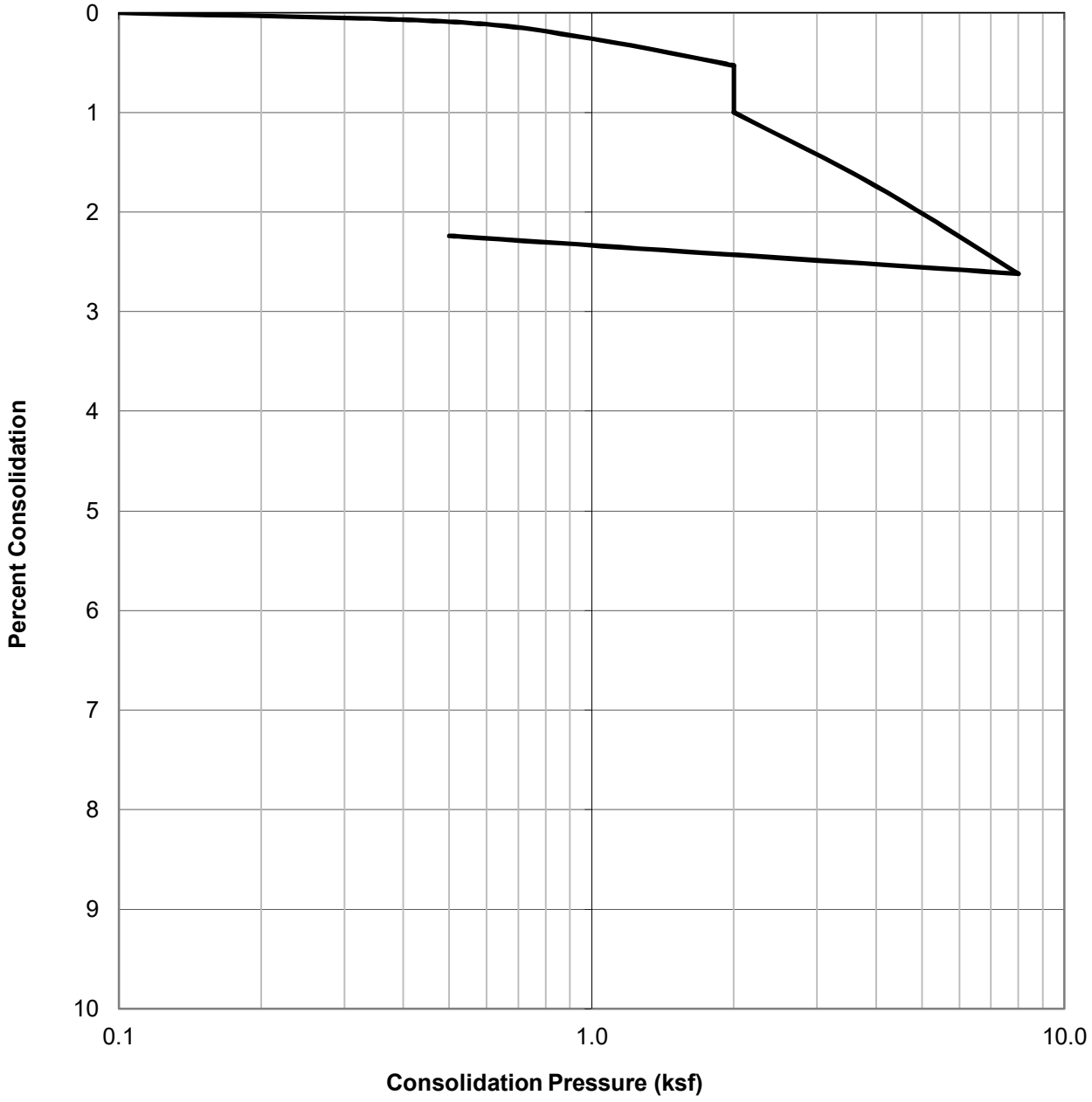
Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B5

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B3@12.5'	Light Brown Sand with Gravel and Cobbles (SW)	124.7	2.4	11.8

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

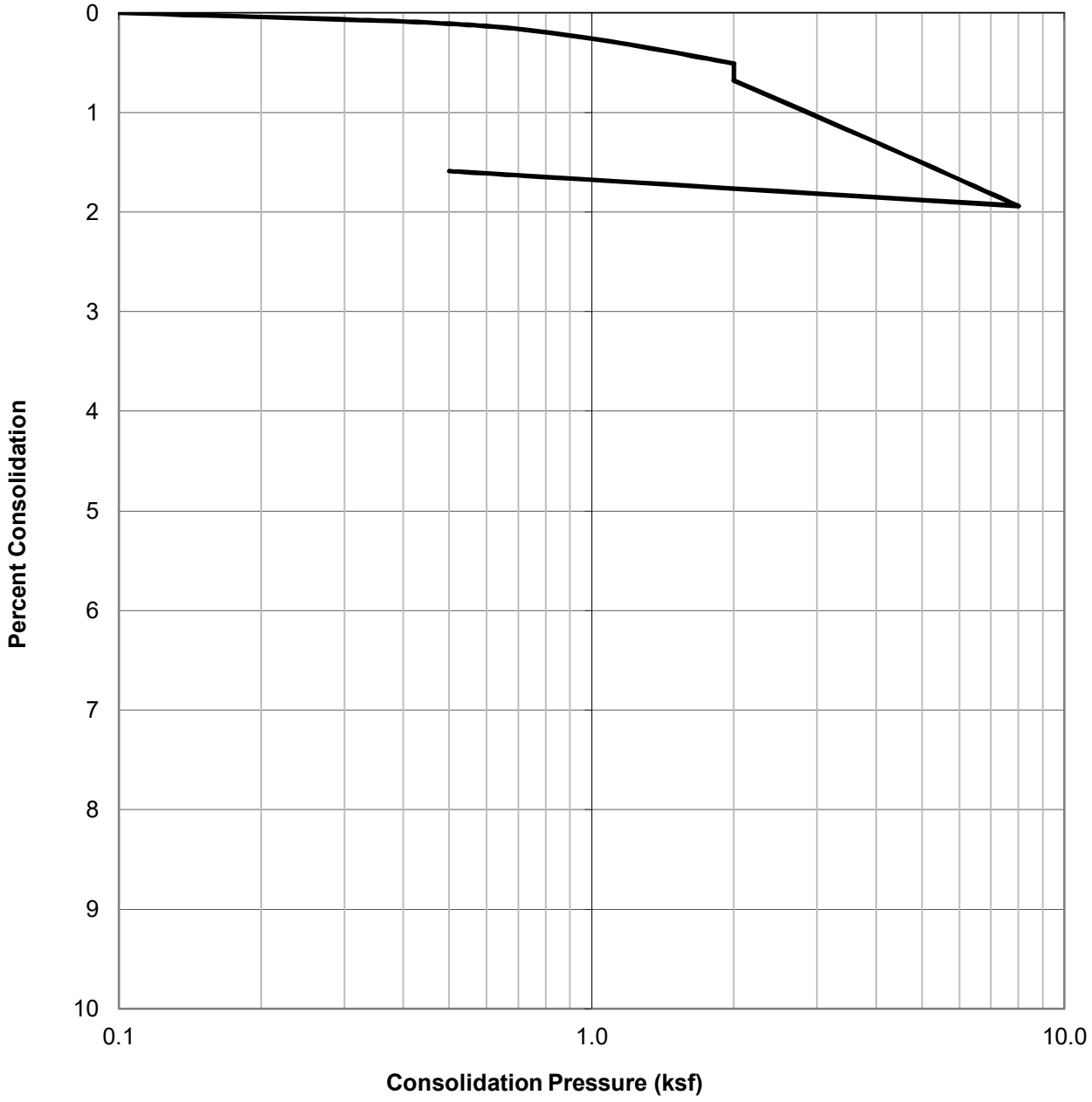
Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B6

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B4@12.5'	Brown Sand with Gravel (SW)	130.1	2.4	11.2

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

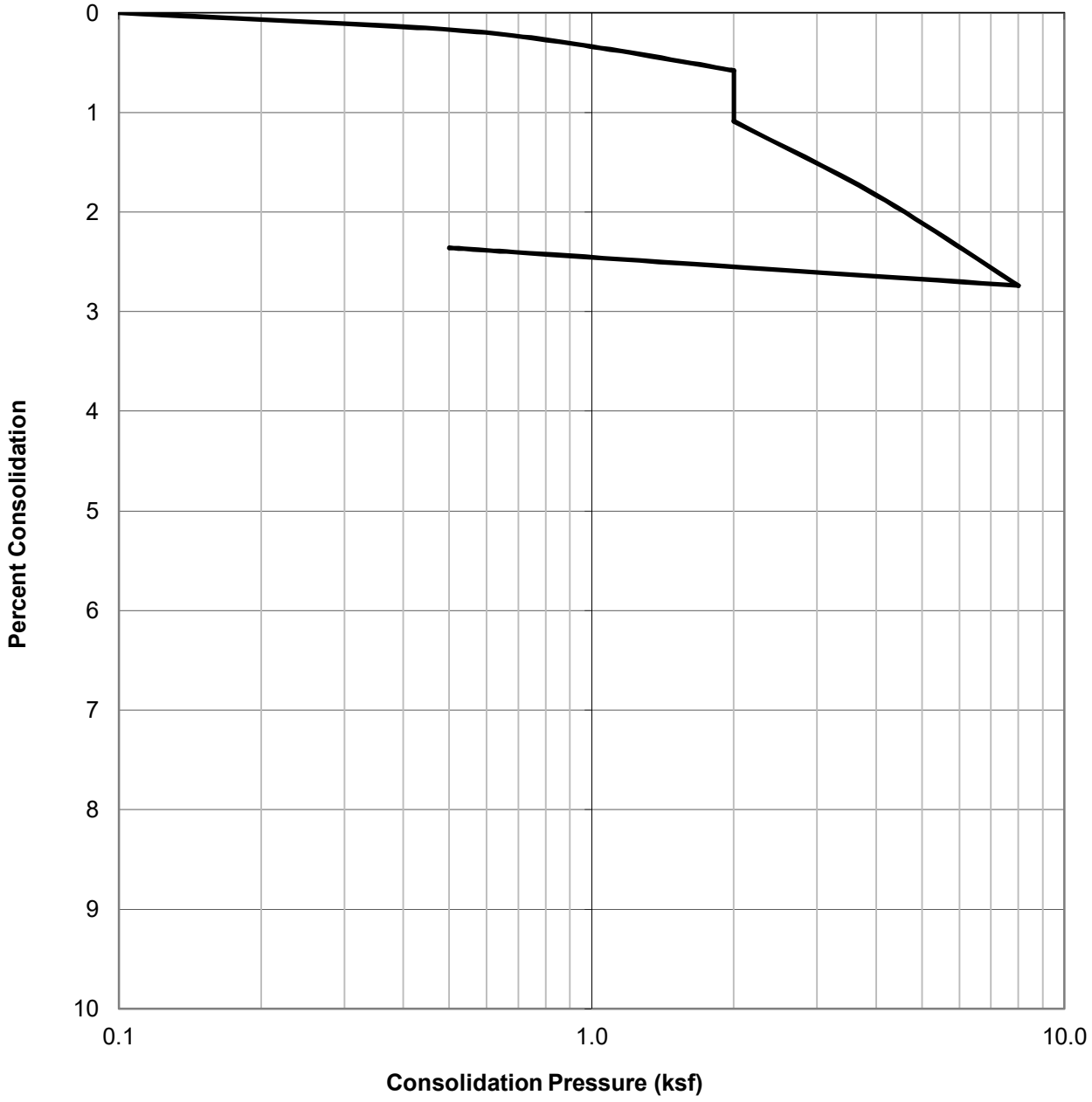
Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B7

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B2B@20'	Brown Sand with Gravel (SP)	126.1	2.8	11.1

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B8

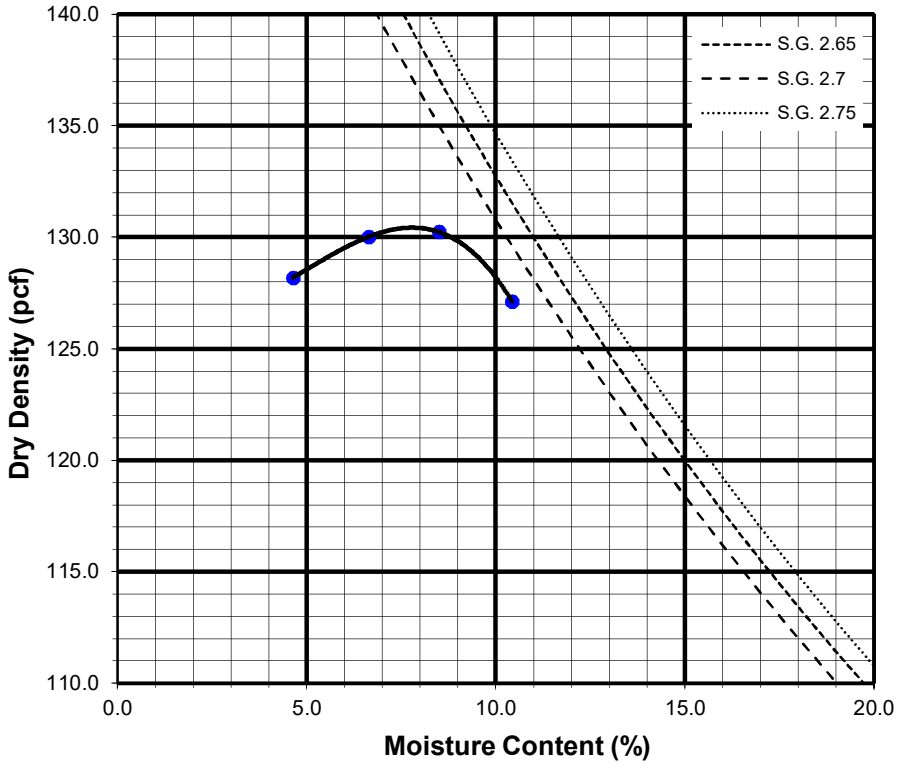
Sample No:

B1+B4@0-5'	Brown Sand with Gravel (SP)

TEST NO.		1	2	3	4	5	6
Wt. Compacted Soil + Mold	(g)	6312	6380	6420	6406		
Weight of Mold	(g)	4292	4292	4292	4292		
Net Weight of Soil	(g)	2020	2088	2128	2114		
Wet Weight of Soil + Cont.	(g)	2397.9	2470.4	2538.1	2493.6		429.1
Dry Weight of Soil + Cont.	(g)	2308.4	2340.2	2371.2	2293.8		420.7
Weight of Container	(g)	378.7	378.8	409.0	379.0		95.2
Moisture Content	(%)	4.6	6.6	8.5	10.4	0.0	2.6
Wet Density	(pcf)	134.1	138.6	141.3	140.4		
Dry Density	(pcf)	128.2	130.0	130.2	127.1	0.0	0.0

Maximum Dry Density (pcf)	**130.6**
Bulk Specific Gravity (dry)	**2.64**
Corrected Maximum Dry Density (pcf)	**147.8**

Optimum Moisture Content (%)	**7.6**
Oversized Fraction (%)	**55.8**
Corrected Moisture Content (%)	**3.3**



Preparation Method: A

GEOCON

COMPACTION CHARACTERISTICS USING MODIFIED EFFORT TEST RESULTS

ASTM D-1557

Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue and Lowell Street Rialto, California

August 2021 Figure B9

SUMMARY OF LABORATORY POTENTIAL
OF HYDROGEN (pH) AND RESISTIVITY TEST RESULTS
CALIFORNIA TEST NO. 643

Sample No.	pH	Resistivity (ohm centimeters)
B1+B4@0-5'	7.7	6000 (Moderately Corrosive)

SUMMARY OF LABORATORY CHLORIDE CONTENT TEST RESULTS
EPA NO. 325.3

Sample No.	Chloride Ion Content (%)
B1+B4@0-5'	0.015

SUMMARY OF LABORATORY WATER SOLUBLE SULFATE TEST RESULTS
CALIFORNIA TEST NO. 417

Sample No.	Water Soluble Sulfate (% SO_4)	Sulfate Exposure*
B1+B4@0-5'	0.000	S0

GEOCON

CORROSIVITY TEST RESULTS

Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B10

APPENDIX G

PRELIMINARY WATER QUALITY MANAGEMENT PLAN

Preliminary Water Quality Management Plan

For:

Thrifty Locust and Lowell Warehouse

PM 7173

PPD# 2021-0055

Prepared for:

Thrifty Oil Co.

13116 Imperial Highway

Santa Fe Springs, CA 90670

562-921-3581 x344

Prepared by:

Kimley-Horn and Associates

401 B Street

San Diego, CA 92101

(619) 234-9411

Approval Date: _____

Prepared: April 2022

Project Owner's Certification

This Preliminary Water Quality Management Plan (PWQMP) has been prepared for **Thrifty Oil Co.** by Kimley-Horn and Associates. The PWQMP is intended to comply with the requirements of the **City of Rialto, San Bernardino County** and the NPDES Areawide Stormwater Program requiring the preparation of a PWQMP. The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with San Bernardino County's Municipal Storm Water Management Program and the intent of the NPDES Permit for San Bernardino County and the incorporated cities of San Bernardino County within the Santa Ana Region. Once the undersigned transfers its interest in the property, its successors in interest and the city/county shall be notified of the transfer. The new owner will be informed of its responsibility under this PWQMP. A copy of the approved WQMP shall be available on the subject site in perpetuity.

"I certify under a penalty of law that the provisions (implementation, operation, maintenance, and funding) of the PWQMP have been accepted and that the plan will be transferred to future successors."

Project Data			
Permit/Application Number(s):	PPD 2021-0055	Grading Permit Number(s):	
Tract/Parcel Map Number(s):	PM 7173	Building Permit Number(s):	
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract):			APN 0239-192-12-0000

Owner's Signature			
Owner Name: Stephane Wandel			
Title	Director of Acquisitions and Development		
Company	Thrifty Oil Co		
Address	13116 Imperial Highway, Santa Fe Springs, CA 90670		
Email	wandel@thriftyoil.com		
Telephone #	310-418-6588		
Signature		Date	

Preparer's Certification

Project Data			
Permit/Application Number(s):	PPD 2021-0055	Grading Permit Number(s):	
Tract/Parcel Map Number(s):	PM 7173	Building Permit Number(s):	
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract):			APN 0239-192-12-0000

"The selection, sizing and design of stormwater treatment and other stormwater quality and quantity control measures in this plan were prepared under my oversight and meet the requirements of Regional Water Quality Control Board Order No. R8-2010-0036."

Engineer: Davie Cowan		PE Stamp Below
Title	Civil Engineer	PRELIMINARY
Company	Kimley-Horn and Associates	
Address	401 B Street, Suite 600, San Diego, CA 92101	
Email	Davie.cowan@kimley-horn.com	
Telephone #	619-744-0144	
Signature		
Date		

Table of Contents

Section 1 Discretionary Permit(s) 1

Section 2 Project Description 1

2.1 Project Information 1
2.2 Property Ownership/Management 2
2.3 Potential Stormwater Pollutants 3
2.4 Water Quality Credits 4

Section 3 Site and Watershed Description 1

Section 4 Best Management Practices (BMP) 1

4.1 Source Control BMP 1
4.2 Project Performance Criteria 8
4.3 Project Conformance Analysis 13
4.4 Alternative Compliance Plan (if applicable) 28

Section 5 Inspection and Maintenance Responsibility for Post Construction BMP 1

Section 6 WQMP Attachments 1

6.1. Site Plan and Drainage Plan 1
6.2 Electronic Data Submittal 1
6.3 Post Construction 1
6.4 Other Supporting Documentation 1

Forms

Form 1-1 Project Information 1

Form 2.1-1 Description of Proposed Project 1

Form 2.2-1 Property Ownership/Management 2

Form 2.3-1 Pollutants of Concern 3

Form 2.4-1 Water Quality Credits 5

Form 3-1 Site Location and Hydrologic Features 1

Form 3-2 Existing Hydrologic Characteristics for Drainage Area 1 2

Form 4.1-1 Non-Structural Source Control BMPs 2

Form 4.1-2 Structural Source Control BMPs 4

Form 4.1-3 Preventative LID Site Design Practices Checklist 7

Form 4.2-1 LID BMP Performance Criteria for Design Capture Volume 8

Form 4.2-2 Summary of HCOC Assessment (DA 1) 9

Form 4.2-3 HCOC Assessment for Runoff Volume (DA 1) 10

Form 4.2-4 HCOC Assessment for Time of Concentration (DA 1) 11
Form 4.2-5 HCOC Assessment for Peak Runoff (DA 1) 12
Form 4.3-1 Infiltration BMP Feasibility (DA 1) 14
Form 4.3-2 Site Design Hydrologic Source Control BMPs (DA 1) 15
Form 4.3-3 Infiltration LID BMP 18
Form 4.3-4 Harvest and Use BMPs (DA 1) 20
Form 4.3-5 Selection and Evaluation of Biotreatment BMP (DA 1) 21
Form 4.3-6 Volume Based Biotreatment (DA 1) – 22
Bioretention and Planter Boxes with Underdrains 22
Form 4.3-7 Volume Based Biotreatment (DA 1) – 23
Constructed Wetlands and Extended Detention 23
Form 4.3-8 Flow Based Biotreatment (DA 1) 24
Form 4.3-9 Conformance Summary and Alternative Compliance Volume Estimate 25
Form 4.3-10 Hydromodification Control BMPs (DA 1) 27
Form 5-1 BMP Inspection and Maintenance 1

Appendices

Appendix A **WQMP Site Plan Exhibit and BMP Calculations**

Appendix B **BMP Educational Material**

Appendix C **WQMP Agreement**

Appendix D **BMP Operation and Maintenance**

Appendix E **Geotechnical Report**

Appendix F **Hydrologic Conditions of Concern Exemption Documentation**

Section 1 Discretionary Permit(s)

Form 1-1 Project Information					
Project Name	Thrifty Locust and Lowell Warehouse				
Project Owner Contact Name:	Stephane Wandel				
Mailing Address:	13116 Imperial Highway, Santa Fe Springs, CA 90670	E-mail Address:	wandel@thriftyoil.com	Telephone:	310-418-6588
Permit/Application Number(s):	PPD 2021-0055		Tract/Parcel Map Number(s):	PM 7173	
Additional Information/ Comments:					
Description of Project:	The proposed Locust and Lowell Warehouse is approximately 5.01 acres and encompasses one proposed warehouse building with a total of ±103,822 square feet of building footprint with paved infrastructure to provide parking and access to the building. The buildings will include office and warehouse space. The 5.01 acres project site is located at the northwest corner of N Locust Avenue and W Lowell Street. The project site is designated as general manufacturing land use I-GM, and zoning designation of general manufacturing I-GM. This project proposes two underground infiltration basins on-site to capture and fully infiltrate the water quailty design capture volume and the 100yr design storm runoff volume.				
Provide summary of Conceptual WQMP conditions (if previously submitted and approved). Attach complete copy.	N/A.				

Section 2 Project Description

2.1 Project Information

This section of the PWQMP should provide the information listed below. The information provided for Conceptual/ Preliminary WQMP should give sufficient detail to identify the major proposed site design and LID BMPs and other anticipated water quality features that impact site planning. Final Project WQMP must specifically identify all BMP incorporated into the final site design and provide other detailed information as described herein.

The purpose of this information is to help determine the applicable development category, pollutants of concern, watershed description, and long term maintenance responsibilities for the project, and any applicable water quality credits. This information will be used in conjunction with the information in Section 3, Site Description, to establish the performance criteria and to select the LID BMP or other BMP for the project or other alternative programs that the project will participate in, which are described in Section 4.

Form 2.1-1 Description of Proposed Project

[1] Development Category (Select all that apply):

☐ Significant re-development involving the addition or replacement of 5,000 ft² or more of impervious surface on an already developed site	☒ New development involving the creation of 10,000 ft² or more of impervious surface collectively over entire site	☐ Automotive repair shops with standard industrial classification (SIC) codes 5013, 5014, 5541, 7532- 7534, 7536-7539	☐ Restaurants (with SIC code 5812) where the land area of development is 5,000 ft² or more
☐ Hillside developments of 5,000 ft² or more which are located on areas with known erosive soil conditions or where the natural slope is 25 percent or more	☐ Developments of 2,500 ft² of impervious surface or more adjacent to (within 200 ft) or discharging directly into environmentally sensitive areas or waterbodies listed on the CWA Section 303(d) list of impaired waters.	☒ Parking lots of 5,000 ft² or more exposed to storm water	☐ Retail gasoline outlets that are either 5,000 ft² or more, or have a projected average daily traffic of 100 or more vehicles per day

☐ Non-Priority / Non-Category Project *May require source control LID BMPs and other LIP requirements. Please consult with local jurisdiction on specific requirements*.

[2] Project Area (ft2):	218,204 SF (5.01 AC)	[3] Number of Dwelling Units:	N/A	[4] SIC Code:	1541

[5] Is Project going to be phased? Yes ☐ No ☒ *If yes, ensure that the WQMP evaluates each phase as a distinct DA, requiring LID BMPs to address runoff at time of completion.*

[6] Does Project include roads? Yes ☐ No ☒ *If yes, ensure that applicable requirements for transportation projects are addressed (see Appendix A of TGD for WQMP)*

2.2 Property Ownership/Management

Describe the ownership/management of all portions of the project and site. State whether any infrastructure will transfer to public agencies (City, County, Caltrans, etc.) after project completion. State if a homeowners or property owners association will be formed and be responsible for the long-term maintenance of project stormwater facilities. Describe any lot-level stormwater features that will be the responsibility of individual property owners.

Form 2.2-1 Property Ownership/Management

Describe property ownership/management responsible for long-term maintenance of WQMP stormwater facilities:

The project site, including the proposed building, paved and unpaved areas, onsite utilities and the BMPs included within this PWQMP will be owned, operated and maintained by Thrifty Oil Co. No transfer of infrastructure to public agencies is anticipated. Long-term stormwater facility maintenance will be conducted by Thrifty Oil Co. staff and/ or subcontracted maintenance staff.

2.3 Potential Stormwater Pollutants

Determine and describe expected stormwater pollutants of concern based on land uses and site activities (refer to Table 3-3 in the TGD for WQMP).

Form 2.3-1 Pollutants of Concern			
Pollutant	Please check: E=Expected, N=Not Expected		Additional Information and Comments
Pathogens (Bacterial / Virus)	E ☒	N ☐	Pollutant includes petroleum hydrocarbons
Nutrients - Phosphorous	E ☒	N ☐	Landscaping is proposed on-site
Nutrients - Nitrogen	E ☒	N ☐	Landscaping is proposed on-site
Noxious Aquatic Plants	E ☒	N ☐	Landscaping is proposed on-site
Sediment	E ☒	N ☐	Landscaping is proposed on-site
Metals	E ☒	N ☐	Brake dust from vehicular traffic
Oil and Grease	E ☒	N ☐	Vehicular Traffic in parking areas
Trash/Debris	E ☒	N ☐	Covered trash enclosure proposed on-site
Pesticides / Herbicides	E ☒	N ☐	Landscaping is proposed on-site
Organic Compounds	E ☒	N ☐	Landscaping is proposed on-site
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	

2.4 Water Quality Credits

A water quality credit program is applicable for certain types of development projects if it is not feasible to meet the requirements for on-site LID. Proponents for eligible projects, as described below, can apply for water quality credits that would reduce project obligations for selecting and sizing other treatment BMP or participating in other alternative compliance programs. Refer to Section 6.2 in the TGD for WQMP to determine if water quality credits are applicable for the project.

Form 2.4-1 Water Quality Credits

1 Project Types that Qualify for Water Quality Credits: *Select all that apply*

Redevelopment projects that reduce the overall impervious footprint of the project site. [Credit = % impervious reduced]	Higher density development projects Vertical density [20%] 7 units/ acre [5%]	Mixed use development (combination of residential, commercial, industrial, office, institutional, or other land uses which incorporate design principles that demonstrate environmental benefits not realized through single use projects) [20%]	Brownfield redevelopment (redevelop real property complicated by presence or potential of hazardous contaminants) [25%]
Redevelopment projects in established historic district, historic preservation area, or similar significant core city center areas [10%]	Transit oriented developments (mixed use residential or commercial area designed to maximize access to public transportation) [20%]	In-fill projects (conversion of empty lots & other underused spaces < 5 acres, substantially surrounded by urban land uses, into more beneficially used spaces, such as residential or commercial areas) [10%]	Live-Work developments (variety of developments designed to support residential and vocational needs) [20%]

NOT APPLICABLE

2 Total Credit % *(Total all credit percentages up to a maximum allowable credit of 50 percent)*

Description of Water Quality Credit Eligibility (if applicable)	N/A

Section 3 Site and Watershed Description

Describe the project site conditions that will facilitate the selection of BMP through an analysis of the physical conditions and limitations of the site and its receiving waters. Identify distinct drainage areas (DA) that collect flow from a portion of the site and describe how runoff from each DA (and sub-watershed DMAs) is conveyed to the site outlet(s). Refer to Section 3.2 in the TGD for WQMP. The form below is provided as an example. Then complete Forms 3.2 and 3.3 for each DA on the project site. *If the project has more than one drainage area for stormwater management, then complete additional versions of these forms for each DA / outlet.*

Form 3-1 Site Location and Hydrologic Features

Site coordinates *take GPS measurement at approximate center of site*	Latitude 34° 09'10"N	Longitude 117°24'39"W	Google Earth Pro

[1] San Bernardino County climatic region: ☒ Valley ☐ Mountain

[2] Does the site have more than one drainage area (DA): Yes☒ No☐ *If no, proceed to Form 3-2. If yes, then use this form to show a conceptual schematic describing DMAs and hydrologic feature connecting DMAs to the site outlet(s). An example is provided below that can be modified for proposed project or a drawing clearly showing DMA and flow routing may be attached*



Conveyance	Briefly describe on-site drainage features to convey runoff that is not retained within a DMA
DMA 1 to BMP 1	Stormwater from DMA 1 surface flows to onsite inlet where storm drain convey the flows to the proposed underground chamber (BMP 1). The water quality volume is fully infiltrated into the ground.
DMA 2 to BMP 2	Stormwater from DMA 2 surface flows to onsite inlet where storm drains convey the flows to the proposed underground chamber (BMP 2). The water quality volume is fully infiltrated into the ground.

Form 3-2 Existing Hydrologic Characteristics for Drainage Areas

For Drainage Areas' sub-watershed DMA, provide the following characteristics	DA 1	DA 2		
1 DMA drainage area (ft^2)	96,459	121,749		
2 Existing site impervious area (ft^2)	0	0		
3 Antecedent moisture condition *For desert areas, use* *http://www.sbcounty.gov/dpw/floodcontrol/pdf/20100412_map.pdf*	3	3		
4 Hydrologic soil group *Refer to Watershed Mapping Tool – http://sbcounty.permitrack.com/WAP*	A	A		
5 Longest flowpath length (ft)	774	430		
6 Longest flowpath slope (ft/ft)	0.0214	0.0298		
7 Current land cover type(s) *Select from Fig C-3 of Hydrology Manual*	78	78		
8 Pre-developed pervious area condition: *Based on the extent of wet season vegetated cover good >75%; Fair 50-75%; Poor <50% Attach photos of site to support rating*	Poor	Poor		

Section 4 Best Management Practices (BMP)

4.1 Source Control BMP

4.1.1 Pollution Prevention

Non-structural and structural source control BMP are required to be incorporated into all new development and significant redevelopment projects. Form 4.1-1 and 4.1-2 are used to describe specific source control BMPs used in the PWQMP or to explain why a certain BMP is not applicable. Table 7-3 of the TGD for WQMP provides a list of applicable source control BMP for projects with specific types of potential pollutant sources or activities. The source control BMP in this table must be implemented for projects with these specific types of potential pollutant sources or activities.

The preparers of this PWQMP have reviewed the source control BMP requirements for new development and significant redevelopment projects. The preparers have also reviewed the specific BMP required for project as specified in Forms 4.1-1 and 4.1-2. All applicable non-structural and structural source control BMP shall be implemented in the project.

Form 4.1-1 Non-Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, if not applicable, state reason
		Included	Not Applicable	
N1	Education of Property Owners, Tenants and Occupants on Stormwater BMPs	☒	☐	Property owner will familiarize himself/ herself with the education materials provided within this WQMP and educate tenants and employees.
N2	Activity Restrictions	☒	☐	No outdoor work areas, processing, storage or wash area proposed.
N3	Landscape Management BMPs	☒	☐	Irrigation must be consistent with the City's Water Conservation Ordinance. Fertilizer and pesticide usage will be consistent with County Management Guidelines for Use of Fertilizers and Pesticides.
N4	BMP Maintenance	☒	☐	BMP maintenance, implementation schedules, and responsible parties are included within this WQMP.
N5	Title 22 CCR Compliance (How development will comply)	☐	☒	Not Applicable – No hazardous waste onsite.
N6	Local Water Quality Ordinances	☐	☒	Not Applicable – Local agency does not have additional water quality ordinances.
N7	Spill Contingency Plan	☒	☐	Owner will have a spill contingency plan based on site needs.
N8	Underground Storage Tank Compliance	☐	☒	Not Applicable – No underground storage tank proposed onsite.
N9	Hazardous Materials Disclosure Compliance	☐	☒	Not Applicable – No hazardous materials onsite.

Form 4.1-1 Non-Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, if not applicable, state reason
		Included	Not Applicable	
N10	Uniform Fire Code Implementation	☒	☐	Owner will comply with Article 80 of the Uniform Fire Code enforced by the fire protection agency.
N11	Litter/Debris Control Program	☒	☐	Owner to implement litter debris control program to provide during regularly scheduled maintenance.
N12	Employee Training	☒	☐	Owner to ensure tenants are familiar with onsite BMPs and the associated maintenance required. Owner will check with City and County at least once a year to obtain new or updated education materials and provide these materials to tenants. Employees shall be trained to clean up spills and participate in ongoing maintenance. The WQMP requires bi-annually employee training and training for new hires within 2 months.
N13	Housekeeping of Loading Docks	☒	☐	All fluids to be kept indoors. Clean up spills immediately and keep spills from entering the storm drain system. No direct discharges are allowed into the storm drain system. Area shall be inspected weekly for proper containment and practices with spills cleansed up immediately and disposed of properly.
N14	Catch Basin Inspection Program	☒	☐	Monthly catch basin and inlet inspection by Owner's designee required. Vacuum when sediment or trash becomes 2 inches deep and dispose of properly.
N15	Vacuum Sweeping of Private Streets and Parking Lots	☒	☐	All landscape maintenance contractors will be required to sweep up all landscape cuttings, mowings and fertilizer materials off paved areas weekly and dispose of properly. Parking areas and drive ways will be swept monthly by sweeping contractor.
N16	Other Non-structural Measures for Public Agency Projects	☐	☒	Not Applicable – Not a public agency project.
N17	Comply with all other applicable NPDES permits	☒	☐	Project will comply with Construction General permit.

Form 4.1-2 Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, If not applicable, state reason
		Included	Not Applicable	
S1	Provide storm drain system stencilling and signage (CASQA New Development BMP Handbook SD-13)	☒	☐	"No Dumping" stencils will be included on all proposed catch basins and inlets. Legibility of stencil will be maintained on a yearly basis.
S2	Design and construct outdoor material storage areas to reduce pollution introduction (CASQA New Development BMP Handbook SD-34)	☐	☒	Not Applicable – No outdoor material storage areas onsite.
S3	Design and construct trash and waste storage areas to reduce pollution introduction (CASQA New Development BMP Handbook SD-32)	☒	☐	Trash and wastes storage areas will be paved with an impervious surface and not allowed any run-on from adjacent areas. Drainage will be diverted from adjoining roofs and pavements. Trash and waste storage area will be screened or walled to prevent offsite transport of trash and have solid roof or awning to prevent direct contact with rainfall.
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control (Statewide Model Landscape Ordinance; CASQA New Development BMP Handbook SD-12)	☒	☐	Irrigation systems shall include reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines. Timers will be used to avoid over watering and watering cycles and duration shall be adjusted seasonally by the landscape maintenance contractor. The landscaping areas will be grouped with plants that have similar water requirements. Native or drought tolerant species shall also be used where appropriate to reduce excess irrigation runoff and propose surface filtration.
S5	Finish grade of landscaped areas at a minimum of 1-2 inches below top of curb, sidewalk, or pavement	☒	☐	Where applicable, landscaped areas will be depressed in order to increase retention of stormwater/ irrigation water promote infiltration. This includes around parking lots.
S6	Protect slopes and channels and provide energy dissipation (CASQA New Development BMP Handbook SD-10)	☒	☐	All slopes will be vegetated or properly mulched with non-organic mulch (gravel/rocks) and maintained to prevent erosion and transport of sediment. Energy dissipaters are installed at all inlets into the basin.
S7	Covered dock areas (CASQA New Development BMP Handbook SD-31)	☐	☒	Not Applicable – No covered docks onsite.

Form 4.1-2 Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, If not applicable, state reason
		Included	Not Applicable	
S8	Covered maintenance bays with spill containment plans (CASQA New Development BMP Handbook SD-31)	☐	☒	Not Applicable – No maintenance bays onsite.
S9	Vehicle wash areas with spill containment plans (CASQA New Development BMP Handbook SD-33)	☐	☒	Not Applicable – No vehicle wash areas onsite.
S10	Covered outdoor processing areas (CASQA New Development BMP Handbook SD-36)	☐	☒	Not Applicable – No outdoor processing areas onsite.
S11	Equipment wash areas with spill containment plans (CASQA New Development BMP Handbook SD-33)	☐	☒	Not Applicable - No equipment wash area on-site.
S12	Fueling areas (CASQA New Development BMP Handbook SD-30)	☐	☒	Not Applicable - No fueling areas on-site.
S13	Hillside landscaping (CASQA New Development BMP Handbook SD-10)	☐	☒	Not Applicable - No hillsides on-site.
S14	Wash water control for food preparation areas	☐	☒	Not Applicable – No food preparation areas onsite.
S15	Community car wash racks (CASQA New Development BMP Handbook SD-33)	☐	☒	Not Applicable - No community car wash racks on-site.

4.1.2 Preventative LID Site Design Practices

Site design practices associated with new LID requirements in the MS4 Permit should be considered in the earliest phases of a project. Preventative site design practices can result in smaller DCV for LID BMP and hydromodification control BMP by reducing runoff generation. Describe site design and drainage plan including:

- A narrative of site design practices utilized or rationale for not using practices
- A narrative of how site plan incorporates preventive site design practices
- Include an attached Site Plan layout which shows how preventative site design practices are included in WQMP

Refer to Section 5.2 of the TGD for WQMP for more details.

Form 4.1-3 Preventative LID Site Design Practices Checklist

Site Design Practices
If yes, explain how preventative site design practice is addressed in project site plan. If no, other LID BMPs must be selected to meet targets

Minimize impervious areas: Yes ☒ No ☐

Explanation: The project will utilize onsite underground chambers to collect runoff from impervious areas. Landscaped areas are provided throughout the site.

Maximize natural infiltration capacity: Yes ☒ No ☐

Explanation: The underground chambers will maximize the site's natural infiltration.

Preserve existing drainage patterns and time of concentration: Yes ☐ No ☒

Explanation:
In the existing condition, the site is undeveloped and generally flows from the northwest corner to the southeast corner, discharging to an existing curb inlet and cross gutter. In the developed condition, the project will be mostly impervious and proposes to fully infiltrate the 100 year storm event. Ancillary perimeter runoff will discharge in the same location as existing conditions.

Disconnect impervious areas: Yes ☒ No ☐

Explanation: Landscaped areas are provided throughout the site.

Protect existing vegetation and sensitive areas: Yes ☐ No ☒

Explanation: Not applicable – There are not any sensitive areas onsite. Areas that are not paved will be planted with approved landscape per the landscape plans.

Re-vegetate disturbed areas: Yes ☐ No ☒

Explanation: Not applicable – most disturbed areas will be paved.

Minimize unnecessary compaction in stormwater retention/infiltration basin/trench areas: Yes ☒ No ☐

Explanation: Heavy construction vehicles will be prohibited from unnecessary soil compaction within the underground chamber area.

Utilize vegetated drainage swales in place of underground piping or imperviously lined swales: Yes ☐ No ☒
Explanation: The site is mostly impervious surfaces. Underground piping is used to route stormwater to the underground chambers for treatment.

Stake off areas that will be used for landscaping to minimize compaction during construction: Yes ☒ No ☐
Explanation: Landscape areas will be staked to minimize unnecessary compaction during construction.

4.2 Project Performance Criteria

The purpose of this section of the Project PWQMP is to establish targets for post-development hydrology based on performance criteria specified in the MS4 Permit. These targets include runoff volume for water quality control (referred to as LID design capture volume), and runoff volume, time of concentration, and peak runoff for protection of any downstream waterbody segments with a HCOC. *If the project has more than one outlet for stormwater runoff, then complete additional versions of these forms for each DA / outlet.*

Methods applied in the following forms include:

- For LID BMP Design Capture Volume (DCV), the San Bernardino County Stormwater Program requires use of the P_6 method (MS4 Permit Section XI.D.6a.ii) – Form 4.2-1
- For HCOC pre- and post-development hydrologic calculation, the San Bernardino County Stormwater Program requires the use of the Rational Method (San Bernardino County Hydrology Manual Section D). Forms 4.2-2 through Form 4.2-5 calculate hydrologic variables including runoff volume, time of concentration, and peak runoff from the project site pre- and post-development using the Hydrology Manual Rational Method approach. For projects greater than 640 acres (1.0 mi^2), the Rational Method and these forms should not be used. For such projects, the Unit Hydrograph Method (San Bernardino County Hydrology Manual Section E) shall be applied for hydrologic calculations for HCOC performance criteria.

Refer to Section 4 in the TGD for WQMP for detailed guidance and instructions.

Form 4.2-1.1 LID BMP Performance Criteria for Design Capture Volume (DMA 1)

1 Project area BMP 1 (ft^2): 92,226	2 Imperviousness after applying preventative site design practices (Imp%): 90%	3 Runoff Coefficient (Rc): 0.73 *$R_c = 0.858(Imp\%)^{\wedge 3} - 0.78(Imp\%)^{\wedge 2} + 0.774(Imp\%) + 0.04$*
4 Determine 1-hour rainfall depth for a 2-year return period $P_{2yr\text{-}1hr}$ (in): 0.730 http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html		
5 Compute P_6, Mean 6-hr Precipitation (inches): 1.08 *P_6 = Item 4 * C_1, where C_1 is a function of site climatic region specified in Form 3-1 Item 1 (Valley = 1.4807; Mountain = 1.909; Desert = 1.2371)*		
6 Drawdown Rate *Use 48 hours as the default condition. Selection and use of the 24 hour drawdown time condition is subject to approval by the local jurisdiction. The necessary BMP footprint is a function of drawdown time. While shorter drawdown times reduce the performance criteria for LID BMP design capture volume, the depth of water that can be stored is also reduced.*		24-hrs ☐ 48-hrs ☒
7 Compute design capture volume, DCV (ft^3): 11,894 *DCV = 1/12 * [Item 1 * Item 3 * Item 5 * C_2], where C_2 is a function of drawdown rate (24-hr = 1.582; 48-hr = 1.963)* *Compute separate DCV for each outlet from the project site per schematic drawn in Form 3-1 Item 2*		

Form 4.2-1.2 LID BMP Performance Criteria for Design Capture Volume (DMA 2)

1 Project area BMP 1 (ft^2): 102,374	2 Imperviousness after applying preventative site design practices (Imp%): 90%	3 Runoff Coefficient (Rc): 0.73 *$R_c = 0.858(Imp\%)^{\wedge 3} - 0.78(Imp\%)^{\wedge 2} + 0.774(Imp\%) + 0.04$*
4 Determine 1-hour rainfall depth for a 2-year return period $P_{2yr\text{-}1hr}$ (in): 0.730 http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html		
5 Compute P_6, Mean 6-hr Precipitation (inches): 1.08 *P_6 = Item 4 * C_1, where C_1 is a function of site climatic region specified in Form 3-1 Item 1 (Valley = 1.4807; Mountain = 1.909; Desert = 1.2371)*		
6 Drawdown Rate *Use 48 hours as the default condition. Selection and use of the 24 hour drawdown time condition is subject to approval by the local jurisdiction. The necessary BMP footprint is a function of drawdown time. While shorter drawdown times reduce the performance criteria for LID BMP design capture volume, the depth of water that can be stored is also reduced.*		24-hrs ☐ 48-hrs ☒
7 Compute design capture volume, DCV (ft^3): 13,203 *DCV = 1/12 * [Item 1 * Item 3 * Item 5 * C_2], where C_2 is a function of drawdown rate (24-hr = 1.582; 48-hr = 1.963)* *Compute separate DCV for each outlet from the project site per schematic drawn in Form 3-1 Item 2*		

Form 4.2-2 Summary of HCOC Assessment

Does project have the potential to cause or contribute to an HCOC in a downstream channel: Yes ☐ No ☒

Go to: http://sbcounty.permitrack.com/WAP

If "Yes", then complete HCOC assessment of site hydrology for 2yr storm event using Forms 4.2-3 through 4.2-5 and insert results below

(Forms 4.2-3 through 4.2-5 may be replaced by computer software analysis based on the San Bernardino County Hydrology Manual)

If "No," then proceed to Section 4.3 Project Conformance Analysis

NOT APPLICABLE

Condition	Runoff Volume (ft^3)	Time of Concentration (min)	Peak Runoff (cfs)
Pre-developed	1 *Form 4.2-3 Item 13*	2 *Form 4.2-4 Item 13*	3 *Form 4.2-5 Item 10*
Post-developed	4 *Form 4.2-3 Item 13*	5 *Form 4.2-4 Item 14*	6 *Form 4.2-5 Item 14*
Difference	7 *Item 4 – Item 1*	8 *Item 2 – Item 5*	9 *Item 6 – Item 3*
Difference (as % of pre-developed)	10 % *Item 7 / Item 1*	11 % *Item 8 / Item 2*	12 % *Item 9 / Item 3*

Form 4.2-3 HCOC Assessment for Runoff Volume

Weighted Curve Number Determination for: Pre-developed DA	DMA A	DMA B	DMA C	DMA D	DMA E	DMA F	DMA G	DMA H
1a Land Cover type								
2a Hydrologic Soil Group (HSG)								
3a DMA Area, ft² *sum of areas of DMA should equal area of DA*								
4a Curve Number (CN) *use Items 1 and 2 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								
Weighted Curve Number Determination for: Post-developed DA	DMA A	DMA B	DMA C	DMA D	DMA E	DMA F	DMA G	DMA H
1b Land Cover type								
2b Hydrologic Soil Group (HSG)								
3b DMA Area, ft² *sum of areas of DMA should equal area of DA*								
4b Curve Number (CN) *use Items 5 and 6 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								

5 Pre-Developed area-weighted CN:	**7** Pre-developed soil storage capacity, S (in) *S = (1000 / Item 5) - 10*	**9** Initial abstraction, I_a (in): *I_a = 0.2 * Item 7*
6 Post-Developed area-weighted CN:	**8** Post-developed soil storage capacity, S (in): *S = (1000 / Item 6) - 10*	**10** Initial abstraction, I_a (in): *I_a = 0.2 * Item 8*

11 Precipitation for 2 yr, 24 hr storm (in):
Go to: http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html

12 Pre-developed Volume (ft³):
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 9)^2 / ((Item 11 – Item 9 + Item 7)*

13 Post-developed Volume (ft³):
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 10)^2 / ((Item 11 – Item 10 + Item 8)*

14 Volume Reduction needed to meet HCOC Requirement, (ft³):
*V_{HCOC} = (Item 13 * 0.95) – Item 12*

NOT APPLICABLE
NOT APPLICABLE

Form 4.2-4 HCOC Assessment for Time of Concentration

Compute time of concentration for pre and post developed conditions for each DA *(For projects using the Hydrology Manual complete the form below)*

Variables	Pre-developed DA1 *Use additional forms if there are more than 4 DMA*				Post-developed DA1 *Use additional forms if there are more than 4 DMA*			
	DMA A	DMA B	DMA C	DMA D	DMA A	DMA B	DMA C	DMA D
1 Length of flowpath (ft) *Use Form 3-2 Item 5 for pre-developed condition*								
2 Change in elevation (ft)								
3 Slope (ft/ft), S_o = *Item 2 / Item 1*								
4 Land cover								
5 Initial DMA Time of Concentration (min) *Appendix C-1 of the TGD for WQMP*								
6 Length of conveyance from DMA outlet to project site outlet (ft) *May be zero if DMA outlet is at project site outlet*								
7 Cross-sectional area of channel (ft^2)								
8 Wetted perimeter of channel (ft)								
9 Manning's roughness of channel (n)								
10 Channel flow velocity (ft/sec) V_{fps} = *(1.49 / Item 9) * (Item 7/Item 8)^0.67 * (Item 3)^0.5*								
11 Travel time to outlet (min) T_t = *Item 6 / (Item 10 * 60)*								
12 Total time of concentration (min) T_c = *Item 5 + Item 11*								

13 Pre-developed time of concentration (min): *Minimum of Item 12 pre-developed DMA*

14 Post-developed time of concentration (min): *Minimum of Item 12 post-developed DMA*

15 Additional time of concentration needed to meet HCOC requirement (min): $T_{C\text{-}HCOC}$ = *(Item 13 * 0.95) – Item 14*

NOT APPLICABLE

Form 4.2-5 HCOC Assessment for Peak Runoff (DA 1)

Compute peak runoff for pre- and post-developed conditions

Variables		Pre-developed DA to Project Outlet (*Use additional forms if more than 3 DMA*)			Post-developed DA to Project Outlet (*Use additional forms if more than 3 DMA*)		
		DMA A	DMA B	DMA C	DMA A	DMA B	DMA C
1 Rainfall Intensity for storm duration equal to time of concentration *I_{peak} = 10^(LOG Form 4.2-1 Item 4 - 0.6 LOG Form 4.2-4 Item 5 /60)*							
2 Drainage Area of each DMA (Acres) *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
3 Ratio of pervious area to total area *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
4 Pervious area infiltration rate (in/hr) *Use pervious area CN and antecedent moisture condition with Appendix C.3 of the LGD for WQMP*							
5 Maximum loss rate (in/hr) *F_m = Item 3 * Item 4* *Use area-weighted F_m from DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
6 Peak Flow from DMA (cfs) *Q_p =Item 2 * 0.9 * (Item 1 - Item 5)*							
7 Time of concentration adjustment factor for other DMA to site discharge point *Form 4.2-4 Item 12 DMA / Other DMA upstream of site discharge point (If ratio is greater than 1.0, then use maximum value of 1.0)*	DMA A	*n/a*			*n/a*		
	DMA B		*n/a*			*n/a*	
	DMA C			*n/a*			*n/a*

8 Pre-developed Q_p at T_c for DMA A: *Q_p = Item 6_{DMAA} + [Item 6_{DMAB} * (Item 1_{DMAA} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB}) * Item $7_{DMAA/2}$] + [Item 6_{DMAC} * (Item 1_{DMAA} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC}) * Item $7_{DMAA/3}$]*	9 Pre-developed Q_p at T_c for DMA B: *Q_p = Item 6_{DMAB} + [Item 6_{DMAA} * (Item 1_{DMAB} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA}) * Item $7_{DMAB/1}$] + [Item 6_{DMAC} * (Item 1_{DMAB} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC}) * Item $7_{DMAB/3}$]*	10 Pre-developed Q_p at T_c for DMA C: *Q_p = Item 6_{DMAC} + [Item 6_{DMAA} * (Item 1_{DMAC} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA}) * Item $7_{DMAC/1}$] + [Item 6_{DMAB} * (Item 1_{DMAC} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB}) * Item $7_{DMAC/2}$]*
10 Peak runoff from pre-developed condition confluence analysis (cfs):		*Maximum of Item 8, 9, and 10 (including additional forms as needed)*
11 Post-developed Q_p at T_c for DMA A: *Same as Item 8 for post-developed values*	12 Post-developed Q_p at T_c for DMA B: *Same as Item 9 for post-developed values*	13 Post-developed Q_p at T_c for DMA C: *Same as Item 10 for post-developed values*
14 Peak runoff from post-developed condition confluence analysis (cfs):		*Maximum of Item 11, 12, and 13 (including additional forms as needed)*
15 Peak runoff reduction needed to meet HCOC Requirement (cfs):		*$Q_{p\text{-}HCOC}$ = (Item 14 * 0.95) – Item 10*

NOT APPLICABLE

4.3 Project Conformance Analysis

Complete the following forms for each project site DA to document that the proposed LID BMPs conform to the project DCV developed to meet performance criteria specified in the MS4 Permit (WQMP Template Section 4.2). For the LID DCV, the forms are ordered according to hierarchy of BMP selection as required by the MS4 Permit (see Section 5.3.1 in the TGD for WQMP). The forms compute the following for on-site LID BMP:

- Site Design and Hydrologic Source Controls (Form 4.3-2)
- Retention and Infiltration (Form 4.3-3)
- Harvested and Use (Form 4.3-4) or
- Biotreatment (Form 4.3-5).

At the end of each form, additional fields facilitate the determination of the extent of mitigation provided by the specific BMP category, allowing for use of the next category of BMP in the hierarchy, if necessary.

The first step in the analysis, using Section 5.3.2.1 of the TGD for WQMP, is to complete Forms 4.3-1 and 4.3-3) to determine if retention and infiltration BMPs are infeasible for the project. For each feasibility criterion in Form 4.3-1, if the answer is "Yes," provide all study findings that includes relevant calculations, maps, data sources, etc. used to make the determination of infeasibility.

Next, complete Forms 4.3-2 and 4.3-4 to determine the feasibility of applicable HSC and harvest and use BMPs, and, if their implementation is feasible, the extent of mitigation of the DCV.

If no site constraints exist that would limit the type of BMP to be implemented in a DA, evaluate the use of combinations of LID BMPs, including all applicable HSC BMPs to maximize on-site retention of the DCV. If no combination of BMP can mitigate the entire DCV, implement the single BMP type, or combination of BMP types, that maximizes on-site retention of the DCV within the minimum effective area.

If the combination of LID HSC, retention and infiltration, and harvest and use BMPs are unable to mitigate the entire DCV, then biotreatment BMPs may be implemented by the project proponent. If biotreatment BMPs are used, then they must be sized to provide sufficient capacity for effective treatment of the remainder of the volume-based performance criteria that cannot be achieved with LID BMPs (TGD for WQMP Section 5.4.4.2). Under no circumstances shall any portion of the DCV be released from the site without effective mitigation and/or treatment.

Form 4.3-1 Infiltration BMP Feasibility (DMA 1 and 2)

Feasibility Criterion – Complete evaluation for each DA on the Project Site

1 Would infiltration BMP pose significant risk for groundwater related concerns? Yes ☐ No ☒

Refer to Section 5.3.2.1 of the TGD for WQMP

If Yes, Provide basis: (attach)

2 Would installation of infiltration BMP significantly increase the risk of geotechnical hazards? Yes ☐ No ☒

(Yes, if the answer to any of the following questions is yes, as established by a geotechnical expert):

- The location is less than 50 feet away from slopes steeper than 15 percent
- The location is less than eight feet from building foundations or an alternative setback.
- A study certified by a geotechnical professional or an available watershed study determines that stormwater infiltration would result in significantly increased risks of geotechnical hazards.

If Yes, Provide basis: (attach)

3 Would infiltration of runoff on a Project site violate downstream water rights? Yes ☐ No ☒

If Yes, Provide basis: (attach)

4 Is proposed infiltration facility located on hydrologic soil group (HSG) D soils or does the site geotechnical investigation indicate presence of soil characteristics, which support categorization as D soils? Yes ☐ No ☒

If Yes, Provide basis: (attach)

5 Is the design infiltration rate, after accounting for safety factor of 2.0, below proposed facility less than 0.3 in/hr (accounting for soil amendments)? Yes ☐ No ☒

If Yes, Provide basis: (attach)

6 Would on-site infiltration or reduction of runoff over pre-developed conditions be partially or fully inconsistent with watershed management strategies as defined in the WAP, or impair beneficial uses? Yes ☐ No ☒

See Section 3.5 of the TGD for WQMP and WAP

If Yes, Provide basis: (attach)

7 Any answer from Item 1 through Item 3 is "Yes": Yes ☐ No ☒

If yes, infiltration of any volume is not feasible onsite. Proceed to Form 4.3-4, Harvest and Use BMP. If no, then proceed to Item 8 below.

8 Any answer from Item 4 through Item 6 is "Yes": Yes ☐ No ☒

If yes, infiltration is permissible but is not required to be considered. Proceed to Form 4.3-2, Hydrologic Source Control BMP.
If no, then proceed to Item 9, below.

9 All answers to Item 1 through Item 6 are "No":

Infiltration of the full DCV is potentially feasible, LID infiltration BMP must be designed to infiltrate the full DCV to the MEP.
Proceed to Form 4.3-2, Hydrologic Source Control BMP.

4.3.1 Site Design Hydrologic Source Control BMP

Section XI.E. of the Permit emphasizes the use of LID preventative measures; and the use of LID HSC BMPs reduces the portion of the DCV that must be addressed in downstream BMPs. Therefore, all applicable HSC shall be provided except where they are mutually exclusive with each other, or with other BMPs. Mutual exclusivity may result from overlapping BMP footprints such that either would be potentially feasible by itself, but both could not be implemented. Please note that while there are no numeric standards regarding the use of HSC, if a project cannot feasibly meet BMP sizing requirements or cannot fully address HCOCs, feasibility of all applicable HSC must be part of demonstrating that the BMP system has been designed to retain the maximum feasible portion of the DCV. Complete Form 4.3-2 to identify and calculate estimated retention volume from implementing site design HSC BMP. Refer to Section 5.4.1 in the TGD for more detailed guidance.

Form 4.3-2 Site Design Hydrologic Source Control BMPs (DA 1)

1 Implementation of Impervious Area Dispersion BMP (i.e. routing runoff from impervious to pervious areas), excluding impervious areas planned for routing to on-lot infiltration BMP: Yes ☐ No ☒ *If yes, complete Items 2-5; If no, proceed to Item 6*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Total impervious area draining to pervious area (ft^2)			
3 Ratio of pervious area receiving runoff to impervious area			
4 Retention volume achieved from impervious area dispersion (ft^3) *V = Item2 * Item 3 * (0.5/12), assuming retention of 0.5 inches of runoff*			
5 Sum of retention volume achieved from impervious area dispersion (ft^3): $V_{retention}$ *=Sum of Item 4 for all BMPs*			
6 Implementation of Localized On-lot Infiltration BMPs (e.g. on-lot rain gardens): Yes ☐ No ☒ *If yes, complete Items 7-13 for aggregate of all on-lot infiltration BMP in each DA; If no, proceed to Item 14*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
7 Ponding surface area (ft^2)			
8 Ponding depth (ft)			
9 Surface area of amended soil/gravel (ft^2)			
10 Average depth of amended soil/gravel (ft)			
11 Average porosity of amended soil/gravel			
12 Retention volume achieved from on-lot infiltration (ft^3) $V_{retention}$ *= (Item 7 *Item 8) + (Item 9 * Item 10 * Item 11)*			
13 Runoff volume retention from on-lot infiltration (ft^3): $V_{retention}$ *=Sum of Item 12 for all BMPs*			

NOT APPLICABLE

Form 4.3-2 cont. Site Design Hydrologic Source Control BMPs (DA 1)

14 Implementation of evapotranspiration BMP (green, brown, or blue roofs): Yes ☐ No ☒ *If yes, complete Items 15-20. If no, proceed to Item 21*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
15 Rooftop area planned for ET BMP (ft^2)			
16 Average wet season ET demand (in/day) *Use local values, typical ~ 0.1*			
17 Daily ET demand (ft^3/day) *Item 15 * (Item 16 / 12)*			
18 Drawdown time (hrs) *Copy Item 6 in Form 4.2-1*			
19 Retention Volume (ft^3) *$V_{retention}$ = Item 17 * (Item 18 / 24)*			
20 Runoff volume retention from evapotranspiration BMPs (ft^3): *$V_{retention}$ = Sum of Item 19 for all BMPs*			
21 Implementation of Street Trees: Yes ☐ No ☒ *If yes, complete Items 22-25. If no, proceed to Item 26*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
22 Number of Street Trees			
23 Average canopy cover per impervious area (ft^2)			
24 Runoff volume retention from street trees (ft^3) *$V_{retention}$ = Item 22 * Item 23 * (0.05/12) assume runoff retention of 0.05 inches*			
25 Runoff volume retention from street tree BMPs (ft^3): *$V_{retention}$ = Sum of Item 24 for all BMPs*			
26 Implementation of residential rain barrel/cisterns: Yes ☐ No ☒ *If yes, complete Items 27-29; If no, proceed to Item 30*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
27 Number of rain barrels/cisterns			
28 Runoff volume retention from rain barrels/cisterns (ft^3) *$V_{retention}$ = Item 27 * 3*			
29 Runoff volume retention from residential rain barrels/Cisterns (ft3): *$V_{retention}$ =Sum of Item 28 for all BMPs*			
30 Total Retention Volume from Site Design Hydrologic Source Control BMPs: *Sum of Items 5, 13, 20, 25 and 29*			

NOT APPLICABLE

4.3.2 Infiltration BMPs

Use Form 4.3-3 to compute on-site retention of runoff from proposed retention and infiltration BMPs. Volume retention estimates are sensitive to the percolation rate used, which determines the amount of runoff that can be infiltrated within the specified drawdown time. The infiltration safety factor reduces field measured percolation to account for potential inaccuracy associated with field measurements, declining BMP performance over time, and compaction during construction. Appendix D of the TGD for WQMP provides guidance on estimating an appropriate safety factor to use in Form 4.3-3.

If site constraints limit the use of BMPs to a single type and implementation of retention and infiltration BMPs mitigate no more than 40% of the DCV, then they are considered infeasible and the Project Proponent may evaluate the effectiveness of BMPs lower in the LID hierarchy of use (Section 5.5.1 of the TGD for WQMP)

If implementation of infiltrations BMPs is feasible as determined using Form 4.3-1, then LID infiltration BMPs shall be implemented to the MEP (section 4.1 of the TGD for WQMP).

The proposed underground chamber is sized to both infiltrate the entire design capture volume (DCV) and the 100-year design storm volume. The calculations included in Form 4.3-3 show that the chamber geometry achieves the required DCV through underground storage.

Form 4.3-3.1 Infiltration LID BMP (DMA 1)

1 Remaining LID DCV not met by site design HSC BMP (ft³): 11,894 *V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item 30*			
BMP Type *Use columns to the right to compute runoff volume retention from proposed infiltration BMP (select BMP from Table 5-4 in TGD for WQMP) - Use additional forms for more BMPs*	BMP 1 BMP Type Underground Chamber		
2 Infiltration rate of underlying soils (in/hr) *See Section 5.4.2 and Appendix D of the TGD for WQMP for minimum requirements for assessment methods*	16.9 in/hr		
3 Infiltration safety factor *See TGD Section 5.4.2 and Appendix D*	2		
4 Design percolation rate (in/hr) *P_{design} = Item 2 / Item 3*	8.45 in/hr		
5 Ponded water drawdown time (hr) *Copy Item 6 in Form 4.2-1*	48 hours		
6 Maximum ponding depth (ft) *BMP specific, see Table 5-4 of the TGD for WQMP for BMP design details*	3.27 ft		
7 Ponding Depth (ft) *d_{BMP} = Minimum of (1/12*Item 4*Item 5) or Item 6*	3.27 ft		
8 Infiltrating surface area, SA_{BMP} (ft²) *the lesser of the area needed for infiltration of full DCV or minimum space requirements from Table 5.7 of the TGD for WQMP*	4,938 sf		
9 Amended soil depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 in the TGD for WQMP for reference to BMP design details*	N/A		
10 Amended soil porosity	N/A		
11 Gravel depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 of the TGD for WQMP for BMP design details*	N/A		
12 Gravel porosity	N/A		
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*	3		
14 Above Ground Retention Volume (ft³)	N/A		
15 Underground Retention Volume (ft³) *Volume determined using manufacturer's specifications and calculations*	17,094 ft³		
16 Total Retention Volume from LID Infiltration BMPs 17,094 ft³ *(Sum of Items 14 and 15 for all infiltration BMP included in plan)*			
17 Fraction of DCV achieved with infiltration BMP: 144%			
18 Is full LID DCV retained on-site with combination of hydrologic source control and LID retention and infiltration BMPs? Yes ☒ No ☐ *If yes, demonstrate conformance using Form 4.3-10; If no, then reduce Item 3, Factor of Safety to 2.0 and increase Item 8, Infiltrating Surface Area, such that the portion of the site area used for retention and infiltration BMPs equals or exceeds the minimum effective area thresholds (Table 5-7 of the TGD for WQMP) for the applicable category of development and repeat all above calculations.*			

Form 4.3-3.2 Infiltration LID BMP (DMA 2)

1 Remaining LID DCV not met by site design HSC BMP (ft³): 13,203 *V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item 30*			
BMP Type *Use columns to the right to compute runoff volume retention from proposed infiltration BMP (select BMP from Table 5-4 in TGD for WQMP) - Use additional forms for more BMPs*	BMP 2 BMP Type Underground Chamber		
2 Infiltration rate of underlying soils (in/hr) *See Section 5.4.2 and Appendix D of the TGD for WQMP for minimum requirements for assessment methods*	16.9 in/hr		
3 Infiltration safety factor *See TGD Section 5.4.2 and Appendix D*	2		
4 Design percolation rate (in/hr) *P_{design} = Item 2 / Item 3*	8.45 in/hr		
5 Ponded water drawdown time (hr) *Copy Item 6 in Form 4.2-1*	48 hours		
6 Maximum ponding depth (ft) *BMP specific, see Table 5-4 of the TGD for WQMP for BMP design details*	3.66 ft		
7 Ponding Depth (ft) *d_{BMP} = Minimum of (1/12*Item 4*Item 5) or Item 6*	3.66 ft		
8 Infiltrating surface area, SA_{BMP} (ft²) *the lesser of the area needed for infiltration of full DCV or minimum space requirements from Table 5.7 of the TGD for WQMP*	5,213 sf		
9 Amended soil depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 in the TGD for WQMP for reference to BMP design details*	N/A		
10 Amended soil porosity	N/A		
11 Gravel depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 of the TGD for WQMP for BMP design details*	N/A		
12 Gravel porosity	N/A		
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*	3		
14 Above Ground Retention Volume (ft³)	N/A		
15 Underground Retention Volume (ft³) *Volume determined using manufacturer's specifications and calculations*	18,004 ft³		
16 Total Retention Volume from LID Infiltration BMPs 18,004 ft³ *(Sum of Items 14 and 15 for all infiltration BMP included in plan)*			
17 Fraction of DCV achieved with infiltration BMP: 136%			
18 Is full LID DCV retained on-site with combination of hydrologic source control and LID retention and infiltration BMPs? Yes ☒ No ☐ *If yes, demonstrate conformance using Form 4.3-10; If no, then reduce Item 3, Factor of Safety to 2.0 and increase Item 8, Infiltrating Surface Area, such that the portion of the site area used for retention and infiltration BMPs equals or exceeds the minimum effective area thresholds (Table 5-7 of the TGD for WQMP) for the applicable category of development and repeat all above calculations.*			

4.3.3 Harvest and Use BMP

Harvest and use BMP may be considered if the full LID DCV cannot be met by maximizing infiltration BMPs. Use Form 4.3-4 to compute on-site retention of runoff from proposed harvest and use BMPs.

Volume retention estimates for harvest and use BMPs are sensitive to the on-site demand for captured stormwater. Since irrigation water demand is low in the wet season, when most rainfall events occur in San Bernardino County, the volume of water that can be used within a specified drawdown period is relatively low. The bottom portion of Form 4.3-4 facilitates the necessary computations to show infeasibility if a minimum incremental benefit of 40 percent of the LID DCV would not be achievable with MEP implementation of on-site harvest and use of stormwater (Section 5.5.4 of the TGD for WQMP).

Form 4.3-4 Harvest and Use BMPs (DA 1)

1 Remaining LID DCV not met by site design HSC or infiltration BMP (ft^3): 0
V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item 30 – Form 4.3-3 Item 16

BMP Type(s) *Compute runoff volume retention from proposed harvest and use BMP (Select BMPs from Table 5-4 of the TGD for WQMP) - Use additional forms for more BMPs*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Describe cistern or runoff detention facility			
3 Storage volume for proposed detention type (ft^3) *Volume of cistern*			
4 Landscaped area planned for use of harvested stormwater (ft^2)			
5 Average wet season daily irrigation demand (in/day) Use local values, typical ~ 0.1 in/day			
6 Daily water demand (ft^3/day) *Item 4 * (Item 5 / 12)*			
7 Drawdown time (hrs) *Copy Item 6 from Form 4.2-1*			
8 Retention Volume (ft^3) *$V_{retention}$ = Minimum of (Item 3) or (Item 6 * (Item 7 / 24))*			

NOT APPLICABLE

9 Total Retention Volume (ft^3) from Harvest and Use BMP *Sum of Item 8 for all harvest and use BMP included in plan*

10 Is the full DCV retained with a combination of LID HSC, retention and infiltration, and harvest and use BMPs? Yes ☐ No ☐
If yes, demonstrate conformance using Form 4.3-10. If no, then re-evaluate combinations of all LID BMP and optimize their implementation such that the maximum portion of the DCV is retained on-site (using a single BMP type or combination of BMP types). If the full DCV cannot be mitigated after this optimization process, proceed to Section 4.3.4.

4.3.4 Biotreatment BMP

Biotreatment BMPs may be considered if the full LID DCV cannot be met by maximizing retention and infiltration, and harvest and use BMPs. A key consideration when using biotreatment BMP is the effectiveness of the proposed BMP in addressing the pollutants of concern for the project (see Table 5-5 of the TGD for WQMP).

Use Form 4.3-5 to summarize the potential for volume based and/or flow based biotreatment options to biotreat the remaining unmet LID DCV w. Biotreatment computations are included as follows:

- Use Form 4.3-6 to compute biotreatment in small volume based biotreatment BMP (e.g. bioretention w/underdrains);
- Use Form 4.3-7 to compute biotreatment in large volume based biotreatment BMP (e.g. constructed wetlands);
- Use Form 4.3-8 to compute sizing criteria for flow-based biotreatment BMP (e.g. bioswales)

Form 4.3-5 Selection and Evaluation of Biotreatment BMP (DA 1)

1 Remaining LID DCV not met by site design HSC, infiltration, or harvest and use BMP for potential biotreatment (ft^3): 0 *Form 4.2-1 Item 7 - Form 4.3-2 Item 30 – Form 4.3-3 Item 16- Form 4.3-4 Item 9*	List pollutants of concern *Copy from Form 2.3-1.*	
2 Biotreatment BMP Selected *(Select biotreatment BMP(s) necessary to ensure all pollutants of concern are addressed through Unit Operations and Processes, described in Table 5-5 of the TGD for WQMP)*	Volume-based biotreatment *Use Forms 4.3-6 and 4.3-7 to compute treated volume*	Flow-based biotreatment *Use Form 4.3-8 to compute treated volume*
	☐ Bioretention with underdrain ☐ Planter box with underdrain ☐ Constructed wetlands ☐ Wet extended detention ☐ Dry extended detention	☐ Vegetated swale ☐ Vegetated filter strip ☐ Proprietary biotreatment
3 Volume biotreated in volume based biotreatment BMP (ft^3): *Form 4.3-6 Item 15 + Form 4.3-7 Item 13*	4 Compute remaining LID DCV with implementation of volume based biotreatment BMP (ft^3): *Item 1 – Item 3*	5 Remaining fraction of LID DCV for sizing flow based biotreatment BMP: % *Item 4 / Item 1*
6 Flow-based biotreatment BMP capacity provided (cfs): *Use Figure 5-2 of the TGD for WQMP to determine flow capacity required to provide biotreatment of remaining percentage of unmet LID DCV (Item 5), for the project's precipitation zone (Form 3-1 Item 1)*		
7 Metrics for MEP determination: • Provided a WQMP with the portion of site area used for suite of LID BMP equal to minimum thresholds in Table 5-7 of the TGD for WQMP for the proposed category of development: ☐ *If maximized on-site retention BMPs is feasible for partial capture, then LID BMP implementation must be optimized to retain and infiltrate the maximum portion of the DCV possible within the prescribed minimum effective area. The remaining portion of the DCV shall then be mitigated using biotreatment BMP.*		

NOT APPLICABLE

Form 4.3-6 Volume Based Biotreatment (DA 1) – Bioretention and Planter Boxes with Underdrains

Biotreatment BMP Type *(Bioretention w/underdrain, planter box w/underdrain, other comparable BMP)*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
1 Pollutants addressed with BMP *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in Table 5-5 of the TGD for WQMP*			
2 Amended soil infiltration rate *Typical ~ 5.0*			
3 Amended soil infiltration safety factor *Typical ~ 2.0*			
4 Amended soil design percolation rate (in/hr) P_{design} = *Item 2 / Item 3*			
5 Ponded water drawdown time (hr) *Copy Item 6 from Form 4.3-1*			
6 Maximum ponding depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
7 Ponding Depth (ft) d_{BMP} = *Minimum of (1/12 * Item 4 * Item 5) or Item 6*			
8 Amended soil surface area (ft^2)			
9 Amended soil depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
10 Amended soil porosity, *n*			
11 Gravel depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
12 Gravel porosity, *n*			
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*			
14 Biotreated Volume (ft^3) $V_{biotreated}$ = *Item 8 * [(Item 7/2) + (Item 9 * Item 10) +(Item 11 * Item 12) + (Item 13 * (Item 4 / 12))]*			
15 Total biotreated volume from bioretention and/or planter box with underdrains BMP: *Sum of Item 14 for all volume-based BMPs included in this form*			

NOT APPLICABLE

Form 4.3-7 Volume Based Biotreatment (DA 1) – Constructed Wetlands and Extended Detention

Biotreatment BMP Type *Constructed wetlands, extended wet detention, extended dry detention, or other comparable proprietary BMP. If BMP includes multiple modules (e.g. forebay and main basin), provide separate estimates for storage and pollutants treated in each module.*	DA DMA BMP Type		DA DMA BMP Type *(Use additional forms for more BMPs)*	
	Forebay	Basin	Forebay	Basin
1 Pollutants addressed with BMP forebay and basin *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in Table 5-5 of the TGD for WQMP*				
2 Bottom width (ft)				
3 Bottom length (ft)				
4 Bottom area (ft^2) A_{bottom} = *Item 2 * Item 3*				
5 Side slope (ft/ft)				
6 Depth of storage (ft)				
7 Water surface area (ft^2) $A_{surface}$ =*(Item 2 + (2 * Item 5 * Item 6)) * (Item 3 + (2 * Item 5 * Item 6))*				
8 Storage volume (ft^3) *For BMP with a forebay, ensure fraction of total storage is within ranges specified in BMP specific fact sheets, see Table 5-6 of the TGD for WQMP for reference to BMP design details* V =*Item 6 / 3 * [Item 4 + Item 7 + (Item 4 * Item 7)^0.5]*				
9 Drawdown Time (hrs) *Copy Item 6 from Form 2.1*				
10 Outflow rate (cfs) Q_{BMP} = *(Item $8_{forebay}$ + Item 8_{basin}) / (Item 9 * 3600)*				
11 Duration of design storm event (hrs)				
12 Biotreated Volume (ft^3) $V_{biotreated}$ = *(Item $8_{forebay}$ + Item 8_{basin}) +(Item 10 * Item 11 * 3600)*				
13 Total biotreated volume from constructed wetlands, extended dry detention, or extended wet detention : *(Sum of Item 12 for all BMP included in plan)*				

NOT APPLICABLE

Form 4.3-8 Flow Based Biotreatment (DA 1)

Biotreatment BMP Type *Vegetated swale, vegetated filter strip, or other comparable proprietary BMP*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
1 Pollutants addressed with BMP *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in TGD Table 5-5*			
2 Flow depth for water quality treatment (ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
3 Bed slope (ft/ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
4 Manning's roughness coefficient			
5 Bottom width (ft) b_w = *(Form 4.3-5 Item 6 * Item 4) - (1.49 * Item 2^1.67 * Item 3^0.5)*			
6 Side Slope (ft/ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
7 Cross sectional area (ft^2) *A = (Item 5 * Item 2) + (Item 6 * Item 2^2)*			
8 Water quality flow velocity (ft/sec) *V = Form 4.3-5 Item 6 / Item 7*			
9 Hydraulic residence time (min) *Pollutant specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
10 Length of flow based BMP (ft) *L = Item 8 * Item 9 * 60*			
11 Water surface area at water quality flow depth (ft^2) SA_{top} = *(Item 5 + (2 * Item 2 * Item 6)) * Item 10*			

NOT APPLICABLE

4.3.5 Conformance Summary

Complete Form 4.3-9 to demonstrate how on-site LID DCV is met with proposed site design hydrologic source control, infiltration, harvest and use, and/or biotreatment BMP. The bottom line of the form is used to describe the basis for infeasibility determination for on-site LID BMP to achieve full LID DCV, and provides methods for computing remaining volume to be addressed in an alternative compliance plan. If the project has more than one outlet, then complete additional versions of this form for each outlet.

Form 4.3-9.1 Conformance Summary and Alternative Compliance Volume Estimate (DMA 1)

1 Total LID DCV for the Project DA-1 (ft^3): 11,894 *Copy Item 7 in Form 4.2-1*

2 On-site retention with site design hydrologic source control LID BMP (ft^3): 0 *Copy Item 30 in Form 4.3-2*

3 On-site retention with LID infiltration BMP (ft^3): 17,094 *Copy Item 16 in Form 4.3-3*

4 On-site retention with LID harvest and use BMP (ft^3): 0 *Copy Item 9 in Form 4.3-4*

5 On-site biotreatment with volume based biotreatment BMP (ft^3): 0 *Copy Item 3 in Form 4.3-5*

6 Flow capacity provided by flow based biotreatment BMP (cfs): 0 *Copy Item 6 in Form 4.3-5*

7 LID BMP performance criteria are achieved if answer to any of the following is "Yes":

- Full retention of LID DCV with site design HSC, infiltration, or harvest and use BMP: Yes ☒ No ☐
  If yes, sum of Items 2, 3, and 4 is greater than Item 1
- Combination of on-site retention BMPs for a portion of the LID DCV and volume-based biotreatment BMP that address all pollutants of concern for the remaining LID DCV: Yes ☐ No ☒
  If yes, a) sum of Items 2, 3, 4, and 5 is greater than Item 1, and Items 2, 3 and 4 are maximized; or b) Item 6 is greater than Form 4.3--5 Item 6 and Items 2, 3 and 4 are maximized
- On-site retention and infiltration is determined to be infeasible and biotreatment BMP provide biotreatment for all pollutants of concern for full LID DCV: Yes ☐ No ☒
  If yes, Form 4.3-1 Items 7 and 8 were both checked yes

8 If the LID DCV is not achieved by any of these means, then the project may be allowed to develop an alternative compliance plan. Check box that describes the scenario which caused the need for alternative compliance:

- Combination of HSC, retention and infiltration, harvest and use, and biotreatment BMPs provide less than full LID DCV capture: ☐
  Checked yes for Form 4.3-5 Item 7, Item 6 is zero, and sum of Items 2, 3, 4, and 5 is less than Item 1. If so, apply water quality credits and calculate volume for alternative compliance, V_{alt} *= (Item 1 – Item 2 – Item 3 – Item 4 – Item 5) * (100 - Form 2.4-1 Item 2)%*
- An approved Watershed Action Plan (WAP) demonstrates that water quality and hydrologic impacts of urbanization are more effective when managed in at an off-site facility: ☐
  Attach appropriate WAP section, including technical documentation, showing effectiveness comparisons for the project site and regional watershed

Form 4.3-9.2 Conformance Summary and Alternative Compliance Volume Estimate (DMA 2)

1 Total LID DCV for the Project DA-1 (ft^3): 13,203 *Copy Item 7 in Form 4.2-1*

2 On-site retention with site design hydrologic source control LID BMP (ft^3): 0 *Copy Item 30 in Form 4.3-2*

3 On-site retention with LID infiltration BMP (ft^3): 18,004 *Copy Item 16 in Form 4.3-3*

4 On-site retention with LID harvest and use BMP (ft^3): 0 *Copy Item 9 in Form 4.3-4*

5 On-site biotreatment with volume based biotreatment BMP (ft^3): 0 *Copy Item 3 in Form 4.3-5*

6 Flow capacity provided by flow based biotreatment BMP (cfs): 0 *Copy Item 6 in Form 4.3-5*

7 LID BMP performance criteria are achieved if answer to any of the following is "Yes":

- Full retention of LID DCV with site design HSC, infiltration, or harvest and use BMP: Yes ☒ No ☐
  If yes, sum of Items 2, 3, and 4 is greater than Item 1
- Combination of on-site retention BMPs for a portion of the LID DCV and volume-based biotreatment BMP that address all pollutants of concern for the remaining LID DCV: Yes ☐ No ☒
  If yes, a) sum of Items 2, 3, 4, and 5 is greater than Item 1, and Items 2, 3 and 4 are maximized; or b) Item 6 is greater than Form 4.3--5 Item 6 and Items 2, 3 and 4 are maximized
- On-site retention and infiltration is determined to be infeasible and biotreatment BMP provide biotreatment for all pollutants of concern for full LID DCV: Yes ☐ No ☒
  If yes, Form 4.3-1 Items 7 and 8 were both checked yes

8 If the LID DCV is not achieved by any of these means, then the project may be allowed to develop an alternative compliance plan. Check box that describes the scenario which caused the need for alternative compliance:

- Combination of HSC, retention and infiltration, harvest and use, and biotreatment BMPs provide less than full LID DCV capture: ☐
  Checked yes for Form 4.3-5 Item 7, Item 6 is zero, and sum of Items 2, 3, 4, and 5 is less than Item 1. If so, apply water quality credits and calculate volume for alternative compliance, V_{alt} *= (Item 1 – Item 2 – Item 3 – Item 4 – Item 5) * (100 - Form 2.4-1 Item 2)%*
- An approved Watershed Action Plan (WAP) demonstrates that water quality and hydrologic impacts of urbanization are more effective when managed in at an off-site facility: ☐
  Attach appropriate WAP section, including technical documentation, showing effectiveness comparisons for the project site and regional watershed

4.3.6 Hydromodification Control BMP

Use Form 4.3-10 to compute the remaining runoff volume retention, after LID BMP are implemented, needed to address HCOC, and the increase in time of concentration and decrease in peak runoff necessary to meet targets for protection of waterbodies with a potential HCOC. Describe hydromodification control BMP that address HCOC, which may include off-site BMP and/or in-stream controls. Section 5.6 of the TGD for WQMP provides additional details on selection and evaluation of hydromodification control BMP.

Form 4.3-10 Hydromodification Control BMPs (DA 1)

1 Volume reduction needed for HCOC performance criteria (ft^3): *(Form 4.2-2 Item 4 * 0.95) – Form 4.2-2 Item 1*	2 On-site retention with site design hydrologic source control, infiltration, and harvest and use LID BMP (ft^3): *Sum of Form 4.3-9 Items 2, 3, and 4 Evaluate option to increase implementation of on-site retention in Forms 4.3-2, 4.3-3, and 4.3-4 in excess of LID DCV toward achieving HCOC volume reduction*
3 Remaining volume for HCOC volume capture (ft^3): *Item 1 – Item 2*	4 Volume capture provided by incorporating additional on-site or off-site retention BMPs (ft^3): *Existing downstream BMP may be used to demonstrate additional volume capture (if so, attach to this WQMP a hydrologic analysis showing how the additional volume would be retained during a 2-yr storm event for the regional watershed)*

5 If Item 4 is less than Item 3, incorporate in-stream controls on downstream waterbody segment to prevent impacts due to hydromodification ☐ *Attach in-stream control BMP selection and evaluation to this WQMP*

6 Is Form 4.2-2 Item 11 less than or equal to 5%: Yes ☐ No ☐

If yes, HCOC performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate increase in time of concentration achieved by proposed LID site design, LID BMP, and additional on-site or off-site retention BMP ☐
  BMP upstream of a waterbody segment with a potential HCOC may be used to demonstrate increased time of concentration through hydrograph attenuation (if so, show that the hydraulic residence time provided in BMP for a 2-year storm event is equal or greater than the additional time of concentration requirement in Form 4.2-4 Item 15)
- Increase time of concentration by preserving pre-developed flow path and/or increase travel time by reducing slope and increasing cross sectional area and roughness for proposed on-site conveyance facilities ☐
- Incorporate appropriate in-stream controls for downstream waterbody segment to prevent impacts due to hydromodification, in a plan approved and signed by a licensed engineer in the State of California ☐

7 Form 4.2-2 Item 12 less than or equal to 5%: Yes ☐ No ☐

If yes, HCOC performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate reduction in peak runoff achieved by proposed LID site design, LID BMPs, and additional on-site or off-site retention BMPs ☐
  BMPs upstream of a waterbody segment with a potential HCOC may be used to demonstrate additional peak runoff reduction through hydrograph attenuation (if so, attach to this WQMP, a hydrograph analysis showing how the peak runoff would be reduced during a 2-yr storm event)
- Incorporate appropriate in-stream controls for downstream waterbody segment to prevent impacts due to hydromodification, in a plan approved and signed by a licensed engineer in the State of California ☐

NOT APPLICABLE

4.4 Alternative Compliance Plan (if applicable)

Describe an alternative compliance plan (if applicable) for projects not fully able to infiltrate, harvest and use, or biotreat the DCV via on-site LID practices. A project proponent must develop an alternative compliance plan to address the remainder of the LID DCV. Depending on project type some projects may qualify for water quality credits that can be applied to reduce the DCV that must be treated prior to development of an alternative compliance plan (see Form 2.4-1, Water Quality Credits). Form 4.3-9 Item 8 includes instructions on how to apply water quality credits when computing the DCV that must be met through alternative compliance. Alternative compliance plans may include one or more of the following elements:

- On-site structural treatment control BMP - All treatment control BMP should be located as close to possible to the pollutant sources and should not be located within receiving waters;
- Off-site structural treatment control BMP - Pollutant removal should occur prior to discharge of runoff to receiving waters;
- Urban runoff fund or In-lieu program, if available

Depending upon the proposed alternative compliance plan, approval by the executive officer may or may not be required (see Section 6 of the TGD for WQMP).

Section 5 Inspection and Maintenance Responsibility for Post Construction BMP

All BMP included as part of the project WQMP are required to be maintained through regular scheduled inspection and maintenance (refer to Section 8, Post Construction BMP Requirements, in the TGD for WQMP). Fully complete Form 5-1 summarizing all BMP included in the WQMP. Attach additional forms as needed. The WQMP shall also include a detailed Operation and Maintenance Plan for all BMP and may require a Maintenance Agreement (consult the jurisdiction's LIP). If a Maintenance Agreement is required, it must also be attached to the WQMP.

Form 5-1 BMP Inspection and Maintenance (use additional forms as necessary)

BMP	Responsible Party(s)	Inspection/ Maintenance Activities Required	Minimum Frequency of Activities
N1 Education	Owner	Provide educational materials to tenants and employees.	Upon turn over to tenant or lease agreement, Anually
N2 Activity Restriction	Owner	The following activities are prohibited through lease agreement and employees: no outdoor work areas, processing, storage of materials, wash area	Daily
N3 Landscape Management	Owner	Irrigation must be consistent with the City's Water Conservation Ordinance. Fertilizer and pesticide usage will be consistent with County Management Guidelines for Use of Fertilizers and Pesticides.	Bi-weekly
N4 BMP Maintenance (Underground Chambers)	Owner	Trash, debris and sediment must be removed and disposed of per local jurisdiction requirements. The sump manhole shall be cleaned of all debris, silt and trash when the capacity has reached 75% of the total depth to maintain clear flow from inlet and outlet pipe.	Inspection and maintenance required after every rain event greater than 0.5 inches. Inspections should occur on a regular interval to ensure optimum performance
N7 Spill Contingency	Owner	Provide spill contingency plan.	Daily

N10 Uniform Fire Code Implementation	Owner	Comply with Article 80 of the Uniform Fire Code enforced by the fire protection agency.	Daily
N11 Litter/Debris Control Program	Owner	Implement Litter Debris control program	Regular scheduled maintenance
N12 Employee Training	Owner	Ensure tenants and employees are familiar with onsite BMPs and the associated maintenance required. Check with City and County to obtain new or updated education materials and provide to tenants and employess. Employees shall be trained to clean up spills and participate in ongoing maintenance.	Bi-annually
N13 Housekeeping of Loading Docks	Owner	All fluids to be kept indoors. Clean up spills immediately and keep spills from entering the storm drain system. No direct discharges are allowed into the storm drain system. Area shall be inspected weekly for proper containment and practices with spills cleansed up immediately and disposed of properly.	Weekly
N14 Catch Basin Inspection Program	Owner	Monthly catch basin and inlet inspection by Owner's designee required. Vacuum when sediment or trash becomes 2 inches deep and dispose of properly.	Monthly
N15 Vacuum Sweeping of Private Streets and Parking Lots	Owner	All landscape maintenance contractors hire by owner or tenant will be required to sweep up all landscape cuttings, mowings and fertilizer materials off paved areas weekly and dispose of properly. Parking areas and driveways will be swept monthly by sweeping contractor.	Monthly
N17 Comply with all other applicable NPDES permits	Owner	Project will comply with Construction General Permit.	Daily
S1 Storm Drain Stencilling and Signage	Owner	Owner will provide stencilling and signage on all proposed catch basins and inlets. Owner will re-stencil as necessary to maintain legibility.	As needed, or June of each odd year
S3 Trash and Waste Storage	Owner	Trash and wastes storage areas will be paved with an impervious surface and not allowed any run-on from adjacent areas. Drainage will be diverted from	Fix as needed

		adjoining roofs and pavements. Trash and waste storage area will be screened or walled to prevent offsite transport of trash and have solid roof or awning to prevent direct contact with rainfall.	
S4 Landscape Planning and Site Design & Efficient Irrigation	Owner	Irrigation systems shall include reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines. Timers will be used to avoid over watering and watering cycles and duration shall be adjusted seasonally by the landscape maintenance contractor. The landscaping areas will be grouped with plants that have similar water requirements. Native or drought tolerant species shall also be used where appropriate to reduce excess irrigation runoff and propose surface filtration. Inspect all landscape areas and replace dead vegetation and remove trash.	Weekly
S5 Finished grade of landscape areas at minimum 1-2 inches below concrete	Owner	Where applicable, landscaped areas will be depressed in order to increase retention of stormwater/ irrigation water promote infiltration. This includes around parking lots.	Where applicable
S6 Protect slopes and channels	Owner	All slopes need to be vegetated or properly mulched with non-organic mulch (gravel/rocks) and maintained to prevent erosion and transport of sediment. Energy dissipaters are installed at all inlets into the basin.	Weekly

Section 6 WQMP Attachments

6.1. Site Plan and Drainage Plan

Include a site plan and drainage plan sheet set containing the following minimum information:

- Project location
- Site boundary
- Land uses and land covers, as applicable
- Suitability/feasibility constraints
- Structural Source Control BMP locations
- Site Design Hydrologic Source Control BMP locations
- LID BMP details
- Drainage delineations and flow information
- Drainage connections

See Appendix A for WQMP Exhibits and BMP Design Details

6.2 Electronic Data Submittal

Minimum requirements include submittal of PDF exhibits in addition to hard copies. Format must not require specialized software to open. If the local jurisdiction requires specialized electronic document formats (as described in their Local Implementation Plan), this section will describe the contents (e.g., layering, nomenclature, geo-referencing, etc.) of these documents so that they may be interpreted efficiently and accurately.

6.3 Post Construction

Attach all O&M Plans and Maintenance Agreements for BMP to the WQMP.

See Appendix D for BMP O&M

6.4 Other Supporting Documentation

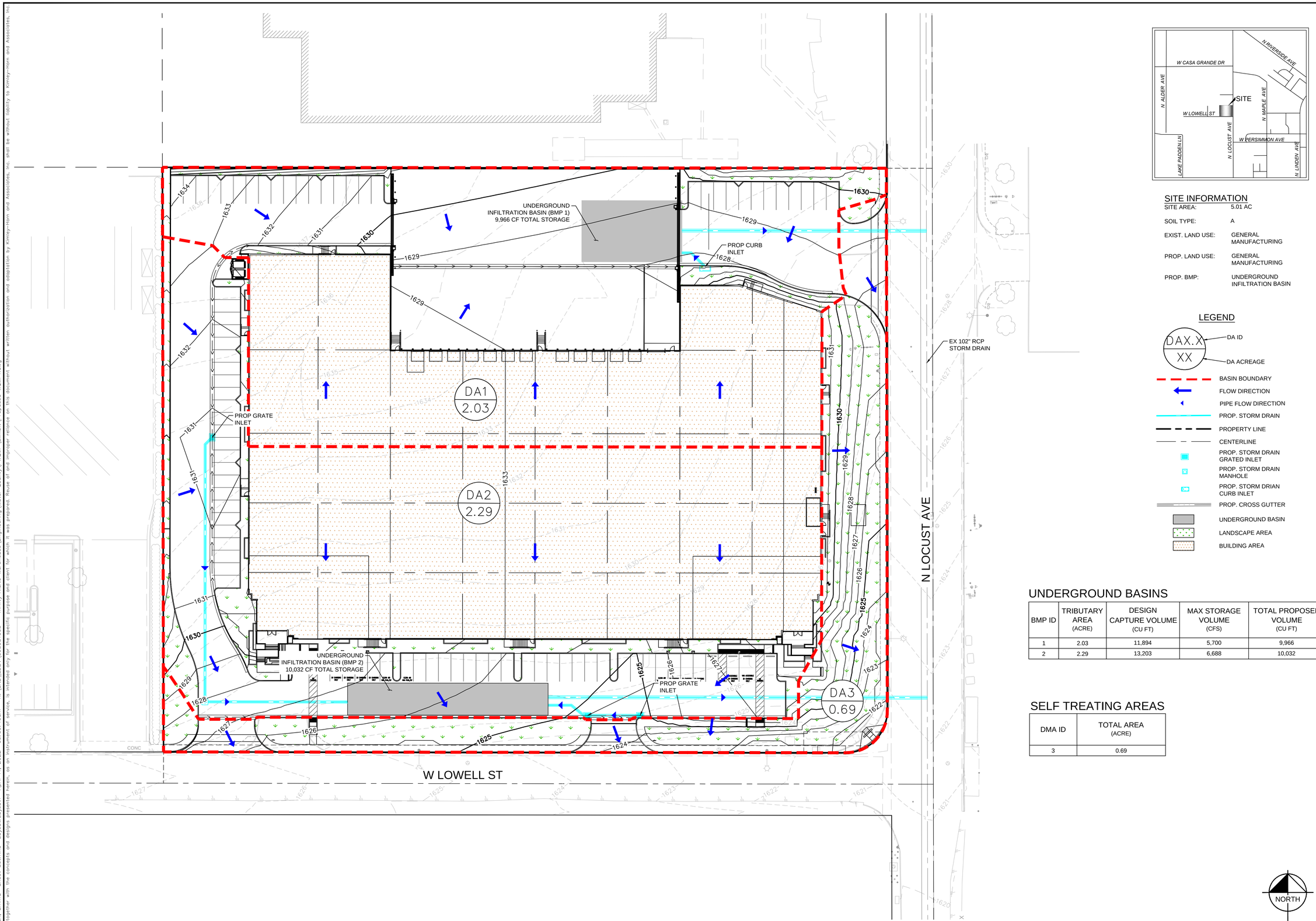
- BMP Educational Materials
- Activity Restriction – C, C&R's & Lease Agreements

See Appendix B for BMP Educational Materials
See Appendix C for WQMP Agreement
See Appendix E for Geotechnical Report
See Appendix F for Hydromodification Exemption Documentation

APPENDICES

APPENDIX A

WQMP EXHIBIT AND BMP DESIGN DETAILS



SITE INFORMATION

SITE AREA:	5.01 AC
SOIL TYPE:	A
EXIST. LAND USE:	GENERAL MANUFACTURING
PROP. LAND USE:	GENERAL MANUFACTURING
PROP. BMP:	UNDERGROUND INFILTRATION BASIN

LEGEND

- DA.X / XX — DA ID / DA ACREAGE
- BASIN BOUNDARY
- FLOW DIRECTION
- PIPE FLOW DIRECTION
- PROP. STORM DRAIN
- PROPERTY LINE
- CENTERLINE
- PROP. STORM DRAIN GRATED INLET
- PROP. STORM DRAIN MANHOLE
- PROP. STORM DRIAN CURB INLET
- PROP. CROSS GUTTER
- UNDERGROUND BASIN
- LANDSCAPE AREA
- BUILDING AREA

UNDERGROUND BASINS

BMP ID	TRIBUTARY AREA (ACRE)	DESIGN CAPTURE VOLUME (CU FT)	MAX STORAGE VOLUME (CFS)	TOTAL PROPOSED VOLUME (CU FT)
1	2.03	11,894	5,700	9,966
2	2.29	13,203	6,688	10,032

SELF TREATING AREAS

DMA ID	TOTAL AREA (ACRE)
3	0.69

NORTH

GRAPHIC SCALE IN FEET
0 15 30 60

No.	REVISIONS	DATE	BY

Kimley»Horn
401 B STREET, SUITE 600, SAN DIEGO, CA
92101 PHONE: 619-234-9411
WWW.KIMLEY-HORN.COM

KHA PROJECT #095931005
DATE
SCALE AS SHOWN
DESIGNED BY EH/KA
DRAWN BY EH/KA
CHECKED BY DC

PPD #XXXX-XXXX

PROPOSED WQMP EXHIBIT

THRIFTY LOCUST AND LOWELL
CITY OF RIALTO, CA

N LOCUST AVE AND W LOWELL ST
RIALTO, CA

SHEET NUMBER
1 OF 1

Plotted By: Huun, Emma Sheet Set: Kha Layout: Layout1 April 11, 2022 09:06:46am K:\SND_LDEV\095931005 - Thrifty Rialto Warehouse\Engineering\Water Quality\PWQMP\Exhibit\Proposed WQMP1.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

PRINSCO
ENGINEERED WITH INTEGRITY

HydroStor™ System Design Aid

PROJECT DESCRIPTION

Project Name: Thrifty Rialto | Date: 9 / 20 / 2021 | City/State: Rialto / CA | Phone #: 619-744-0144

Engineer: Davie Cowan, P.E. | Contractor: | Designed By: Kimley-Horn | Prinsco Rep:

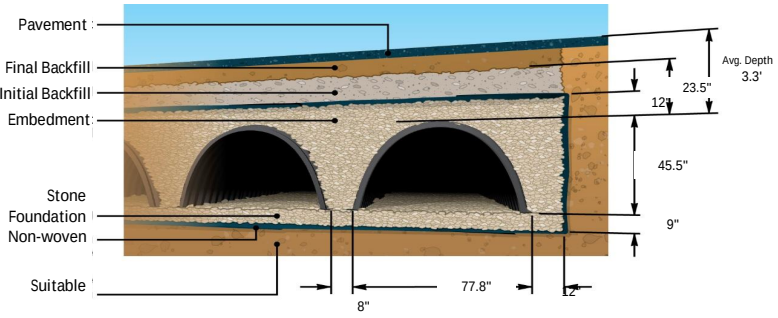
DESIGN CRITERIA - BASED ON STORAGE VOLUME

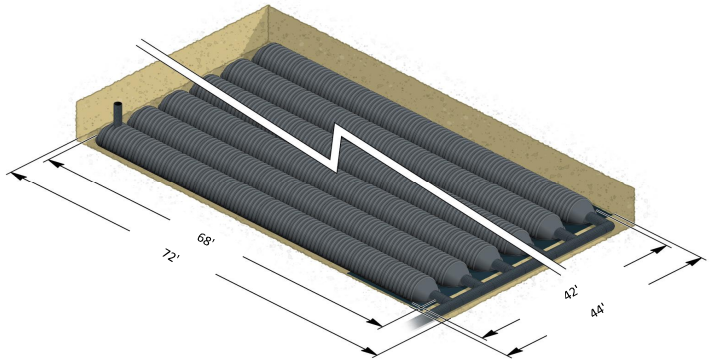
Chamber Size: HS180 | Constraint on System Dimensions: Width | Number of Manifolds: 1 | Manifold Diameter: 24 (in) | Include Manifold Volume?: Yes | Units: Standard

Target Storage Volume	11000 (cf)	Constraint Limit	50 (ft)	Stone Porosity	40 %	Bottom of Stone Elevation	1621 (ft)	Max. Pvement Elevation	1629.76 (ft)
Additional Stone Above Chamber*	0 (in)	Additional Stone Below Chamber*	0 (in)	Additional Stone Side of Chamber*	0 (in)	Additional Stone Between Chambers*	0 (in)	Min. Pavement Elevation	1627.93 (ft)

* Minimum recommended values are already included in calculations

SYSTEM LAYOUT





Min. Burial Depth: 23.5"

Max. Burial Depth: 8'

SYSTEM STORAGE & QUANTITIES

System Layout: 6 rows of 9 chambers & 0 rows of 0 chambers

System Footprint	Stone Storage	Manifold Storage	Chamber Storage	Total System Storage
3204 (sf)	4481 (cf)	156 (cf)	6362 (cf)	11000 (cf)

Number of Chambers	Number of End Caps	Required Stone (For Embedment Backfill)	Non-Woven Geotextile (Includes 20% Overlap)	Woven Geotextile - Scour (Includes 20% Overlap)	Woven Geotextile - Sediment Row (Includes 20% Overlap)
54	12	415 (cy)	1035 (sy)	90 (sy)	155 (sy)

ASSISTANCE: For assistance with design, drawings or pricing please have your completed system design aid ready, and contact your Prinsco sales representative

Prinsco, Inc. I 1717 16th St NE I Willmar, MN 56201 I 320.222.6800 I 800.992.1725 I prinsco.com

This tool is intended to assist in sizing stormwater management systems using Prinsco products. It should be used for estimating purposes only and is not intended to be a final design tool. The design engineer needs to verify all the values and ensure they meet all project design criteria.

Chamber Model	HS180		
Number of Chambers	54		
Number of Endcaps	12		
Stone Voids (porosity)	40%		
Base of Stone Elevation	1621	ft	
Recommended Stone Below Chambers*	6	in.	Include perimeter stone? Yes
Recommended Stone Above Chambers*	6	in.	Standard or metric? Standard

Area of System** 3204 sq.ft

***Area must be greater than:* 3030.35 sq.ft

**The minimum stone below and above the chambers to be determinded by the design engineer.*

System Height (Inches)	Incremental Single Chamber Storage (cu.ft)	Incremental Single End Cap Storage (cu.ft)	Incremental Total Chamber Storage (cu.ft)	Incremental Total End Cap Storage (cu.ft)	Incremental Stone Storage (cu.ft)	Incremental Chamber, End Cap, & Stone (cu.ft)	Cumulative System Storage (cu.ft)	Elevation (ft)
57	0.000	0.000	0.000	0.000	108.35	108.35	9966.03	1625.75
56	0.000	0.000	0.000	0.000	108.35	108.35	9857.68	1625.67
55	0.000	0.000	0.000	0.000	108.35	108.35	9749.33	1625.58
54	0.000	0.000	0.000	0.000	108.35	108.35	9640.98	1625.50
53	0.000	0.000	0.000	0.000	108.35	108.35	9532.63	1625.42
52	0.000	0.000	0.000	0.000	108.35	108.35	9424.28	1625.33
51	0.183	0.000	9.868	0.000	104.40	114.27	9315.93	1625.25
50	0.314	0.010	16.948	0.120	101.52	118.59	9201.66	1625.17
49	0.442	0.030	23.887	0.360	98.65	122.90	9083.07	1625.08
48	0.626	0.050	33.821	0.600	94.58	129.00	8960.18	1625.00
47	1.024	0.070	55.296	0.840	85.89	142.03	8831.17	1624.92
46	1.272	0.080	68.691	0.960	80.49	150.14	8689.14	1624.83
45	1.461	0.100	78.921	1.200	76.30	156.42	8539.00	1624.75
44	1.620	0.120	87.464	1.440	72.79	161.69	8382.58	1624.67
43	1.757	0.150	94.864	1.800	69.68	166.35	8220.89	1624.58
42	1.878	0.160	101.404	1.920	67.02	170.34	8054.54	1624.50
41	1.986	0.170	107.257	2.040	64.63	173.93	7884.20	1624.42
40	2.084	0.190	112.535	2.280	62.42	177.24	7710.27	1624.33
39	2.173	0.200	117.344	2.400	60.45	180.20	7533.03	1624.25
38	2.255	0.220	121.785	2.640	58.58	183.00	7352.84	1624.17
37	2.333	0.230	125.959	2.760	56.86	185.58	7169.83	1624.08
36	2.406	0.250	129.919	3.000	55.18	188.10	6984.25	1624.00
35	2.476	0.270	133.678	3.240	53.58	190.50	6796.15	1623.92
34	2.542	0.280	137.244	3.360	52.11	192.71	6605.65	1623.83
33	2.604	0.300	140.628	3.600	50.66	194.89	6412.94	1623.75
32	2.664	0.320	143.836	3.840	49.28	196.95	6218.06	1623.67
31	2.720	0.330	146.876	3.960	48.01	198.85	6021.10	1623.58
30	2.773	0.350	149.757	4.200	46.77	200.72	5822.25	1623.50
29	2.824	0.370	152.480	4.440	45.58	202.50	5621.53	1623.42
28	2.871	0.370	155.053	4.440	44.55	204.05	5419.03	1623.33
27	2.916	0.400	157.481	4.800	43.44	205.72	5214.98	1623.25
26	2.964	0.410	160.080	4.920	42.35	207.35	5009.26	1623.17
25	2.998	0.420	161.913	5.040	41.57	208.52	4801.91	1623.08

24	3.036	0.440	163.919	5.280	40.67	209.87	4593.39	1623.00
23	3.071	0.450	165.818	5.400	39.86	211.08	4383.53	1622.92
22	3.105	0.460	167.682	5.520	39.07	212.27	4172.45	1622.83
21	3.138	0.470	169.474	5.640	38.30	213.42	3960.17	1622.75
20	3.171	0.490	171.209	5.880	37.51	214.60	3746.76	1622.67
19	3.202	0.500	172.892	6.000	36.79	215.68	3532.15	1622.58
18	3.232	0.510	174.535	6.120	36.09	216.74	3316.47	1622.50
17	3.261	0.520	176.109	6.240	35.41	217.76	3099.73	1622.42
16	3.292	0.530	177.749	6.360	34.71	218.81	2881.97	1622.33
15	3.321	0.540	179.314	6.480	34.03	219.83	2663.16	1622.25
14	3.349	0.550	180.859	6.600	33.37	220.82	2443.33	1622.17
13	3.377	0.560	182.341	6.720	32.72	221.79	2222.51	1622.08
12	3.405	0.560	183.854	6.720	32.12	222.69	2000.72	1622.00
11	3.433	0.570	185.377	6.840	31.46	223.68	1778.03	1621.92
10	3.462	0.580	186.950	6.960	30.79	224.70	1554.35	1621.83
9	3.490	0.580	188.458	6.960	30.18	225.60	1329.65	1621.75
8	3.518	0.580	189.951	6.960	29.58	226.50	1104.05	1621.67
7	3.545	0.590	191.439	7.080	28.94	227.46	877.56	1621.58
6	0.000	0.000	0.000	0.000	108.35	108.35	650.10	1621.50
5	0.000	0.000	0.000	0.000	108.35	108.35	541.75	1621.42
4	0.000	0.000	0.000	0.000	108.35	108.35	433.40	1621.33
3	0.000	0.000	0.000	0.000	108.35	108.35	325.05	1621.25
2	0.000	0.000	0.000	0.000	108.35	108.35	216.70	1621.17
1	0.000	0.000	0.000	0.000	108.35	108.35	108.35	1621.08
0	0.000	0.000	0.000	0.000	0.00	0.00	0.00	1621.00

PRINSCO
ENGINEERED WITH INTEGRITY

HydroStor™ System Design Aid

PROJECT DESCRIPTION

Project Name: Thrifty Rialto | Date: 9 / 20 / 2021 | City/State: Rialto / CA | Phone #: 619-744-0144

Engineer: Davie Cowan, P.E. | Contractor: | Designed By: Kimley-Horn | Prinsco Rep:

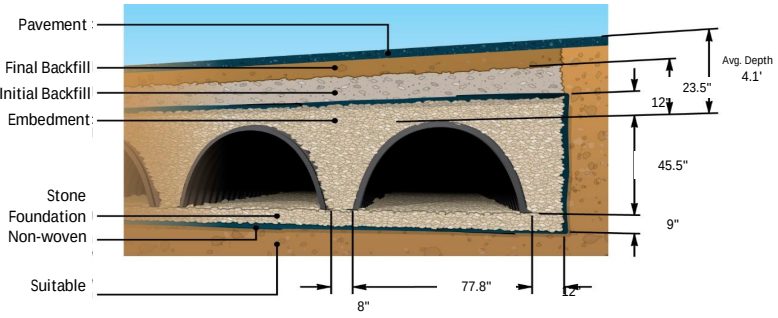
DESIGN CRITERIA - BASED ON STORAGE VOLUME

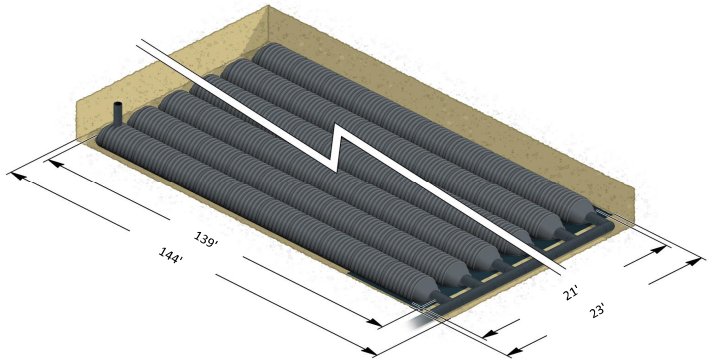
Chamber Size: HS180 | Constraint on System Dimensions: Width | Number of Manifolds: 1 | Manifold Diameter: 24 (in) | Include Manifold Volume?: Yes | Units: Standard

Target Storage Volume	11000 (cf)	Constraint Limit	25 (ft)	Stone Porosity	40 %	Bottom of Stone Elevation	1618 (ft)	Max. Pvement Elevation	1628.24 (ft)
Additional Stone Above Chamber*	0 (in)	Additional Stone Below Chamber*	0 (in)	Additional Stone Side of Chamber*	0 (in)	Additional Stone Between Chambers*	0 (in)	Min. Pavement Elevation	1625.12 (ft)

* Minimum recommended values are already included in calculations

SYSTEM LAYOUT





Min. Burial Depth: 23.5"

Max. Burial Depth: 8'

SYSTEM STORAGE & QUANTITIES

System Layout: 2 rows of 19 chambers & 1 rows of 18 chambers

System Footprint	Stone Storage	Manifold Storage	Chamber Storage	Total System Storage
3219 (sf)	4507 (cf)	78 (cf)	6476 (cf)	11061 (cf)

Number of Chambers	Number of End Caps	Required Stone (For Embedment Backfill)	Non-Woven Geotextile (Includes 20% Overlap)	Woven Geotextile - Scour (Includes 20% Overlap)	Woven Geotextile - Sediment Row (Includes 20% Overlap)
56	6	417 (cy)	1112 (sy)	47 (sy)	313 (sy)

ASSISTANCE: For assistance with design, drawings or pricing please have your completed system design aid ready, and contact your Prinsco sales representative

Prinsco, Inc. I 1717 16th St NE I Willmar, MN 56201 I 320.222.6800 I 800.992.1725 I prinsco.com

This tool is intended to assist in sizing stormwater management systems using Prinsco products. It should be used for estimating purposes only and is not intended to be a final design tool. The design engineer needs to verify all the values and ensure they meet all project design criteria.

Chamber Model	HS180		
Number of Chambers	56		
Number of Endcaps	6		
Stone Voids (porosity)	40%		
Base of Stone Elevation	1618	ft	
Recommended Stone Below Chambers*	6	in.	Include perimeter stone? Yes
Recommended Stone Above Chambers*	6	in.	Standard or metric? Standard

Area of System** 3219 sq.ft

***Area must be greater than:* 3126.38 sq.ft

**The minimum stone below and above the chambers to be determinded by the design engineer.*

System Height (Inches)	Incremental Single Chamber Storage (cu.ft)	Incremental Single End Cap Storage (cu.ft)	Incremental Total Chamber Storage (cu.ft)	Incremental Total End Cap Storage (cu.ft)	Incremental Stone Storage (cu.ft)	Incremental Chamber, End Cap, & Stone (cu.ft)	Cumulative System Storage (cu.ft)	Elevation (ft)
57	0.000	0.000	0.000	0.000	108.07	108.07	10031.48	1622.75
56	0.000	0.000	0.000	0.000	108.07	108.07	9923.40	1622.67
55	0.000	0.000	0.000	0.000	108.07	108.07	9815.33	1622.58
54	0.000	0.000	0.000	0.000	108.07	108.07	9707.25	1622.50
53	0.000	0.000	0.000	0.000	108.07	108.07	9599.18	1622.42
52	0.000	0.000	0.000	0.000	108.07	108.07	9491.10	1622.33
51	0.183	0.000	10.233	0.000	103.98	114.21	9383.03	1622.25
50	0.314	0.010	17.575	0.060	101.02	118.66	9268.81	1622.17
49	0.442	0.030	24.772	0.180	98.09	123.05	9150.16	1622.08
48	0.626	0.050	35.074	0.300	93.93	129.30	9027.11	1622.00
47	1.024	0.070	57.344	0.420	84.97	142.73	8897.81	1621.92
46	1.272	0.080	71.235	0.480	79.39	151.10	8755.08	1621.83
45	1.461	0.100	81.844	0.600	75.10	157.54	8603.98	1621.75
44	1.620	0.120	90.703	0.720	71.51	162.93	8446.44	1621.67
43	1.757	0.150	98.378	0.900	68.36	167.64	8283.51	1621.58
42	1.878	0.160	105.160	0.960	65.63	171.75	8115.87	1621.50
41	1.986	0.170	111.230	1.020	63.17	175.42	7944.12	1621.42
40	2.084	0.190	116.703	1.140	60.94	178.78	7768.70	1621.33
39	2.173	0.200	121.690	1.200	58.92	181.81	7589.92	1621.25
38	2.255	0.220	126.295	1.320	57.03	184.64	7408.11	1621.17
37	2.333	0.230	130.625	1.380	55.27	187.28	7223.46	1621.08
36	2.406	0.250	134.731	1.500	53.58	189.81	7036.19	1621.00
35	2.476	0.270	138.629	1.620	51.98	192.22	6846.37	1620.92
34	2.542	0.280	142.327	1.680	50.47	194.48	6654.15	1620.83
33	2.604	0.300	145.837	1.800	49.02	196.66	6459.67	1620.75
32	2.664	0.320	149.163	1.920	47.64	198.72	6263.01	1620.67
31	2.720	0.330	152.316	1.980	46.36	200.65	6064.29	1620.58
30	2.773	0.350	155.303	2.100	45.11	202.52	5863.64	1620.50
29	2.824	0.370	158.127	2.220	43.94	204.28	5661.12	1620.42
28	2.871	0.370	160.796	2.220	42.87	205.88	5456.84	1620.33
27	2.916	0.400	163.313	2.400	41.79	207.50	5250.95	1620.25
26	2.964	0.410	166.009	2.460	40.69	209.16	5043.45	1620.17
25	2.998	0.420	167.910	2.520	39.90	210.33	4834.30	1620.08

24	3.036	0.440	169.990	2.640	39.02	211.65	4623.96	1620.00
23	3.071	0.450	171.960	2.700	38.21	212.87	4412.31	1619.92
22	3.105	0.460	173.893	2.760	37.41	214.07	4199.44	1619.83
21	3.138	0.470	175.751	2.820	36.65	215.22	3985.37	1619.75
20	3.171	0.490	177.550	2.940	35.88	216.37	3770.16	1619.67
19	3.202	0.500	179.295	3.000	35.16	217.45	3553.79	1619.58
18	3.232	0.510	181.000	3.060	34.45	218.51	3336.34	1619.50
17	3.261	0.520	182.632	3.120	33.77	219.53	3117.83	1619.42
16	3.292	0.530	184.332	3.180	33.07	220.58	2898.30	1619.33
15	3.321	0.540	185.955	3.240	32.40	221.59	2677.72	1619.25
14	3.349	0.550	187.557	3.300	31.73	222.59	2456.13	1619.17
13	3.377	0.560	189.095	3.360	31.09	223.55	2233.54	1619.08
12	3.405	0.560	190.663	3.360	30.47	224.49	2009.99	1619.00
11	3.433	0.570	192.243	3.420	29.81	225.47	1785.50	1618.92
10	3.462	0.580	193.874	3.480	29.13	226.49	1560.03	1618.83
9	3.490	0.580	195.437	3.480	28.51	227.43	1333.54	1618.75
8	3.518	0.580	196.986	3.480	27.89	228.35	1106.12	1618.67
7	3.545	0.590	198.529	3.540	27.25	229.32	877.76	1618.58
6	0.000	0.000	0.000	0.000	108.07	108.07	648.45	1618.50
5	0.000	0.000	0.000	0.000	108.07	108.07	540.37	1618.42
4	0.000	0.000	0.000	0.000	108.07	108.07	432.30	1618.33
3	0.000	0.000	0.000	0.000	108.07	108.07	324.22	1618.25
2	0.000	0.000	0.000	0.000	108.07	108.07	216.15	1618.17
1	0.000	0.000	0.000	0.000	108.07	108.07	108.07	1618.08
0	0.000	0.000	0.000	0.000	0.00	0.00	0.00	1618.00

APPENDIX B

BMP EDUCATIONAL MATERIALS

EPA
United States
Environmental Protection
Agency

EPA 841-F-03-003

Protecting Water Quality *from* URBAN RUNOFF

Clean Water Is Everybody's Business

In urban and suburban areas, much of the land surface is covered by buildings and pavement, which do not allow rain and snowmelt to soak into the ground. Instead, most developed areas rely on storm drains to carry large amounts of runoff from roofs and paved areas to nearby waterways. The stormwater runoff carries pollutants such as oil, dirt, chemicals, and lawn fertilizers directly to streams and rivers, where they seriously harm water quality. To protect surface water quality and groundwater resources, development should be designed and built to minimize increases in runoff.

The most recent National Water Quality Inventory reports that runoff from urbanized areas is the leading source of water quality impairments to surveyed estuaries and the third-largest source of impairments to surveyed lakes.

Did you know that because of impervious surfaces like pavement and rooftops, a typical city block generates more than 5 times more runoff than a woodland area of the same size?

How Urbanized Areas Affect Water Quality

Increased Runoff

The porous and varied terrain of natural landscapes like forests, wetlands, and grasslands traps rainwater and snowmelt and allows them to filter slowly into the ground. In contrast, impervious (nonporous) surfaces like roads, parking lots, and rooftops prevent rain and snowmelt from infiltrating, or soaking, into the ground. Most of the rainfall and snowmelt remains above the surface, where it runs off rapidly in unnaturally large amounts.

Storm sewer systems concentrate runoff into smooth, straight conduits. This runoff gathers speed and erosional power as it travels underground. When this runoff leaves the storm drains and empties into a stream, its excessive volume and power blast out streambanks, damaging streamside vegetation and wiping out aquatic habitat. These increased storm flows carry sediment loads from construction sites and other denuded surfaces and eroded streambanks. They often carry higher water temperatures from streets, roof tops, and parking lots, which are harmful to the health and reproduction of aquatic life.

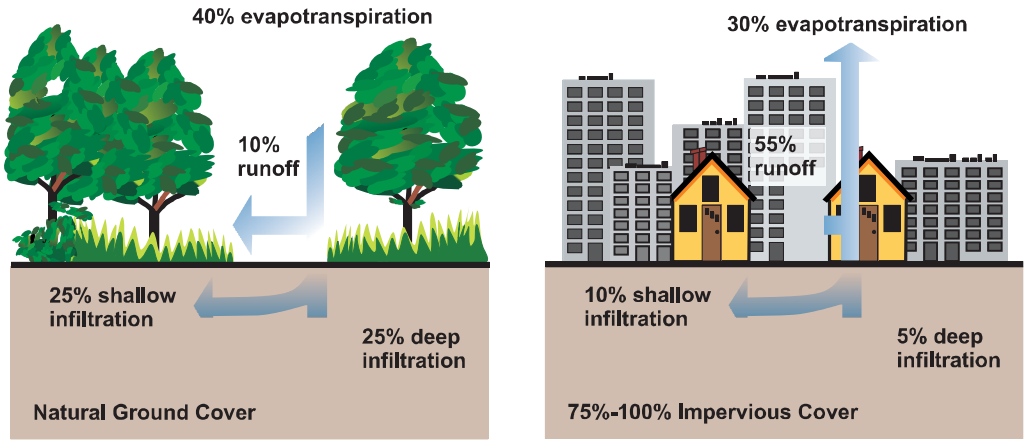
The loss of infiltration from urbanization may also cause profound groundwater changes. Although urbanization leads to great increases in flooding during and immediately after wet weather, in many instances it results in lower stream flows during dry weather. Many native fish and other aquatic life cannot survive when these conditions prevail.

Increased Pollutant Loads

Urbanization increases the variety and amount of pollutants carried into streams, rivers, and lakes. The pollutants include:

- Sediment
- Oil, grease, and toxic chemicals from motor vehicles
- Pesticides and nutrients from lawns and gardens
- Viruses, bacteria, and nutrients from pet waste and failing septic systems
- Road salts
- Heavy metals from roof shingles, motor vehicles, and other sources
- Thermal pollution from dark impervious surfaces such as streets and rooftops

These pollutants can harm fish and wildlife populations, kill native vegetation, foul drinking water supplies, and make recreational areas unsafe and unpleasant.



Relationship between impervious cover and surface runoff. Impervious cover in a watershed results in increased surface ruunoff. As little as 10 percent impervious cover in a watershed can result in stream degradation.

Managing Urban Runoff

What Homeowners Can Do

To decrease polluted runoff from paved surfaces, households can develop alternatives to areas traditionally covered by impervious surfaces. Porous pavement materials are available for driveways and sidewalks, and native vegetation and mulch can replace high maintenance grass lawns. Homeowners can use fertilizers sparingly and sweep driveways, sidewalks, and roads instead of using a hose. Instead of disposing of yard waste, they can use the materials to start a compost pile. And homeowners can learn to use Integrated Pest Management (IPM) to reduce dependence on harmful pesticides.

In addition, households can prevent polluted runoff by picking up after pets and using, storing, and disposing of chemicals properly. Drivers should check their cars for leaks and recycle their motor oil and antifreeze when these fluids are changed. Drivers can also avoid impacts from car wash runoff (e.g., detergents, grime, etc.) by using car wash facilities that do not generate runoff. Households served by septic systems should have them professionally inspected and pumped every 3 to 5 years. They should also practice water conservation measures to extend the life of their septic systems.

Controlling Impacts from New Development

Developers and city planners should attempt to control the volume of runoff from new development by using low impact development, structural controls, and pollution prevention strategies. Low impact development includes measures that conserve natural areas (particularly sensitive hydrologic areas like riparian buffers and infiltrable soils); reduce development impacts; and reduce site runoff rates by maximizing surface roughness, infiltration opportunities, and flow paths.

Controlling Impacts from Existing Development

Controlling runoff from existing urban areas is often more costly than controlling runoff from new developments. Economic efficiencies are often realized through approaches that target "hot spots" of runoff pollution or have multiple benefits, such as high-efficiency street sweeping (which addresses aesthetics, road safety, and water quality). Urban planners and others responsible for managing urban and suburban areas can first identify and implement pollution prevention strategies and examine source control opportunities. They should seek out priority pollutant reduction opportunities, then protect natural areas that help control runoff, and finally begin ecological restoration and retrofit activities to clean up degraded water bodies. Local governments are encouraged to take lead roles in public education efforts through public signage, storm drain marking, pollution prevention outreach campaigns, and partnerships with citizen groups and businesses. Citizens can help prioritize the clean-up strategies, volunteer to become involved in restoration efforts, and mark storm drains with approved "don't dump" messages.



Related Publications

Turn Your Home into a Stormwater Pollution Solution!
www.epa.gov/nps

This web site links to an EPA homeowner's guide to healthy habits for clean water that provides tips for better vehicle and garage care, lawn and garden techniques, home improvement, pet care, and more.

National Management Measures to Control Nonpoint Source Pollution from Urban Areas
www.epa.gov/owow/nps/urbanmm

This technical guidance and reference document is useful to local, state, and tribal managers in implementing management programs for polluted runoff. Contains information on the best available, economically achievable means of reducing pollution of surface waters and groundwater from urban areas.

Onsite Wastewater Treatment System Resources
www.epa.gov/owm/onsite

This web site contains the latest brochures and other resources from EPA for managing onsite wastewater treatment systems (OWTS) such as conventional septic systems and alternative decentralized systems. These resources provide basic information to help individual homeowners, as well as detailed, up-to-date technical guidance of interest to local and state health departments.

Low Impact Development Center
www.lowimpactdevelopment.org

This center provides information on protecting the environment and water resources through integrated site design techniques that are intended to replicate preexisting hydrologic site conditions.

Stormwater Manager's Resource Center (SMRC)
www.stormwatercenter.net

Created and maintained by the Center for Watershed Protection, this resource center is designed specifically for stormwater practitioners, local government officials, and others that need technical assistance on stormwater management issues.

Strategies: Community Responses to Runoff Pollution
www.nrdc.org/water/pollution/storm/stoinx.asp

The Natural Resources Defense Council developed this interactive web document to explore some of the most effective strategies that communities are using around the nation to control urban runoff pollution. The document is also available in print form and as an interactive CD-ROM.

For More Information

U.S. Environmental Protection Agency
Nonpoint Source Control Branch (4503T)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

www.epa.gov/nps

February 2003

STORMWATER Pollution Prevention

Important Phone Numbers

San Bernardino County Flood Control
(909) 387-8112

County of San Bernardino
(909) 387-8109

City of Big Bear Lake
(909) 866-5831

City of Chino (909) 591-9850

City of Chino Hills (909) 364-2722

City of Colton (909) 370-6128

City of Fontana (909) 350-6772

City of Grand Terrace
(909) 824-6671 x 226

City of Highland (909) 864-8732 x 230

City of Loma Linda (909) 799-4405

City of Montclair (909) 625-9470

City of Ontario (909) 395-2025

City of Rancho Cucamonga
(909) 477-2740 x 4063

City of Redlands (909) 798-7655

City of Rialto (909) 421-4921

City of San Bernardino (909) 384-5154

City of Upland (909) 931-4370

City of Yucaipa (909) 797-2489 x 243

San Bernardino County
Stormwater Program
825 East Third Street • Room 201
San Bernardino, CA 94215-0835

STORMWATER Pollution Prevention

INDUSTRIAL AND COMMERCIAL FACILITIES



1606

STORMWATER Pollution Prevention

To reduce the amount of pollutants reaching our storm drain system, which leads to the Santa Ana River and Pacific Ocean, the San Bernardino County Stormwater Program has developed Best Management Practices (BMPs) for Industrial and Commercial Facilities. City and County ordinances require that businesses comply with these BMPs, where applicable, to protect local water quality. Local cities and the County are required to verify implementation of these BMPs by performing regular facility inspections.



Prohibited Discharges

- Discontinue all non-stormwater discharges to the storm drain system. It is prohibited to discharge any chemicals, wastes or wastewater into the gutter, street or storm drain.

Outdoor Storage

- Install covers and secondary containment areas for all hazardous materials and wastes stored outdoors in accordance with County and/or City standards.
- Keep all temporary waste containers covered, except when in direct use.
- Sweep outdoor areas instead of using a hose or pressure washer.

Outdoor Processes

- Move all process operations including vehicle and equipment maintenance inside of the building or into a covered and contained area.
- Wash equipment and vehicles in a contained and covered wash bay which is closed-loop or connected to a clarifier sized to city standards, then discharged to a sanitary sewer or take them to a commercial car wash.

Spills and Clean Ups

- Clean up spills immediately when they occur, using dry clean up methods such as absorbent materials and followed by proper disposal of materials.
- Always have a spill kit available near chemical loading dock doors, vehicle maintenance and fueling areas.
- Follow your Business Emergency Plan, as filed with the County Fire Department at (909) 386-8401.

Industrial and Commercial Facilities

- Report all prohibited discharges and non-implementation of BMPs to your local Stormwater Coordinator either at (800) CLEANUP or as listed at www.sbcounty.gov/stormwater.
- Report hazardous materials spills to (800) 33 TOXIC and your local Fire Department Hazmat Team at 911.

Training

Train employees in spill response procedures and prohibited discharges to the storm drain system, as prescribed in your local Stormwater Ordinance and in applicable Best Management Practices available at www.cabmphandbooks.com and www. sbcounty.gov/stormwater.

Permitting

Stormwater discharges associated with specific categories of commercial and industrial facilities are regulated by the State Water Resources Control Board (SWRCB) through an Industrial Storm Water General Permit. A copy of the General Permit and application forms are available at: www.waterboards.ca.gov/stormwtr/industrial.html

To report illegal dumping or for more information on stormwater pollution prevention, call:

1 (800) CLEANUP

or visit our websites at:

www.sbcounty.gov/stormwater

www.1800cleanup.org

San Bernardino County STORMWATER PROGRAM

1607

Prevención de Contaminación
AL SISTEMA DE DRENAJE

Números de Teléfono Importantes

San Bernardino County Flood Control
(909) 387-8112

County of San Bernardino
(909) 387-8109

City of Big Bear Lake
(909) 866-5831

City of Chino (909) 591-9850

City of Chino Hills (909) 364-2722

City of Colton (909) 370-6128

City of Fontana (909) 350-6772

City of Grand Terrace
(909) 824-6671 x 226

City of Highland (909) 864-8732 x 230

City of Loma Linda (909) 799-4405

City of Montclair (909) 625-9470

City of Ontario (909) 395-2025

City of Rancho Cucamonga
(909) 477-2740 x 4063

City of Redlands (909) 798-7655

City of Rialto (909) 421-4921

City of San Bernardino (909) 384-5154

City of Upland (909) 931-4370

City of Yucaipa (909) 797-2489 x 243

San Bernardino County
Stormwater Program
825 East Third Street • Room 201
San Bernardino, CA 94215-0835

Prevención de Contaminación
AL SISTEMA DE DRENAJE

INSTALACIONES INDUSTRIALES Y COMERCIALES



1608

Prevención de Contaminación
AL SISTEMA DE DRENAJE

Para reducir la cantidad de contaminantes que alcanzan nuestro sistema de aguas pluviales, las cuales desembocan en el Río Santa Ana y el Océano Pacífico, el Programa del Condado de San Bernandino ha desarrollado las pautas de Mejores Prácticas de Manejo (BMPs, por sus siglas en inglés) para instalaciones industriales y comerciales. Los decretos de la ciudad y del condado establecen que todas las empresas deben de cumplir con estas BMPs, cuando corresponda, para proteger la calidad del agua local. Las ciudades locales y el condado tienen la obligación de verificar la implementación de estas BMPs al llevar a cabo inspecciones regulares en sus instalaciones.



Desagües Prohibidos

- Descontinúe todo desagüe de aguas no pluviales al sistema de drenaje de aguas pluviales. Está prohibido descargar cualquier sustancia química, residuo o agua residual a los drenajes de la cuneta, de la calle o de aguas pluviales.

Almacenamiento al Aire Libre

- Instale cubiertas y áreas de retención secundarias para todos los materiales peligrosos y residuos almacenados al aire libre, estas instalaciones deberán de cumplir con los estándares establecidos por el condado y/o la ciudad.
- Mantenga todos los recipientes temporales de residuos cubiertos, con la excepción de cuando se estén utilizando directamente.
- Barra todas las áreas al aire libre en lugar de usar una manguera o un equipo de limpieza con agua a alta presión.

Procesos al Aire Libre

- Reubique todos los procesos u operaciones, incluyendo el mantenimiento de vehículos y equipo, dentro de un edificio en una área cubierta e independiente.
- Lave el equipo y los vehículos en una fosa de lavado independiente que tenga un anillo cerrado o bien, esté conectada a un clarificador del tamaño de los estándares municipales, luego elimine los residuos en un drenaje sanitario o llévelos a un lavador de carros comercial.

Derrames y Limpieza

- Limpie los derrames inmediatamente, utilice métodos de limpieza en seco como son el uso de materiales absorbentes y elimine estos materiales de la manera adecuada.
- Siempre tenga a la mano un estuche para derrames cerca de las puertas de los muelles de carga de sustancias químicas, en las áreas de mantenimiento de vehículos y en las áreas de combustible.
- Siga su Plan de Emergencia Comercial, como lo registró con el Departamento de Bomberos del Condado marcando al (909) 386-8401.
- Reporte todos los desagües prohibidos y cualquier punto no implementado de las BMPs a su coordinador local de Aguas Pluviales llamando al (800) CLEANUP o como se indica en el enlace www.sbcounty.gov/stormwater.
- Reporte cualquier derrame peligroso al (800) 33 TOXIC y al equipo Hazmat de su departamento local de bomberos marcando al 911.

Instalaciones Industriales y Comerciales

Capacitación

Capacite a los empleados sobre los procedimientos de respuesta ante un derrame y los desagües prohibidos al sistema de aguas pluviales, como lo indica el decreto local de aguas pluviales de Mejores Prácticas de Manejo (BMPs) disponibles en el sitio www.cabmphandbooks.com y www.sbcounty.gov/stormwater.

Autoridad Competente

Los desagües de aguas pluviales relacionados con categorías específicas de instalaciones comerciales e industriales están regulados por la Junta Estatal de Control de Recursos Acuáticos (State Water Resources Control Board, SWRCB) a través de un permiso industrial general de aguas pluviales. Para obtener una copia de este permiso general y una solicitud, visite el sitio: www.waterboards.ca.gov/stormwtr/industrial.html

Para reportar el desagüe de residuos ilegales o para obtener información adicional sobre la prevención de contaminación a las aguas pluviales, llame a:

1 (800) CLEANUP

o visite nuestro sitio:

www.sbcounty.gov/stormwater

www.1800cleanup.org

San Bernardino County STORMWATER PROGRAM

1609

LANDSCAPE MAINTENANCE

DISCHARGE TO THE STORM DRAIN, **ACCIDENTAL OR NOT**, COULD LEAD TO ENFORCEMENT ACTIONS, WHICH COULD INCLUDE FINES.

Follow the best practices below to **prevent water pollution from landscaping activities.**

RECYCLE YARD WASTE



- Recycle leaves, grass clippings and other yard waste.
- Do not blow, sweep, rake or hose yard waste into the street or catch basin.
- **Try grasscycling:** the natural recycling of grass by leaving clippings on the lawn when mowing.

  For more information, please visit: **www.calrecycle.ca.gov/organics/grasscycling**

USE FERTILIZERS, HERBICIDES AND PESTICIDES SAFELY



- Fertilizers, herbicides and pesticides are often carried into the storm drain system by sprinkler runoff. Use natural and non-toxic alternatives as often as possible.
- If you must use chemical fertilizers, herbicides or pesticides:
  - Spot apply, rather than blanketing entire areas.
  - Avoid applying near curbs and driveways, and **never** before a rain.
  - Apply fertilizers as needed: when plants could best use it and when the potential runoff would be low.
  - Follow the manufacturer's instructions carefully—this will not only give the best results, but will save money.

USE WATER WISELY



- Control the amount of water and direction of sprinklers. Sprinklers should only be on long enough to allow water to soak into the ground, but not so long as to cause runoff.
- Periodically inspect, fix leaks and realign sprinkler heads.
- Plant native vegetation to reduce the need of water, fertilizers, herbicides and pesticides.

HOMEOWNERS

KEEP THESE TIPS IN MIND WHEN HIRING PROFESSIONAL LANDSCAPERS AND REMIND AS NECESSARY.



Leftover pesticides, fertilizers, and herbicides contaminate landfills and should be disposed of through a Hazardous Waste Facility.

For more information on proper disposal call,

(909) 382-5401 or 1-800-OILY CAT.

*FREE for San Bernardino County residents only. Businesses can call for cost inquiries and to schedule an appointment.

To report illegal dumping, call (877) WASTE18 or visit sbcountystormwater.org
To report toxic spills, call 1(800) 33 TOXIC
To dispose of hazardous waste, call 1(800) OILY CAT

sbcountystormwater.org

Big Bear • Chino • Chino Hills • Colton • Fontana • Grand Terrace • Highland • Loma Linda • Montclair • Ontario • Rancho Cucamonga
Redlands • Rialto • San Bernardino • San Bernardino County • San Bernardino County Flood Control District • Upland • Yucaipa

MANTENIMIENTO DE JARDINERÍA

LAS DESCARGAS A LOS DESAGUES PLUVIALES, DE MANERA ACCIDENTAL O NO, PUEDEN INDUCIR A LA APLICACIÓN DE MULTAS Y OTRAS MEDIDAS.

Siga las mejores prácticas descritas debajo para evitar la contaminación del agua por actividades de jardinería.

RECICLAJE DE LOS DESECHOS DE JARDÍN



- Reciclar las hojas, recortes de césped y otros desechos de jardín.
- No soplar, barrer, o usar la manguera para empujar los desechos de jardín a la calle.
- **Poner a prueba el reciclaje de césped (grasscycling): la manera natural de reciclar el césped dejando los recortes sobre el césped cuando son cortados. Para más información, visite la página web: www.calrecycle.ca.gov/organics/grasscycling**

USAR FERTILIZANTES, HERBICIDAS Y PESTICIDAS DE MANERA SEGURA



- Los fertilizantes, herbicidas y pesticidas son arrastrados con frecuencia hacia el sistema de desagüe pluvial mediante el escurrimiento de los rociadores. Use alternativas naturales no tóxicas siempre que sea posible.
- Si tiene que usar fertilizantes, herbicidas o pesticidas químicos:
  Aplicar solo en el sitio necesario, en lugar de cubrir todas las áreas.
  Evitar aplicar cerca de los bordillos y las calzadas, y nunca antes de que llueva.
  Aplicar los fertilizantes cuando sea necesario: esto es, cuando las plantas mejor podrían usarlo y el posible escurrimiento sea bajo.
  Seguir las instrucciones del fabricante cuidadosamente – esto no solo le proporcionará los mejores resultados, pero le permitirá ahorrar dinero.

USAR EL AGUA DE MANERA PRUDENTE



- Controlar la cantidad de agua y la orientación de los rociadores. Los rociadores deben ser **solo lo suficientemente largos como para** permitir que el agua remoje el suelo, pero no tan largos que causen un escurrimiento.
- Inspeccione, repare los escapes y alinee los aspersores periódicamente.
- Siembre plantas nativas para reducir el uso de agua, fertilizantes, herbicidas y pesticidas.

PROPIETARIOS DE HOGARES

Tengan en cuenta estos consejos cuando contraten a paisajistas profesionales y recuérdenselos según sea necesario.



Los sobrantes de pesticidas, fertilizantes y herbicidas contaminan los vertederos y deben ser desechados a través de Plantas de Tratamiento para Residuos Peligrosos.

Para más información sobre el manejo adecuado de residuos peligrosos, llame a (909) 382-5401 o 1-800-OILY CAT.

*GRATIS únicamente para los residentes del Condado de San Bernardino. Las empresas pueden llamar para indagar sobre los costos y concertar una cita

Para denunciar el vertido ilegal de basura, llame al (877) WASTE18 o visite sbcountystormwater.org
Para denunciar derrames tóxicos, llame al 1(800) 33 TOXIC
Para desechar residuos peligrosos, llame al 1(800) OILY CAT

sbcountystormwater.org

Big Bear •Chino •Chino Hills •Colton •Fontana •Grand Terrace •Highland •Loma Linda •Montclair • Ontario •Rancho Cucamonga
Redlands •Rialto •San Bernardino •San Bernardino County •San Bernardino County Flood Control District •Upland •Yucaipa

Building & Grounds Maintenance SC-41



Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	
Metals	✓
Bacteria	✓
Oil and Grease	
Organics	

Description

Stormwater runoff from building and grounds maintenance activities can be contaminated with toxic hydrocarbons in solvents, fertilizers and pesticides, suspended solids, heavy metals, abnormal pH, and oils and greases. Utilizing the protocols in this fact sheet will prevent or reduce the discharge of pollutants to stormwater from building and grounds maintenance activities by washing and cleaning up with as little water as possible, following good landscape management practices, preventing and cleaning up spills immediately, keeping debris from entering the storm drains, and maintaining the stormwater collection system.

Approach

Reduce potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

Pollution Prevention

- Switch to non-toxic chemicals for maintenance when possible.
- Choose cleaning agents that can be recycled.
- Encourage proper lawn management and landscaping, including use of native vegetation.

CASQA California Stormwater Quality Association

- Encourage use of Integrated Pest Management techniques for pest control.
- Encourage proper onsite recycling of yard trimmings.
- Recycle residual paints, solvents, lumber, and other material as much as possible.

Suggested Protocols

Pressure Washing of Buildings, Rooftops, and Other Large Objects

- In situations where soaps or detergents are used and the surrounding area is paved, pressure washers must use a water collection device that enables collection of wash water and associated solids. A sump pump, wet vacuum or similarly effective device must be used to collect the runoff and loose materials. The collected runoff and solids must be disposed of properly.
- If soaps or detergents are not used, and the surrounding area is paved, wash runoff does not have to be collected but must be screened. Pressure washers must use filter fabric or some other type of screen on the ground and/or in the catch basin to trap the particles in wash water runoff.
- If you are pressure washing on a grassed area (with or without soap), runoff must be dispersed as sheet flow as much as possible, rather than as a concentrated stream. The wash runoff must remain on the grass and not drain to pavement.

Landscaping Activities

- Dispose of grass clippings, leaves, sticks, or other collected vegetation as garbage, or by composting. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Use mulch or other erosion control measures on exposed soils.

Building Repair, Remodeling, and Construction

- Do not dump any toxic substance or liquid waste on the pavement, the ground, or toward a storm drain.
- Use ground or drop cloths underneath outdoor painting, scraping, and sandblasting work, and properly dispose of collected material daily.
- Use a ground cloth or oversized tub for activities such as paint mixing and tool cleaning.
- Clean paintbrushes and tools covered with water-based paints in sinks connected to sanitary sewers or in portable containers that can be dumped into a sanitary sewer drain. Brushes and tools covered with non-water-based paints, finishes, or other materials must be cleaned in a manner that enables collection of used solvents (e.g., paint thinner, turpentine, etc.) for recycling or proper disposal.
- Use a storm drain cover, filter fabric, or similarly effective runoff control mechanism if dust, grit, wash water, or other pollutants may escape the work area and enter a catch basin. This is particularly necessary on rainy days. The containment device(s) must be in place at the beginning of the work day, and accumulated dirty runoff and solids must be collected and disposed of before removing the containment device(s) at the end of the work day.

- If you need to de-water an excavation site, you may need to filter the water before discharging to a catch basin or off-site. If directed off-site, you should direct the water through hay bales and filter fabric or use other sediment filters or traps.
- Store toxic material under cover during precipitation events and when not in use. A cover would include tarps or other temporary cover material.

Mowing, Trimming, and Planting

- Dispose of leaves, sticks, or other collected vegetation as garbage, by composting or at a permitted landfill. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Use mulch or other erosion control measures when soils are exposed.
- Place temporarily stockpiled material away from watercourses and drain inlets, and berm or cover stockpiles to prevent material releases to the storm drain system.
- Consider an alternative approach when bailing out muddy water: do not put it in the storm drain; pour over landscaped areas.
- Use hand weeding where practical.

Fertilizer and Pesticide Management

- Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers and pesticides and training of applicators and pest control advisors.
- Use less toxic pesticides that will do the job when applicable. Avoid use of copper-based pesticides if possible.
- Do not use pesticides if rain is expected.
- Do not mix or prepare pesticides for application near storm drains.
- Use the minimum amount needed for the job.
- Calibrate fertilizer distributors to avoid excessive application.
- Employ techniques to minimize off-target application (e.g., spray drift) of pesticides, including consideration of alternative application techniques.
- Apply pesticides only when wind speeds are low.
- Fertilizers should be worked into the soil rather than dumped or broadcast onto the surface.
- Irrigate slowly to prevent runoff and then only as much as is needed.
- Clean pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water.
- Dispose of empty pesticide containers according to the instructions on the container label.

- Use up the pesticides. Rinse containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.
- Implement storage requirements for pesticide products with guidance from the local fire department and County Agricultural Commissioner. Provide secondary containment for pesticides.

Inspection

- Inspect irrigation system periodically to ensure that the right amount of water is being applied and that excessive runoff is not occurring. Minimize excess watering and repair leaks in the irrigation system as soon as they are observed.

Training

- Educate and train employees on pesticide use and in pesticide application techniques to prevent pollution.
- Train employees and contractors in proper techniques for spill containment and cleanup.
- Be sure the frequency of training takes into account the complexity of the operations and the nature of the staff.

Spill Response and Prevention

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Place a stockpile of spill cleanup materials, such as brooms, dustpans, and vacuum sweepers (if desired) near the storage area where it will be readily accessible.
- Have employees trained in spill containment and cleanup present during the loading/unloading of dangerous wastes, liquid chemicals, or other materials.
- Familiarize employees with the Spill Prevention Control and Countermeasure Plan.
- Clean up spills immediately.

Other Considerations

Alternative pest/weed controls may not be available, suitable, or effective in many cases.

Requirements

Costs

- Cost will vary depending on the type and size of facility.
- Overall costs should be low in comparison to other BMPs.

Maintenance

Sweep paved areas regularly to collect loose particles. Wipe up spills with rags and other absorbent material immediately, do not hose down the area to a storm drain.

Supplemental Information

Further Detail of the BMP

Fire Sprinkler Line Flushing

Building fire sprinkler line flushing may be a source of non-stormwater runoff pollution. The water entering the system is usually potable water, though in some areas it may be non-potable reclaimed wastewater. There are subsequent factors that may drastically reduce the quality of the water in such systems. Black iron pipe is usually used since it is cheaper than potable piping, but it is subject to rusting and results in lower quality water. Initially, the black iron pipe has an oil coating to protect it from rusting between manufacture and installation; this will contaminate the water from the first flush but not from subsequent flushes. Nitrates, poly-phosphates and other corrosion inhibitors, as well as fire suppressants and antifreeze may be added to the sprinkler water system. Water generally remains in the sprinkler system a long time (typically a year) and between flushes may accumulate iron, manganese, lead, copper, nickel, and zinc. The water generally becomes anoxic and contains living and dead bacteria and breakdown products from chlorination. This may result in a significant BOD problem and the water often smells. Consequently dispose fire sprinkler line flush water into the sanitary sewer. Do not allow discharge to storm drain or infiltration due to potential high levels of pollutants in fire sprinkler line water.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Mobile Cleaners Pilot Program: Final Report. 1997. Bay Area Stormwater Management Agencies Association (BASMAA). http://www.basmaa.org/

Pollution from Surface Cleaning Folder. 1996. Bay Area Stormwater Management Agencies Association (BASMAA). http://www.basmaa.org/

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net/

Parking/Storage Area Maintenance SC-43



Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

Description

Parking lots and storage areas can contribute a number of substances, such as trash, suspended solids, hydrocarbons, oil and grease, and heavy metals that can enter receiving waters through stormwater runoff or non-stormwater discharges. The following protocols are intended to prevent or reduce the discharge of pollutants from parking/storage areas and include using good housekeeping practices, following appropriate cleaning BMPs, and training employees.

Approach

Pollution Prevention

- Encourage alternative designs and maintenance strategies for impervious parking lots. (See New Development and Redevelopment BMP Handbook).
- Keep accurate maintenance logs to evaluate BMP implementation.

Suggested Protocols

General

- Keep the parking and storage areas clean and orderly. Remove debris in a timely fashion.
- Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices.
- Utilize sand filters or oleophilic collectors for oily waste in low concentrations.

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION

- Arrange rooftop drains to prevent drainage directly onto paved surfaces.
- Design lot to include semi-permeable hardscape.

Controlling Litter

- Post "No Littering" signs and enforce anti-litter laws.
- Provide an adequate number of litter receptacles.
- Clean out and cover litter receptacles frequently to prevent spillage.
- Provide trash receptacles in parking lots to discourage litter.
- Routinely sweep, shovel and dispose of litter in the trash.

Surface cleaning

- Use dry cleaning methods (e.g. sweeping or vacuuming) to prevent the discharge of pollutants into the stormwater conveyance system.
- Establish frequency of public parking lot sweeping based on usage and field observations of waste accumulation.
- Sweep all parking lots at least once before the onset of the wet season.
- If water is used follow the procedures below:
  - Block the storm drain or contain runoff.
  - Wash water should be collected and pumped to the sanitary sewer or discharged to a pervious surface, do not allow wash water to enter storm drains.
  - Dispose of parking lot sweeping debris and dirt at a landfill.
- When cleaning heavy oily deposits:
  - Use absorbent materials on oily spots prior to sweeping or washing.
  - Dispose of used absorbents appropriately.

Surface Repair

- Pre-heat, transfer or load hot bituminous material away from storm drain inlets.
- Apply concrete, asphalt, and seal coat during dry weather to prevent contamination form contacting stormwater runoff.
- Cover and seal nearby storm drain inlets (with waterproof material or mesh) and manholes before applying seal coat, slurry seal, etc., where applicable. Leave covers in place until job is complete and until all water from emulsified oil sealants has drained or evaporated. Clean any debris from these covered manholes and drains for proper disposal.

- Use only as much water as necessary for dust control, to avoid runoff.
- Catch drips from paving equipment that is not in use with pans or absorbent material placed under the machines. Dispose of collected material and absorbents properly.

Inspection

- Have designated personnel conduct inspections of the parking facilities and stormwater conveyance systems associated with them on a regular basis.
- Inspect cleaning equipment/sweepers for leaks on a regular basis.

Training

- Provide regular training to field employees and/or contractors regarding cleaning of paved areas and proper operation of equipment.
- Train employees and contractors in proper techniques for spill containment and cleanup.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup.
- Keep your Spill Prevention Control and countermeasure (SPCC) plan up-to-date, nad implement accordingly.
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- Limitations related to sweeping activities at large parking facilities may include high equipment costs, the need for sweeper operator training, and the inability of current sweeper technology to remove oil and grease.

Requirements

Costs

Cleaning/sweeping costs can be quite large, construction and maintenance of stormwater structural controls can be quite expensive as well.

Maintenance

- Sweep parking lot to minimize cleaning with water.
- Clean out oil/water/sand separators regularly, especially after heavy storms.
- Clean parking facilities on a regular basis to prevent accumulated wastes and pollutants from being discharged into conveyance systems during rainy conditions.

Supplemental Information

Further Detail of the BMP

Surface Repair

Apply concrete, asphalt, and seal coat during dry weather to prevent contamination form contacting stormwater runoff. Where applicable, cover and seal nearby storm drain inlets (with waterproof material or mesh) and manholes before applying seal coat, slurry seal, etc. Leave covers in place until job is complete and until all water from emulsified oil sealants has drained or evaporated. Clean any debris from these covered manholes and drains for proper disposal. Use only as much water as necessary for dust control, to avoid runoff.

References and Resources

http://www.stormwatercenter.net/

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities. Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, Central Coast Regional Water Quality control Board. July 1998 (Revised February 2002 by the California Coastal Commission).

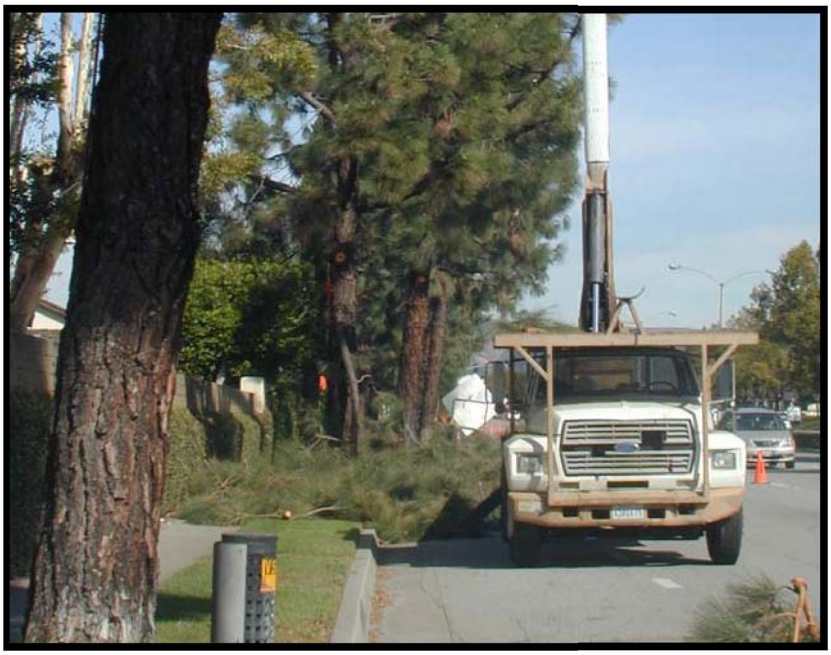
Orange County Stormwater Program
http://www.ocwatersheds.com/StormWater/swp_introduction.asp

Oregon Association of Clean Water Agencies. Oregon Municipal Stormwater Toolbox for Maintenance Practices. June 1998.

Pollution from Surface Cleaning Folder. 1996. Bay Area Stormwater Management Agencies Association (BASMAA) http://www.basma.org

San Diego Stormwater Co-permittees Jurisdictional Urban Runoff Management Program (URMP)
http://www.projectcleanwater.org/pdf/Model%20Program%20Municipal%20Facilities.pdf

Landscape Maintenance SC-73



Objectives

- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	
Bacteria	
Oil and Grease	
Organics	
Oxygen Demanding	☑

Description

Landscape maintenance activities include vegetation removal; herbicide and insecticide application; fertilizer application; watering; and other gardening and lawn care practices. Vegetation control typically involves a combination of chemical (herbicide) application and mechanical methods. All of these maintenance practices have the potential to contribute pollutants to the storm drain system. The major objectives of this BMP are to minimize the discharge of pesticides, herbicides and fertilizers to the storm drain system and receiving waters; prevent the disposal of landscape waste into the storm drain system by collecting and properly disposing of clippings and cuttings, and educating employees and the public.

Approach

Pollution Prevention

- Implement an integrated pest management (IPM) program. IPM is a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools.
- Choose low water using flowers, trees, shrubs, and groundcover.
- Consider alternative landscaping techniques such as naturescaping and xeriscaping.
- Conduct appropriate maintenance (i.e. properly timed fertilizing, weeding, pest control, and pruning) to help preserve the landscapes water efficiency.

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION

- Consider grass cycling (grass cycling is the natural recycling of grass by leaving the clippings on the lawn when mowing. Grass clippings decompose quickly and release valuable nutrients back into the lawn).

Suggested Protocols

Mowing, Trimming, and Weeding

- Whenever possible use mechanical methods of vegetation removal (e.g mowing with tractor-type or push mowers, hand cutting with gas or electric powered weed trimmers) rather than applying herbicides. Use hand weeding where practical.
- Avoid loosening the soil when conducting mechanical or manual weed control, this could lead to erosion. Use mulch or other erosion control measures when soils are exposed.
- Performing mowing at optimal times. Mowing should not be performed if significant rain events are predicted.
- Mulching mowers may be recommended for certain flat areas. Other techniques may be employed to minimize mowing such as selective vegetative planting using low maintenance grasses and shrubs.
- Collect lawn and garden clippings, pruning waste, tree trimmings, and weeds. Chip if necessary, and compost or dispose of at a landfill (see waste management section of this fact sheet).
- Place temporarily stockpiled material away from watercourses, and berm or cover stockpiles to prevent material releases to storm drains.

Planting

- Determine existing native vegetation features (location, species, size, function, importance) and consider the feasibility of protecting them. Consider elements such as their effect on drainage and erosion, hardiness, maintenance requirements, and possible conflicts between preserving vegetation and the resulting maintenance needs.
- Retain and/or plant selected native vegetation whose features are determined to be beneficial, where feasible. Native vegetation usually requires less maintenance (e.g., irrigation, fertilizer) than planting new vegetation.
- Consider using low water use groundcovers when planting or replanting.

Waste Management

- Compost leaves, sticks, or other collected vegetation or dispose of at a permitted landfill. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Place temporarily stockpiled material away from watercourses and storm drain inlets, and berm or cover stockpiles to prevent material releases to the storm drain system.
- Reduce the use of high nitrogen fertilizers that produce excess growth requiring more frequent mowing or trimming.

- Avoid landscape wastes in and around storm drain inlets by either using bagging equipment or by manually picking up the material.

Irrigation

- Where practical, use automatic timers to minimize runoff.
- Use popup sprinkler heads in areas with a lot of activity or where there is a chance the pipes may be broken. Consider the use of mechanisms that reduce water flow to sprinkler heads if broken.
- Ensure that there is no runoff from the landscaped area(s) if re-claimed water is used for irrigation.
- If bailing of muddy water is required (e.g. when repairing a water line leak), do not put it in the storm drain; pour over landscaped areas.
- Irrigate slowly or pulse irrigate to prevent runoff and then only irrigate as much as is needed.
- Apply water at rates that do not exceed the infiltration rate of the soil.

Fertilizer and Pesticide Management

- Utilize a comprehensive management system that incorporates integrated pest management (IPM) techniques. There are many methods and types of IPM, including the following:
  - Mulching can be used to prevent weeds where turf is absent, fencing installed to keep rodents out, and netting used to keep birds and insects away from leaves and fruit.
  - Visible insects can be removed by hand (with gloves or tweezers) and placed in soapy water or vegetable oil. Alternatively, insects can be sprayed off the plant with water or in some cases vacuumed off of larger plants.
  - Store-bought traps, such as species-specific, pheromone-based traps or colored sticky cards, can be used.
  - Slugs can be trapped in small cups filled with beer that are set in the ground so the slugs can get in easily.
  - In cases where microscopic parasites, such as bacteria and fungi, are causing damage to plants, the affected plant material can be removed and disposed of (pruning equipment should be disinfected with bleach to prevent spreading the disease organism).
  - Small mammals and birds can be excluded using fences, netting, tree trunk guards.
  - Beneficial organisms, such as bats, birds, green lacewings, ladybugs, praying mantis, ground beetles, parasitic nematodes, trichogramma wasps, seed head weevils, and spiders that prey on detrimental pest species can be promoted.
- Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers and pesticides and training of applicators and pest control advisors.

- Use pesticides only if there is an actual pest problem (not on a regular preventative schedule).
- Do not use pesticides if rain is expected. Apply pesticides only when wind speeds are low (less than 5 mph).
- Do not mix or prepare pesticides for application near storm drains.
- Prepare the minimum amount of pesticide needed for the job and use the lowest rate that will effectively control the pest.
- Employ techniques to minimize off-target application (e.g. spray drift) of pesticides, including consideration of alternative application techniques.
- Fertilizers should be worked into the soil rather than dumped or broadcast onto the surface.
- Calibrate fertilizer and pesticide application equipment to avoid excessive application.
- Periodically test soils for determining proper fertilizer use.
- Sweep pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water.
- Purchase only the amount of pesticide that you can reasonably use in a given time period (month or year depending on the product).
- Triple rinse containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.
- Dispose of empty pesticide containers according to the instructions on the container label.

Inspection

- Inspect irrigation system periodically to ensure that the right amount of water is being applied and that excessive runoff is not occurring. Minimize excess watering, and repair leaks in the irrigation system as soon as they are observed.
- Inspect pesticide/fertilizer equipment and transportation vehicles daily.

Training

- Educate and train employees on use of pesticides and in pesticide application techniques to prevent pollution. Pesticide application must be under the supervision of a California qualified pesticide applicator.
- Train/encourage municipal maintenance crews to use IPM techniques for managing public green areas.
- Annually train employees within departments responsible for pesticide application on the appropriate portions of the agency's IPM Policy, SOPs, and BMPs, and the latest IPM techniques.

- Employees who are not authorized and trained to apply pesticides should be periodically (at least annually) informed that they cannot use over-the-counter pesticides in or around the workplace.
- Use a training log or similar method to document training.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup
- Have spill cleanup materials readily available and in a know in location
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- The Federal Pesticide, Fungicide, and Rodenticide Act and California Title 3, Division 6, Pesticides and Pest Control Operations place strict controls over pesticide application and handling and specify training, annual refresher, and testing requirements. The regulations generally cover: a list of approved pesticides and selected uses, updated regularly; general application information; equipment use and maintenance procedures; and record keeping. The California Department of Pesticide Regulations and the County Agricultural Commission coordinate and maintain the licensing and certification programs. All public agency employees who apply pesticides and herbicides in "agricultural use" areas such as parks, golf courses, rights-of-way and recreation areas should be properly certified in accordance with state regulations. Contracts for landscape maintenance should include similar requirements.
- All employees who handle pesticides should be familiar with the most recent material safety data sheet (MSDS) files.
- Municipalities do not have the authority to regulate the use of pesticides by school districts, however the California Healthy Schools Act of 2000 (AB 2260) has imposed requirements on California school districts regarding pesticide use in schools. Posting of notification prior to the application of pesticides is now required, and IPM is stated as the preferred approach to pest management in schools.

Requirements

Costs

Additional training of municipal employees will be required to address IPM techniques and BMPs. IPM methods will likely increase labor cost for pest control which may be offset by lower chemical costs.

Maintenance

Not applicable

Supplemental Information

Further Detail of the BMP

Waste Management

Composting is one of the better disposal alternatives if locally available. Most municipalities either have or are planning yard waste composting facilities as a means of reducing the amount of waste going to the landfill. Lawn clippings from municipal maintenance programs as well as private sources would probably be compatible with most composting facilities

Contractors and Other Pesticide Users

Municipal agencies should develop and implement a process to ensure that any contractor employed to conduct pest control and pesticide application on municipal property engages in pest control methods consistent with the IPM Policy adopted by the agency. Specifically, municipalities should require contractors to follow the agency's IPM policy, SOPs, and BMPs; provide evidence to the agency of having received training on current IPM techniques when feasible; provide documentation of pesticide use on agency property to the agency in a timely manner.

References and Resources

King County Stormwater Pollution Control Manual. Best Management Practices for Businesses. 1995. King County Surface Water Management. July. On-line: http://dnr.metrokc.gov/wlr/dss/spcm.htm

Los Angeles County Stormwater Quality Model Programs. Public Agency Activities http://ladpw.org/wmd/npdes/model_links.cfm

Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities. Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, Central Coast Regional Water Quality Control Board. July. 1998.

Orange County Stormwater Program http://www.ocwatersheds.com/StormWater/swp_introduction.asp

Santa Clara Valley Urban Runoff Pollution Prevention Program. 1997 Urban Runoff Management Plan. September 1997, updated October 2000.

United States Environmental Protection Agency (USEPA). 2002. Pollution Prevention/Good Housekeeping for Municipal Operations Landscaping and Lawn Care. Office of Water. Office of Wastewater Management. On-line: http://www.epa.gov/npdes/menuofbmps/poll_8.htm

Drainage System Maintenance SC-74



Photo Credit: Geoff Brosseau

Objectives

- Contain
- Educate
- Reduce/Minimize

Description

As a consequence of its function, the stormwater conveyance system collects and transports urban runoff that may contain certain pollutants. Maintaining catch basins, stormwater inlets, and other stormwater conveyance structures on a regular basis will remove pollutants, prevent clogging of the downstream conveyance system, restore catch basins' sediment trapping capacity, and ensure the system functions properly hydraulically to avoid flooding.

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

Approach

Suggested Protocols

Catch Basins/Inlet Structures

- Municipal staff should regularly inspect facilities to ensure the following:
  - Immediate repair of any deterioration threatening structural integrity.
  - Cleaning before the sump is 40% full. Catch basins should be cleaned as frequently as needed to meet this standard.
  - Stenciling of catch basins and inlets (see SC-75 Waste Handling and Disposal).
- Clean catch basins, storm drain inlets, and other conveyance structures in high pollutant load areas just before the wet season to remove sediments and debris accumulated during the summer.

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION

- Conduct inspections more frequently during the wet season for problem areas where sediment or trash accumulates more often. Clean and repair as needed.
- Keep accurate logs of the number of catch basins cleaned.
- Record the amount of waste collected.
- Store wastes collected from cleaning activities of the drainage system in appropriate containers or temporary storage sites in a manner that prevents discharge to the storm drain.
- Dewater the wastes with outflow into the sanitary sewer if permitted. Water should be treated with an appropriate filtering device prior to discharge to the sanitary sewer. If discharge to the sanitary sewer is not allowed, water should be pumped or vacuumed to a tank and properly disposed of. Do not dewater near a storm drain or stream.
- Except for small communities with relatively few catch basins that may be cleaned manually, most municipalities will require mechanical cleaners such as eductors, vacuums, or bucket loaders.

Storm Drain Conveyance System

- Locate reaches of storm drain with deposit problems and develop a flushing schedule that keeps the pipe clear of excessive buildup.
- Collect flushed effluent and pump to the sanitary sewer for treatment.

Pump Stations

- Clean all storm drain pump stations prior to the wet season to remove silt and trash.
- Do not allow discharge from cleaning a storm drain pump station or other facility to reach the storm drain system.
- Conduct quarterly routine maintenance at each pump station.
- Inspect, clean, and repair as necessary all outlet structures prior to the wet season.
- Sample collected sediments to determine if landfill disposal is possible, or illegal discharges in the watershed are occurring.

Open Channel

- Consider modification of storm channel characteristics to improve channel hydraulics, to increase pollutant removals, and to enhance channel/creek aesthetic and habitat value.
- Conduct channel modification/improvement in accordance with existing laws. Any person, government agency, or public utility proposing an activity that will change the natural (emphasis added) state of any river, stream, or lake in California, must enter into a steam or Lake Alteration Agreement with the Department of Fish and Game. The developer-applicant should also contact local governments (city, county, special districts), other state agencies

(SWRCB, RWQCB, Department of Forestry, Department of Water Resources), and Federal Corps of Engineers and USFWS

Illicit Connections and Discharges

- During routine maintenance of conveyance system and drainage structures field staff should look for evidence of illegal discharges or illicit connections:
  - Is there evidence of spills such as paints, discoloring, etc.
  - Are there any odors associated with the drainage system
  - Record locations of apparent illegal discharges/illicit connections
  - Track flows back to potential dischargers and conduct aboveground inspections. This can be done through visual inspection of up gradient manholes or alternate techniques including zinc chloride smoke testing, fluorometric dye testing, physical inspection testing, or television camera inspection.
  - Once the origin of flow is established, require illicit discharger to eliminate the discharge.
- Stencil storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as "Dump No Waste Drains to Stream" stenciled next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

Illegal Dumping

- Regularly inspect and clean up hot spots and other storm drainage areas where illegal dumping and disposal occurs.
- Establish a system for tracking incidents. The system should be designed to identify the following:
  - Illegal dumping hot spots
  - Types and quantities (in some cases) of wastes
  - Patterns in time of occurrence (time of day/night, month, or year)
  - Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)
  - Responsible parties
- Post "No Dumping" signs in problem areas with a phone number for reporting dumping and disposal. Signs should also indicate fines and penalties for illegal dumping.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

- The State Department of Fish and Game has a hotline for reporting violations called Cal TIP (1-800-952-5400). The phone number may be used to report any violation of a Fish and Game code (illegal dumping, poaching, etc.).
- The California Department of Toxic Substances Control's Waste Alert Hotline, 1-800-69TOXIC, can be used to report hazardous waste violations.

Training

- Train crews in proper maintenance activities, including record keeping and disposal.
- Only properly trained individuals are allowed to handle hazardous materials/wastes.
- Train municipal employees from all departments (public works, utilities, street cleaning, parks and recreation, industrial waste inspection, hazardous waste inspection, sewer maintenance) to recognize and report illegal dumping.
- Train municipal employees and educate businesses, contractors, and the general public in proper and consistent methods for disposal.
- Train municipal staff regarding non-stormwater discharges (See SC-10 Non-Stormwater Discharges).

Spill Response and Prevention

- Refer to SC-11, Prevention, Control & Cleanup
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- Cleanup activities may create a slight disturbance for local aquatic species. Access to items and material on private property may be limited. Trade-offs may exist between channel hydraulics and water quality/riparian habitat. If storm channels or basins are recognized as wetlands, many activities, including maintenance, may be subject to regulation and permitting.
- Storm drain flushing is most effective in small diameter pipes (36-inch diameter pipe or less, depending on water supply and sediment collection capacity). Other considerations associated with storm drain flushing may include the availability of a water source, finding a downstream area to collect sediments, liquid/sediment disposal, and disposal of flushed effluent to sanitary sewer may be prohibited in some areas.
- Regulations may include adoption of substantial penalties for illegal dumping and disposal.
- Municipal codes should include sections prohibiting the discharge of soil, debris, refuse, hazardous wastes, and other pollutants into the storm drain system.
- Private property access rights may be needed to track illegal discharges up gradient.

- Requirements of municipal ordinance authority for suspected source verification testing for illicit connections necessary for guaranteed rights of entry.

Requirements

Costs

- An aggressive catch basin cleaning program could require a significant capital and O&M budget. A careful study of cleaning effectiveness should be undertaken before increased cleaning is implemented. Catch basin cleaning costs are less expensive if vacuum street sweepers are available; cleaning catch basins manually can cost approximately twice as much as cleaning the basins with a vacuum attached to a sweeper.

- Methods used for illicit connection detection (smoke testing, dye testing, visual inspection, and flow monitoring) can be costly and time-consuming. Site-specific factors, such as the level of impervious area, the density and ages of buildings, and type of land use will determine the level of investigation necessary. Encouraging reporting of illicit discharges by employees can offset costs by saving expense on inspectors and directing resources more efficiently. Some programs have used funds available from "environmental fees" or special assessment districts to fund their illicit connection elimination programs.

Maintenance

- Two-person teams may be required to clean catch basins with vactor trucks.

- Identifying illicit discharges requires teams of at least two people (volunteers can be used), plus administrative personnel, depending on the complexity of the storm sewer system.

- Arrangements must be made for proper disposal of collected wastes.

- Requires technical staff to detect and investigate illegal dumping violations, and to coordinate public education.

Supplemental Information

Further Detail of the BMP

Storm Drain flushing

Sanitary sewer flushing is a common maintenance activity used to improve pipe hydraulics and to remove pollutants in sanitary sewer systems. The same principles that make sanitary sewer flushing effective can be used to flush storm drains. Flushing may be designed to hydraulically convey accumulated material to strategic locations, such as to an open channel, to another point where flushing will be initiated, or over to the sanitary sewer and on to the treatment facilities, thus preventing re-suspension and overflow of a portion of the solids during storm events. Flushing prevents "plug flow" discharges of concentrated pollutant loadings and sediments. The deposits can hinder the designed conveyance capacity of the storm drain system and potentially cause backwater conditions in severe cases of clogging.

Storm drain flushing usually takes place along segments of pipe with grades that are too flat to maintain adequate velocity to keep particles in suspension. An upstream manhole is selected to place an inflatable device that temporarily plugs the pipe. Further upstream, water is pumped into the line to create a flushing wave. When the upstream reach of pipe is sufficiently full to

cause a flushing wave, the inflated device is rapidly deflated with the assistance of a vacuum pump, releasing the backed up water and resulting in the cleaning of the storm drain segment.

To further reduce the impacts of stormwater pollution, a second inflatable device, placed well downstream, may be used to re-collect the water after the force of the flushing wave has dissipated. A pump may then be used to transfer the water and accumulated material to the sanitary sewer for treatment. In some cases, an interceptor structure may be more practical or required to re-collect the flushed waters.

It has been found that cleansing efficiency of periodic flush waves is dependent upon flush volume, flush discharge rate, sewer slope, sewer length, sewer flow rate, sewer diameter, and population density. As a rule of thumb, the length of line to be flushed should not exceed 700 feet. At this maximum recommended length, the percent removal efficiency ranges between 65-75 percent for organics and 55-65 percent for dry weather grit/inorganic material. The percent removal efficiency drops rapidly beyond that. Water is commonly supplied by a water truck, but fire hydrants can also supply water. To make the best use of water, it is recommended that reclaimed water be used or that fire hydrant line flushing coincide with storm drain flushing.

Flow Management

Flow management has been one of the principal motivations for designing urban stream corridors in the past. Such needs may or may not be compatible with the stormwater quality goals in the stream corridor.

Downstream flood peaks can be suppressed by reducing through flow velocity. This can be accomplished by reducing gradient with grade control structures or increasing roughness with boulders, dense vegetation, or complex banks forms. Reducing velocity correspondingly increases flood height, so all such measures have a natural association with floodplain open space. Flood elevations laterally adjacent to the stream can be lowered by increasing through flow velocity.

However, increasing velocity increases flooding downstream and inherently conflicts with channel stability and human safety. Where topography permits, another way to lower flood elevation is to lower the level of the floodway with drop structures into a large but subtly excavated bowl where flood flows we allowed to spread out.

Stream Corridor Planning

Urban streams receive and convey stormwater flows from developed or developing watersheds. Planning of stream corridors thus interacts with urban stormwater management programs. If local programs are intended to control or protect downstream environments by managing flows delivered to the channels, then it is logical that such programs should be supplemented by management of the materials, forms, and uses of the downstream riparian corridor. Any proposal for steam alteration or management should be investigated for its potential flow and stability effects on upstream, downstream, and laterally adjacent areas. The timing and rate of flow from various tributaries can combine in complex ways to alter flood hazards. Each section of channel is unique, influenced by its own distribution of roughness elements, management activities, and stream responses.

Flexibility to adapt to stream features and behaviors as they evolve must be included in stream reclamation planning. The amenity and ecology of streams may be enhanced through the landscape design options of 1) corridor reservation, 2) bank treatment, 3) geomorphic restoration, and 4) grade control.

Corridor reservation - Reserving stream corridors and valleys to accommodate natural stream meandering, aggradation, degradation, and over bank flows allows streams to find their own form and generate less ongoing erosion. In California, open stream corridors in recent urban developments have produced recreational open space, irrigation of streamside plantings, and the aesthetic amenity of flowing water.

Bank treatment - The use of armoring, vegetative cover, and flow deflection may be used to influence a channel's form, stability, and biotic habitat. To prevent bank erosion, armoring can be done with rigid construction materials, such as concrete, masonry, wood planks and logs, riprap, and gabions. Concrete linings have been criticized because of their lack of provision of biotic habitat. In contrast, riprap and gabions make relatively porous and flexible linings. Boulders, placed in the bed reduce velocity and erosive power.

Riparian vegetation can stabilize the banks of streams that are at or near a condition of equilibrium. Binding networks of roots increase bank shear strength. During flood flows, resilient vegetation is forced into erosion-inhibiting mats. The roughness of vegetation leads to lower velocity, further reducing erosive effects. Structural flow deflection can protect banks from erosion or alter fish habitat. By concentrating flow, a deflector causes a pool to be scoured in the bed.

Geomorphic restoration – Restoration refers to alteration of disturbed streams so their form and behavior emulate those of undisturbed streams. Natural meanders are retained, with grading to gentle slopes on the inside of curves to allow point bars and riffle-pool sequences to develop. Trees are retained to provide scenic quality, biotic productivity, and roots for bank stabilization, supplemented by plantings where necessary.

A restorative approach can be successful where the stream is already approaching equilibrium. However, if upstream urbanization continues new flow regimes will be generated that could disrupt the equilibrium of the treated system.

Grade Control - A grade control structure is a level shelf of a permanent material, such as stone, masonry, or concrete, over which stream water flows. A grade control structure is called a sill, weir, or drop structure, depending on the relation of its invert elevation to upstream and downstream channels.

A sill is installed at the preexisting channel bed elevation to prevent upstream migration of nick points. It establishes a firm base level below which the upstream channel can not erode.

A weir or check dam is installed with invert above the preexisting bed elevation. A weir raises the local base level of the stream and causes aggradation upstream. The gradient, velocity, and erosive potential of the stream channel are reduced. A drop structure lowers the downstream invert below its preexisting elevation, reducing downstream gradient and velocity. Weirs and drop structure control erosion by dissipating energy and reducing slope velocity.

When carefully applied, grade control structures can be highly versatile in establishing human and environmental benefits in stabilized channels. To be successful, application of grade control structures should be guided by analysis of the stream system both upstream and downstream from the area to he reclaimed.

Examples

The California Department of Water Resources began the Urban Stream Restoration Program in 1985. The program provides grant funds to municipalities and community groups to implement stream restoration projects. The projects reduce damages from streambank aid watershed instability arid floods while restoring streams' aesthetic, recreational, and fish and wildlife values.

In Buena Vista Park, upper floodway slopes are gentle and grassed to achieve continuity of usable park land across the channel of small boulders at the base of the slopes.

The San Diego River is a large, vegetative lined channel, which was planted in a variety of species to support riparian wildlife while stabilizing the steep banks of the floodway.

References and Resources

Ferguson, B.K. 1991. Urban Stream Reclamation, p. 324-322, Journal of Soil and Water Conservation.

Los Angeles County Stormwater Quality. Public Agency Activities Model Program. On-line: http://ladpw.org/wmd/npdes/public_TC.cfm

Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities. Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, Central Coast Regional Water Quality Control Board. July. 1998.

Orange County Stormwater Program
http://www.ocwatersheds.com/StormWater/swp_introduction.asp

Santa Clara Valley Urban Runoff Pollution Prevention Program. 1997 Urban Runoff Management Plan. September 1997, updated October 2000.

San Diego Stormwater Co-permittees Jurisdictional Urban Runoff Management Program (URMP) Municipal Activities Model Program Guidance. 2001. Project Clean Water. November.

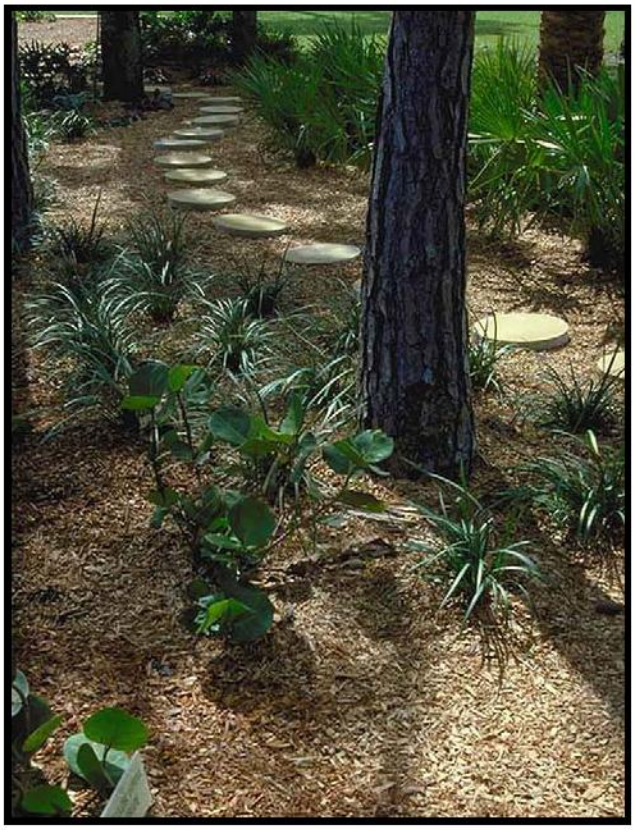
United States Environmental Protection Agency (USEPA). 1999. Stormwater Management Fact Sheet Non-stormwater Discharges to Storm Sewers. EPA 832-F-99-022. Office of Water, Washington, D.C. September.

United States Environmental Protection Agency (USEPA). 1999. Stormwater O&M Fact Sheet Catch Basin Cleaning. EPA 832-F-99-011. Office of Water, Washington, D.C. September.

United States Environmental Protection Agency (USEPA). 2002. Pollution Prevention/Good Housekeeping for Municipal Operations Illegal Dumping Control. On line: http://www.epa.gov/npdes/menuofbmps/poll_7.htm

United States Environmental Protection Agency (USEPA). 2002. Pollution Prevention/Good Housekeeping for Municipal Operations Storm Drain System Cleaning. On line: http://www.epa.gov/npdes/menuofbmps/poll_16.htm

Site Design & Landscape Planning SD-10



Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- ☑ Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Each project site possesses unique topographic, hydrologic, and vegetative features, some of which are more suitable for development than others. Integrating and incorporating appropriate landscape planning methodologies into the project design is the most effective action that can be done to minimize surface and groundwater contamination from stormwater.

Approach

Landscape planning should couple consideration of land suitability for urban uses with consideration of community goals and projected growth. Project plan designs should conserve natural areas to the extent possible, maximize natural water storage and infiltration opportunities, and protect slopes and channels.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment.

Design Considerations

Design requirements for site design and landscapes planning should conform to applicable standards and specifications of agencies with jurisdiction and be consistent with applicable General Plan and Local Area Plan policies.

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION

Designing New Installations

Begin the development of a plan for the landscape unit with attention to the following general principles:

- Formulate the plan on the basis of clearly articulated community goals. Carefully identify conflicts and choices between retaining and protecting desired resources and community growth.
- Map and assess land suitability for urban uses. Include the following landscape features in the assessment: wooded land, open unwooded land, steep slopes, erosion-prone soils, foundation suitability, soil suitability for waste disposal, aquifers, aquifer recharge areas, wetlands, floodplains, surface waters, agricultural lands, and various categories of urban land use. When appropriate, the assessment can highlight outstanding local or regional resources that the community determines should be protected (e.g., a scenic area, recreational area, threatened species habitat, farmland, fish run). Mapping and assessment should recognize not only these resources but also additional areas needed for their sustenance.

Project plan designs should conserve natural areas to the extent possible, maximize natural water storage and infiltration opportunities, and protect slopes and channels.

Conserve Natural Areas during Landscape Planning

If applicable, the following items are required and must be implemented in the site layout during the subdivision design and approval process, consistent with applicable General Plan and Local Area Plan policies:

- Cluster development on least-sensitive portions of a site while leaving the remaining land in a natural undisturbed condition.
- Limit clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection.
- Maximize trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants.
- Promote natural vegetation by using parking lot islands and other landscaped areas.
- Preserve riparian areas and wetlands.

Maximize Natural Water Storage and Infiltration Opportunities Within the Landscape Unit

- Promote the conservation of forest cover. Building on land that is already deforested affects basin hydrology to a lesser extent than converting forested land. Loss of forest cover reduces interception storage, detention in the organic forest floor layer, and water losses by evapotranspiration, resulting in large peak runoff increases and either their negative effects or the expense of countering them with structural solutions.
- Maintain natural storage reservoirs and drainage corridors, including depressions, areas of permeable soils, swales, and intermittent streams. Develop and implement policies and

regulations to discourage the clearing, filling, and channelization of these features. Utilize them in drainage networks in preference to pipes, culverts, and engineered ditches.

- Evaluating infiltration opportunities by referring to the stormwater management manual for the jurisdiction and pay particular attention to the selection criteria for avoiding groundwater contamination, poor soils, and hydrogeological conditions that cause these facilities to fail. If necessary, locate developments with large amounts of impervious surfaces or a potential to produce relatively contaminated runoff away from groundwater recharge areas.

Protection of Slopes and Channels during Landscape Design

- Convey runoff safely from the tops of slopes.
- Avoid disturbing steep or unstable slopes.
- Avoid disturbing natural channels.
- Stabilize disturbed slopes as quickly as possible.
- Vegetate slopes with native or drought tolerant vegetation.
- Control and treat flows in landscaping and/or other controls prior to reaching existing natural drainage systems.
- Stabilize temporary and permanent channel crossings as quickly as possible, and ensure that increases in run-off velocity and frequency caused by the project do not erode the channel.
- Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion. Energy dissipaters shall be installed in such a way as to minimize impacts to receiving waters.
- Line on-site conveyance channels where appropriate, to reduce erosion caused by increased flow velocity due to increases in tributary impervious area. The first choice for linings should be grass or some other vegetative surface, since these materials not only reduce runoff velocities, but also provide water quality benefits from filtration and infiltration. If velocities in the channel are high enough to erode grass or other vegetative linings, riprap, concrete, soil cement, or geo-grid stabilization are other alternatives.
- Consider other design principles that are comparable and equally effective.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Redevelopment may present significant opportunity to add features which had not previously been implemented. Examples include incorporation of depressions, areas of permeable soils, and swales in newly redeveloped areas. While some site constraints may exist due to the status of already existing infrastructure, opportunities should not be missed to maximize infiltration, slow runoff, reduce impervious areas, disconnect directly connected impervious areas.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Stormwater Management Manual for Western Washington, Washington State Department of Ecology, August 2001.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Efficient Irrigation SD-12



Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Irrigation water provided to landscaped areas may result in excess irrigation water being conveyed into stormwater drainage systems.

Approach

Project plan designs for development and redevelopment should include application methods of irrigation water that minimize runoff of excess irrigation water into the stormwater conveyance system.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

Design Considerations

Designing New Installations

The following methods to reduce excessive irrigation runoff should be considered, and incorporated and implemented where determined applicable and feasible by the Permittee:

- Employ rain-triggered shutoff devices to prevent irrigation after precipitation.
- Design irrigation systems to each landscape area's specific water requirements.
- Include design featuring flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines.
- Implement landscape plans consistent with County or City water conservation resolutions, which may include provision of water sensors, programmable irrigation times (for short cycles), etc.

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION

- Design timing and application methods of irrigation water to minimize the runoff of excess irrigation water into the storm water drainage system.
- Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration. Choose plants with low irrigation requirements (for example, native or drought tolerant species). Consider design features such as:
  - Using mulches (such as wood chips or bar) in planter areas without ground cover to minimize sediment in runoff
  - Installing appropriate plant materials for the location, in accordance with amount of sunlight and climate, and use native plant materials where possible and/or as recommended by the landscape architect
  - Leaving a vegetative barrier along the property boundary and interior watercourses, to act as a pollutant filter, where appropriate and feasible
  - Choosing plants that minimize or eliminate the use of fertilizer or pesticides to sustain growth
- Employ other comparable, equally effective methods to reduce irrigation water runoff.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Storm Drain Signage SD-13



Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- ☑ Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Waste materials dumped into storm drain inlets can have severe impacts on receiving and ground waters. Posting notices regarding discharge prohibitions at storm drain inlets can prevent waste dumping. Storm drain signs and stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets.

Approach

The stencil or affixed sign contains a brief statement that prohibits dumping of improper materials into the urban runoff conveyance system. Storm drain messages have become a popular method of alerting the public about the effects of and the prohibitions against waste disposal.

Suitable Applications

Stencils and signs alert the public to the destination of pollutants discharged to the storm drain. Signs are appropriate in residential, commercial, and industrial areas, as well as any other area where contributions or dumping to storm drains is likely.

Design Considerations

Storm drain message markers or placards are recommended at all storm drain inlets within the boundary of a development project. The marker should be placed in clear sight facing toward anyone approaching the inlet from either side. All storm drain inlet locations should be identified on the development site map.

Designing New Installations

The following methods should be considered for inclusion in the project design and show on project plans:

- Provide stenciling or labeling of all storm drain inlets and catch basins, constructed or modified, within the project area with prohibitive language. Examples include "NO DUMPING

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION

– DRAINS TO OCEAN" and/or other graphical icons to discourage illegal dumping.

- Post signs with prohibitive language and/or graphical icons, which prohibit illegal dumping at public access points along channels and creeks within the project area.

Note - Some local agencies have approved specific signage and/or storm drain message placards for use. Consult local agency stormwater staff to determine specific requirements for placard types and methods of application.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. If the project meets the definition of "redevelopment", then the requirements stated under " designing new installations" above should be included in all project design plans.

Additional Information

Maintenance Considerations

- Legibility of markers and signs should be maintained. If required by the agency with jurisdiction over the project, the owner/operator or homeowner's association should enter into a maintenance agreement with the agency or record a deed restriction upon the property title to maintain the legibility of placards or signs.

Placement

- Signage on top of curbs tends to weather and fade.

- Signage on face of curbs tends to be worn by contact with vehicle tires and sweeper brooms.

Supplemental Information

Examples

- Most MS4 programs have storm drain signage programs. Some MS4 programs will provide stencils, or arrange for volunteers to stencil storm drains as part of their outreach program.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Trash Storage Areas SD-32

Description

Trash storage areas are areas where a trash receptacle (s) are located for use as a repository for solid wastes. Stormwater runoff from areas where trash is stored or disposed of can be polluted. In addition, loose trash and debris can be easily transported by water or wind into nearby storm drain inlets, channels, and/or creeks. Waste handling operations that may be sources of stormwater pollution include dumpsters, litter control, and waste piles.

Approach

This fact sheet contains details on the specific measures required to prevent or reduce pollutants in stormwater runoff associated with trash storage and handling. Preventative measures including enclosures, containment structures, and impervious pavements to mitigate spills, should be used to reduce the likelihood of contamination.

Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- Collect and Convey

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

Design Considerations

Design requirements for waste handling areas are governed by Building and Fire Codes, and by current local agency ordinances and zoning requirements. The design criteria described in this fact sheet are meant to enhance and be consistent with these code and ordinance requirements. Hazardous waste should be handled in accordance with legal requirements established in Title 22, California Code of Regulation.

Wastes from commercial and industrial sites are typically hauled by either public or commercial carriers that may have design or access requirements for waste storage areas. The design criteria in this fact sheet are recommendations and are not intended to be in conflict with requirements established by the waste hauler. The waste hauler should be contacted prior to the design of your site trash collection areas. Conflicts or issues should be discussed with the local agency.

Designing New Installations

Trash storage areas should be designed to consider the following structural or treatment control BMPs:

- Design trash container areas so that drainage from adjoining roofs and pavement is diverted around the area(s) to avoid run-on. This might include berming or grading the waste handling area to prevent run-on of stormwater.
- Make sure trash container areas are screened or walled to prevent off-site transport of trash.

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION

- Use lined bins or dumpsters to reduce leaking of liquid waste.
- Provide roofs, awnings, or attached lids on all trash containers to minimize direct precipitation and prevent rainfall from entering containers.
- Pave trash storage areas with an impervious surface to mitigate spills.
- Do not locate storm drains in immediate vicinity of the trash storage area.
- Post signs on all dumpsters informing users that hazardous materials are not to be disposed of therein.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Additional Information

Maintenance Considerations

The integrity of structural elements that are subject to damage (i.e., screens, covers, and signs) must be maintained by the owner/operator. Maintenance agreements between the local agency and the owner/operator may be required. Some agencies will require maintenance deed restrictions to be recorded of the property title. If required by the local agency, maintenance agreements or deed restrictions must be executed by the owner/operator before improvement plans are approved.

Other Resources

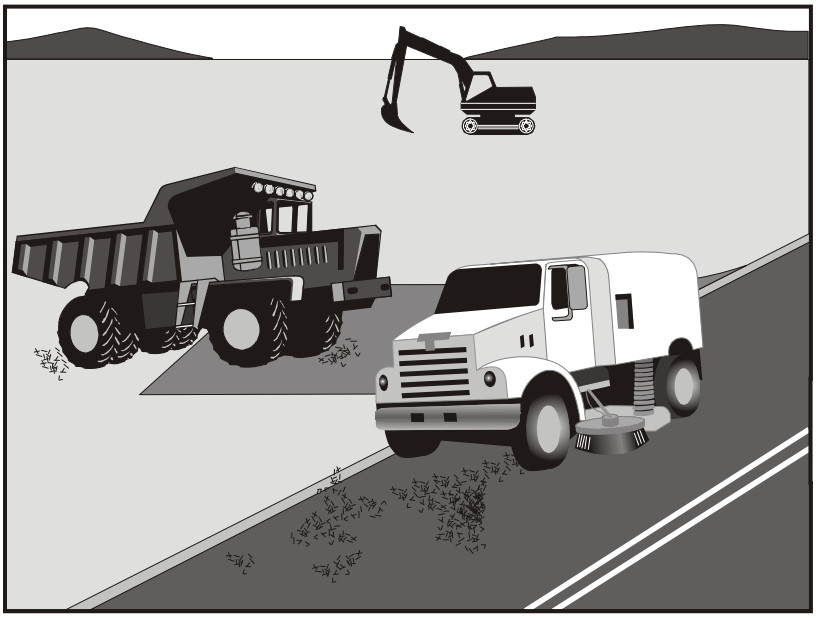
A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Street Sweeping and Vacuuming SE-7



Categories

EC	Erosion Control	
SE	Sediment Control	☒
TC	Tracking Control	☑
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:
☑ **Primary Objective**
☒ **Secondary Objective**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	☑
Metals	
Bacteria	
Oil and Grease	☑
Organics	

Potential Alternatives

None

Description and Purpose

Street sweeping and vacuuming includes use of self-propelled and walk-behind equipment to remove sediment from streets and roadways, and to clean paved surfaces in preparation for final paving. Sweeping and vacuuming prevents sediment from the project site from entering storm drains or receiving waters.

Suitable Applications

Sweeping and vacuuming are suitable anywhere sediment is tracked from the project site onto public or private paved streets and roads, typically at points of egress. Sweeping and vacuuming are also applicable during preparation of paved surfaces for final paving.

Limitations

Sweeping and vacuuming may not be effective when sediment is wet or when tracked soil is caked (caked soil may need to be scraped loose).

Implementation

- Controlling the number of points where vehicles can leave the site will allow sweeping and vacuuming efforts to be focused, and perhaps save money.
- Inspect potential sediment tracking locations daily.
- Visible sediment tracking should be swept or vacuumed on a daily basis.
- Do not use kick brooms or sweeper attachments. These tend to spread the dirt rather than remove it.

- If not mixed with debris or trash, consider incorporating the removed sediment back into the project

Costs

Rental rates for self-propelled sweepers vary depending on hopper size and duration of rental. Expect rental rates from $58/hour (3 yd^3 hopper) to $88/hour (9 yd^3 hopper), plus operator costs. Hourly production rates vary with the amount of area to be swept and amount of sediment. Match the hopper size to the area and expect sediment load to minimize time spent dumping.

Inspection and Maintenance

- Inspect BMPs prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season.
- When actively in use, points of ingress and egress must be inspected daily.
- When tracked or spilled sediment is observed outside the construction limits, it must be removed at least daily. More frequent removal, even continuous removal, may be required in some jurisdictions.
- Be careful not to sweep up any unknown substance or any object that may be potentially hazardous.
- Adjust brooms frequently; maximize efficiency of sweeping operations.
- After sweeping is finished, properly dispose of sweeper wastes at an approved dumpsite.

References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Labor Surcharge and Equipment Rental Rates, State of California Department of Transportation (Caltrans), April 1, 2002 – March 31, 2003.

APPENDIX C

WQMP AGREEMENT

APPENDIX D

BMP OPERATION AND MAINTENANCE

Retention Basin Diversion and Pretreatment Manhole: Operation and Maintenance

Maintenance Required

Trash, debris and sediment must be removed and disposed of per local jurisdiction requirements. The sump manhole shall be cleaned of all debris, silt and trash when the capacity has reached 75% of the total depth to maintain clear flow from inlet and outlet pipe.

Frequency

The diversion structure should be inspected at regular intervals (twice a year minimum) and maintained when necessary to ensure optimum performance. In addition, inspection and maintenance is required after every rain event greater than 0.5 inches.

Record Keeping

Records of inspection shall be maintained for a minimum of 5 years. At minimum, these records shall document:

- Inspection Date
- Depth of Sediment/ Trash/ Debris
- Type of Maintenance Performed
- Maintenance Personnel
- Comments

Introduction

Prinsco's underground retention/detention systems provide a solution to effectively manage and store stormwater runoff utilizing a series of pipes and fittings. As the stormwater moves through the retention/ detention systems, sediment and debris will tend to settle out of the water and collect within the system. This will require the system to be regularly inspected and cleaned in order for the system to perform as originally designed. Designing a system that is conducive to regular maintenance will allow the system to function efficiently and extend the service life.

System Accessories

A good maintenance program is just as important as proper design and installation. There are several components that can be incorporated into a system that are conducive to regular maintenance. These components may be used exclusively or in tandem to allow for ease of maintenance.

Risers –Risers are placed within a retention/detention system to provide manned access to key parts of the systems. Risers are typically 24" diameter or larger and are located on the laterals adjacent to the manifolds.

Cleanouts – Cleanouts are typically placed on the manifolds. Common sizes for cleanouts are 6- or 8-in diameter pipe. Cleanouts provide an access point for vacuum or water-jetting hoses used to clean the retention/detention system.

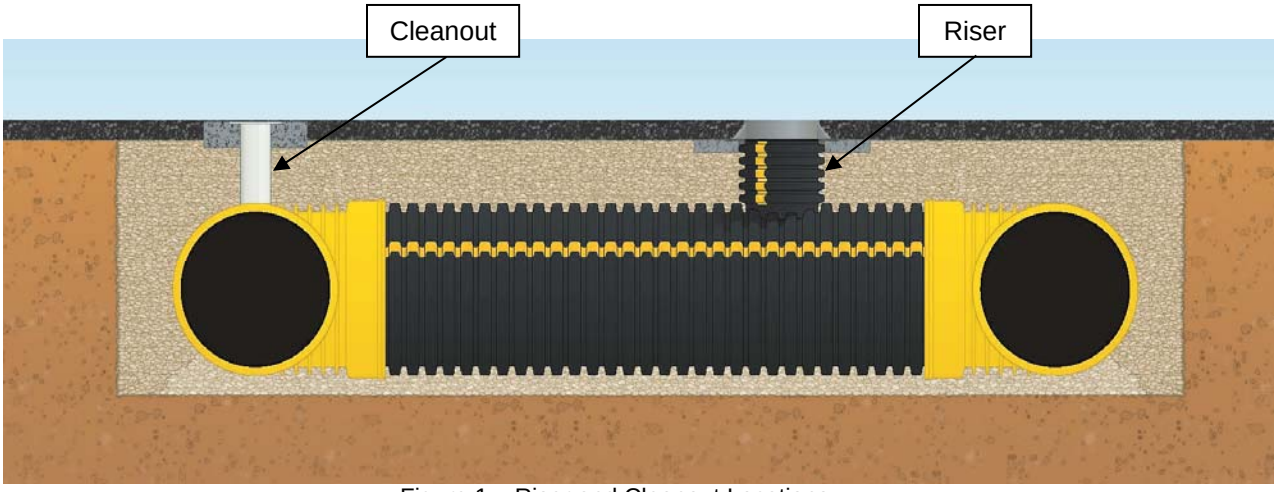


Figure 1 – Riser and Cleanout Locations

Pre-Treatment Device - The use of a pre-treatment unit is recommended for all retention or detention systems. A pre-treatment unit is designed to capture a majority of the sediment and debris before it is able to enter the retention/detention system. This will reduce the maintenance and cleaning requirements of the systems and also reduce pollutants from reaching nearby waterways.

Prinsco's Stormwater Quality Unit (SWQU) is designed to remove debris collected in runoff including trash, sediment, oils and other suspended solids. Prinsco's SWQU is a cost-effective alternative to other units and removes 80 percent of total suspended solids, oil and grease.

1717 16th St NE | Willmar, MN 56201 | 800.992.1725 | www.prinsco.com
© Prinsco, Inc. 12/13

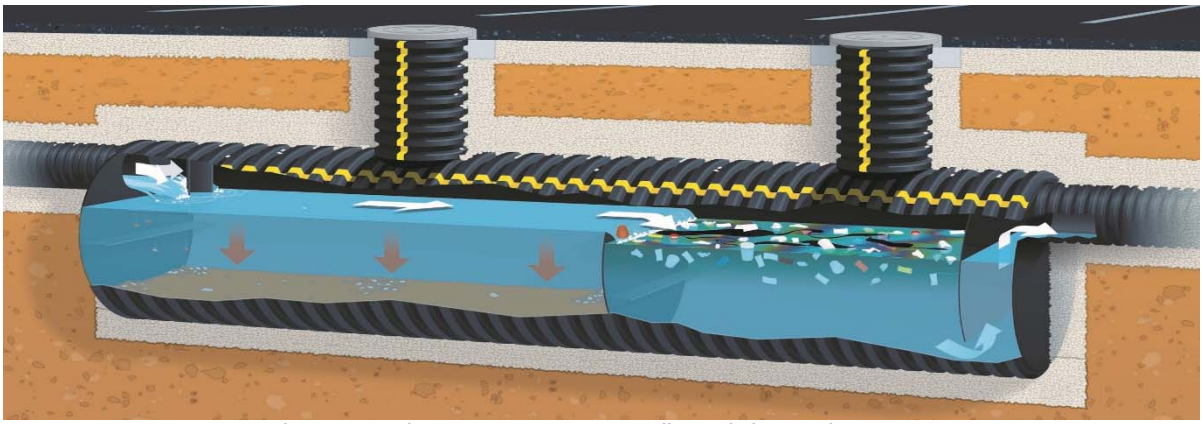


Figure 2 – Prinsco's Stormwater Quality Unit (SWQU)

Retention/Detention System Maintenance

Maintaining a clean and obstruction-free retention/detention system is essential to ensuring the system performs as designed. Buildup of debris can obstruct flow through the laterals or block the entranceway of the outlet pipe in a retention or detention system. This may result in ineffective operation or complete failure of the system. Additionally, surrounding areas may potentially run the risk of damage due to flooding or other similar issues.

Initial System Inspection

An initial inspection should be performed before the retention/detention system is put into operation. It is best to create an Inspection and Maintenance log sheet at this time. An example of an Inspection and Maintenance log sheet can be found at the end of this tech note (Figure 4). Included with the log sheet should be a layout of the system with the invert elevations at all the riser and cleanout locations, prior to sediment accumulation. Initial measurements can be taken with a large stick or piece of string with a flat weight on the end. These measurements will allow for inspection measurements to being taken from outside of the system, eliminating the need for manned entrance.

Inspection Frequency

Inspection frequency will vary based on the system design and requirements. A system inspection schedule should be developed for each individual system, with the industry standard being a minimum of once per year. After the inspection schedule is established for the system, it should be tracked on the Inspection and Maintenance log sheet.

During the first year of operation, more frequent inspections should be done, due to construction activities. Construction sediment and debris loading can be minimized if the Stormwater Pollution Prevention Plan (SWPPP) plan for the construction site is followed. After the first year of operation the rate at which the retention or detention system collects soil/pollutants will be heavily dependent on the site activities. During winter months, in geographical areas where sand is applied to road surface, systems may see increased sediment loading. Other increased loading areas are present with vehicle or equipment wash-down areas.

During inspections, elevations of sediment height should be taken from each riser and cleanout. These elevations should be recorded on the Inspection and Maintenance log sheet. Also during the inspection, personnel should be looking for blockages to inlet or outlet stubs. Inspection of the pre-treatment unit upstream of the system should always be inspected at this same time. Refer to the manufacturer's recommendations for inspecting and maintaining the pre-treatment unit.

1717 16th St NE | Willmar, MN 56201 | 800.992.1725 | www.prinsco.com
© Prinsco, Inc. 12/13

Maintenance Frequency

Cleaning frequency will vary for each system based on the system design. It is at the sole discretion of the inspector to determine if or when the system will require cleaning. The following are recommendations of when the system should be cleaned:

- If the system is experiencing an unusual amount of silt and soil build up, the pre-treatment device should be investigated and or cleaned.
- When the outlet stub becomes blocked or flow is impeded with sediment or debris.
- If the system does not drain to the lowest pipe elevation during dry conditions.
- If the system reaches a sediment height between 10 and 20 percent of the pipe diameter, the inspector should consider cleaning.
- If the system reaches a sediment height greater than 20 percent of the pipe diameter, the system should be clean at the soonest opportunity.

System Cleaning

There are typically two ways that a system is cleaned. The first, and most common method is done by using a high pressure water jet and a vacuum truck. The high pressure nozzle with rear facing jets is attached to a hose and drug downstream, washing sediment and debris downstream with it. The vacuum truck would then be located on the downstream end and remove the sediment and debris with its vacuum hose. It should be noted that multiple passes of the water jet may be needed to clean the run, dependent on the amount of soil loading. The second method used is a manual method that is very labor intensive. This method should only be used with larger diameter retention or detention systems. Care needs to be taken to insure damage to the inside liner of the pipe does not occur when removing sediment and debris. Strategically placed risers and cleanouts will make this process as easy as possible.



Figure 3 – Vacuum Truck Removing Sediment and Debris

Before the system is cleaned, the following considerations should be made:

1. The system will be much easier to clean when there is little to no flow into the system and the system does not have any standing water. For this reason, system cleaning should be scheduled around dry weather.
2. Before cleaning begins, all outlet stubs should be blocked off. If this is not done, sediment loading could back up or plug downstream pipelines adding to cleaning expenses. This is also done to prevent any of the debris or pollutants from washing into downstream waterways.
3. When beginning the cleaning process all upstream pipelines and pre-treatment units should be cleaned prior to starting on the retention or detention system.
4. When cleaning the retention or detention system, it is best to start at the highest elevation of the system and work towards the lowest elevation.
5. Stationing the vacuum truck above the downstream manifold and jetting the debris from the laterals to the downstream manifold, provides an effective capture point for the vacuum line.

Safety

Before entering a retention or detention system, ensure all OSHA and local safety regulations are being followed. Only personnel with appropriate confined space permits and personal protective equipment should be allowed to enter the system.

1717 16th St NE | Willmar, MN 56201 | 800.992.1725 | www.prinsco.com
© Prinsco, Inc. 12/13

Inspection & Maintenance Log Sheet									
Type of System: HS180 Chambers with SWQU & Sediment Row					**Location**: Minneapolis, MN				
Notes/Comments: Contact owner when sediment level reaches 8" (200 mm) or outlet stub is restricted. Scheduled cleaning should be done through JJ's JET/VAC									
Ports / Cleanouts / Manholes		Point 1	Point 2	Point 3	Point 4	Point 5	Point 6	Point 7	Point 8
Initial Inspection	Invert Depth	84" (2100 mm)	84" (2100 mm)	86" (2150 mm)	87" (2175 mm)	88" (2200 mm)	89" (2225 mm)	90" (2250 mm)	91" (2275 mm)
Date: 3/10/13	Sediment Depth	----	----	----	----	----	----	----	----
	Inspector Name:	Inspector 1		Maintenance Performed/Notes:					
Date: 8/10/13	Depth to Sediment	81" (2025 mm)	81" (2025 mm)	81" (2025 mm)	82" (2050 mm)	84" (2100 mm)	84" (2100 mm)	85" (2125 mm)	85" (2125 mm)
	Sediment Depth	3" (75 mm)	3" (75 mm)	5" (125 mm)	5" (125 mm)	4" (100 mm)	5" (125 mm)	5" (125 mm)	6" (150 mm)
	Inspector Name:	Inspector 2		Maintenance Performed/Notes:		excess amounts of sediment, upon further inspection pre-treatment unit was full			
Date:	Depth to Sediment								
	Sediment Depth								
	Inspector Name:			Maintenance Performed/Notes:					
Date:	Depth to Sediment								
	Sediment Depth								
	Inspector Name:			Maintenance Performed/Notes:					

Figure 4 – Example of an Inspection and Maintenance Log Sheet

1717 16th St NE | Willmar, MN 56201 | 800.992.1725 | www.prinsco.com
© Prinsco, Inc. 12/13

APPENDIX E

GEOTECHNICAL REPORT

GEOTECHNICAL INVESTIGATION

PROPOSED INDUSTRIAL DEVELOPMENT
NWC OF LOCUST AVENUE AND LOWELL STREET
RIALTO, CALIFORNIA

GEOCON
WEST, INC.

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

BEST CALIFORNIA GAS, LTD
SANTA FE SPRINGS, CALIFORNIA

PROJECT NO. W1393-99-01

AUGUST 31, 2021

Project No. W1393-99-01
August 31, 2021

Best California Gas, Ltd
13116 Imperial Highway
Santa Fe Springs, California 90670

Attention: Ms. Jaime Jones

Subject: GEOTECHNICAL INVESTIGATION
PROPOSED INDUSTRIAL DEVELOPMENT
NWC OF LOCUST AVENUE AND LOWELL STREET
RIALTO, CALIFORNIA

Dear Ms. Jones:

In accordance with your authorization of our proposal dated May 3, 2021, we have prepared this geotechnical investigation report for the proposed industrial development located at the northwest corner of Locust Avenue and Lowell Street in the City of Rialto, California. The accompanying report presents the findings of our study and our conclusions and recommendations pertaining to the geotechnical aspects of proposed design and construction. Based on the results of our investigation, it is our opinion that the site can be developed as proposed, provided the recommendations of this report are followed and implemented during design and construction.

If you have any questions regarding this report, or if we may be of further service, please contact the undersigned.

Very truly yours,

GEOCON WEST, INC.

REGISTERED PROFESSIONAL ENGINEER
PETRINA ZEN
C87489
CIVIL
STATE OF CALIFORNIA

PROFESSIONAL GEOLOGIST
GERALD KASMAN
NO. 2251
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
JELISA THOMAS ADAMS
GE3092
GEOTECHNICAL
STATE OF CALIFORNIA

Petrina Zen	Gerald A. Kasman	Jelisa Thomas Adams
PE 89489	CEG 2251	GE 3092

(EMAIL) Addressee

TABLE OF CONTENTS

1. PURPOSE AND SCOPE 1
2. SITE CONDITIONS & PROJECT DESCRIPTION 1
3. GEOLOGIC SETTING 2
4. GEOLOGIC MATERIALS 2
   - 4.1 Artificial Fill 2
   - 4.2 Alluvium 3
5. GROUNDWATER 3
6. GEOLOGIC HAZARDS 4
   - 6.1 Surface Fault Rupture 4
   - 6.2 Seismicity 5
   - 6.3 Seismic Design Criteria 5
   - 6.4 Liquefaction Potential 7
   - 6.5 Slope Stability 8
   - 6.6 Earthquake-Induced Flooding 8
   - 6.7 Tsunamis, Seiches and Flooding 8
   - 6.8 Oil Fields & Methane 8
   - 6.9 Subsidence 9
7. CONCLUSIONS AND RECOMMENDATIONS 10
   - 7.1 General 10
   - 7.2 Soil and Excavation Characteristics 12
   - 7.3 Minimum Resistivity, pH and Water-Soluble Sulfate 12
   - 7.4 Grading 13
   - 7.5 Shrinkage 16
   - 7.6 Foundation Design 16
   - 7.7 Foundation Settlement 17
   - 7.8 Miscellaneous Foundations 18
   - 7.9 Lateral Design 18
   - 7.10 Concrete Slabs-on-Grade 18
   - 7.11 Preliminary Pavement Recommendations 20
   - 7.12 Retaining Wall Design 22
   - 7.13 Retaining Wall Drainage 23
   - 7.14 Temporary Excavations 24
   - 7.15 Stormwater Infiltration 25
   - 7.16 Surface Drainage 26
   - 7.17 Plan Review 27

LIMITATIONS AND UNIFORMITY OF CONDITIONS

LIST OF REFERENCES

TABLE OF CONTENTS (Continued)

MAPS, TABLES, AND ILLUSTRATIONS
- Figure 1, Vicinity Map
- Figure 2, Site Plan
- Figure 3, Regional Fault Map
- Figure 4, Regional Seismicity Map
- Figures 5 and 6, Retaining Wall Drain Detail
- Figure 7, Percolation Test Results

APPENDIX A
- FIELD INVESTIGATION
- Figures A1 through A10, Boring Logs

APPENDIX B
- LABORATORY TESTING
- Figures B1 and B2, Direct Shear Test Results
- Figures B3 through B8, Consolidation Test Results
- Figure B9, Modified Compaction Test Results
- Figure B10, Corrosivity Test Results

GEOTECHNICAL INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of a geotechnical investigation for a proposed industrial development located at the northwest corner of Locust Avenue and Lowell Street in the City of Rialto, California (see Vicinity Map, Figure 1). The purpose of this investigation was to evaluate subsurface soil and geologic conditions underlying the property, and based on conditions encountered, to provide conclusions and recommendations pertaining to the geotechnical aspects of proposed design and construction.

The scope of this investigation included a site reconnaissance, field exploration, laboratory testing, engineering analysis, and the preparation of this report. The site was explored on July 22, 2021 by excavating six 8-inch diameter borings using a truck-mounted hollow stem auger drilling machine. Borings B1 and B2 had several attempts but the planned depths were not reached due to refusal on cobbles. The borings were excavated to depths between 9 and 20½ feet below existing ground surface. The approximate locations of the exploratory borings are depicted on the Site Plan (Figure 2). A detailed discussion of the field investigation, including boring logs, is presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to determine pertinent physical and chemical soil properties. Appendix B presents a summary of the laboratory test results.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions. References reviewed to prepare this report are provided in the *List of References* section.

If project details vary significantly from those described herein, Geocon should be contacted to determine the necessity for review and possible revision of this report.

2. SITE CONDITIONS & PROJECT DESCRIPTION

The subject site is located on the northwest corner of Locust Avenue and Lowell Street in the City of Rialto, California. The site consists of an approximately 4.4-acre square shaped parcel currently occupied by an unpaved lot used for equipment storage. The site is bounded by a single-story high-ceiling warehouse structure to the north, by W. Lowell Street to the south, by N. Locust Avenue to the east, and by a 2-story office building, a 1-story warehouse, and a parking lot to the west. The site is relatively level, with no pronounced highs or lows. Surface water drainage at the site appears to be by sheet flow along the existing contours with no discernable pattern. Vegetation is nonexistent.

Based on the preliminary information provided to us by the client, it is our understanding that the proposed project will consist of an approximately 95,850 square foot industrial building. The structure will be constructed at or near present site grade. Other site improvements will consist of paving and driveways.

Based on the preliminary nature of the design at this time, wall and column loads were not available. It is anticipated that column loads for the proposed structure will be up to 300 kips, and wall loads are estimated to be up to 3 kips per linear foot.

Once the design phase and foundation loading configuration proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Any changes in the design, location or elevation of any structure, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

3. GEOLOGIC SETTING

The site is located in the Rialto-Colton basin, which underlies a portion of the upper Santa Ana Valley in southwestern San Bernardino County and northwestern Riverside County. The Rialto-Colton basin is bounded by the San Gabriel Mountains to the north, the San Jacinto Fault to the east, the Box Spring Mountains on the south, and the Rialto-Colton Fault to the west. Lytle Creek drains this part of the valley southeastward to its confluence with the Santa Ana River in the southern part of the basin. The alluvial deposits within the Rialto-Colton Basin are primarily composed of cobbles, gravel, sand, and silt derived from the nearby San Gabriel Mountains and range from Holocene age (last 11,700 years) and Pleistocene age (11,700 to 2 million years). Holocene age deposits are found beneath the current courses of the Lytle and Cajon Creeks and the Santa Ana River.

4. GEOLOGIC MATERIALS

Based on our field investigation and published geologic maps, the soils underlying the site consist of undocumented artificial fill material over Holocene age alluvial fan deposits consisting of cobbles, gravel, and sand. Detailed stratigraphic profiles are provided in the boring logs in Appendix A.

4.1 Artificial Fill

The site is partially mantled by artificial fill to a maximum depth of 4 feet below existing ground surface. The artificial fill generally consists of brown to dark brown sand to gravelly sand and is characterized as fine- to medium grained, slightly moist to moist, and medium dense. The fill is likely the result of past grading and construction activities at the site. Deeper fill may exist between excavations and in other portions of the site that were not directly explored.

4.2 Alluvium

The fill materials are underlain by unconsolidated Holocene age alluvial fan deposits. The alluvium generally consists of yellowish brown to brown well-graded gravelly sand and sandy gravel with locally abundant cobbles. The alluvium is characterized as slightly moist to moist and medium dense to dense. Although not directly observed in our borings, boulders are common in this geologic environment.

5. GROUNDWATER

A review of data provided by the U.S. Geologic Survey Current Water Data for California (USGS, 2021) indicates that several wells have historically been drilled in the site vicinity. The closest wells to the site are Well No. 001N005W27D002S and Well No. 001N005W28J002S, located approximately 0.8 miles southeast and 1 mile southeast of the site, respectively. The State well numbering system is based on the township, range, section, and tract in which the well is located. Based on a review of available monitoring data from these two wells, the depth to groundwater in July 2021 was recorded at 439.06 and 423.34 feet below the existing ground surface, respectively.

Groundwater was not encountered in our field explorations, drilled to a maximum depth of 20½ feet below the ground surface. Based on the recent groundwater levels from wells located in the site vicinity, the lack of groundwater encountered in our borings, and the depth of proposed construction, static groundwater is neither expected to be encountered during construction, nor have a detrimental effect on the project. However, groundwater seepage may be encountered during construction. It is not uncommon for groundwater levels to vary seasonally or for groundwater seepage conditions to develop where none previously existed, especially in impermeable fine-grained soils which are heavily irrigated or after seasonal rainfall. In addition, recent requirements for stormwater infiltration could result in shallower seepage conditions in the immediate site vicinity. Proper surface drainage of irrigation and precipitation will be critical for future performance of the project. Recommendations for drainage are provided in the S*urface Drainage* section of this report (see Section 7.16).

6. GEOLOGIC HAZARDS

6.1 Surface Fault Rupture

The numerous faults in Southern California include Holocene-active, pre-Holocene, and inactive faults. The criteria for these major groups are based on criteria developed by the California Geological Survey (CGS, formerly known as CDMG) for the Alquist-Priolo Earthquake Fault Zone Program (CGS, 2018a). By definition, a Holocene-active fault is one that has had surface displacement within Holocene time (about the last 11,700 years). A pre-Holocene fault has demonstrated surface displacement during Quaternary time (approximately the last 1.6 million years) but has had no known Holocene movement. Faults that have not moved in the last 1.6 million years are considered inactive.

The site is not within a state-designated Alquist-Priolo Earthquake Fault Zone (CGS, 2021a; 2021b) for surface fault rupture hazards. No Holocene-active or pre-Holocene faults with the potential for surface fault rupture are known to pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low. However, the site is located in the seismically active Southern California region and could be subjected to moderate to strong ground shaking in the event of an earthquake on one of the many active Southern California faults. The faults in the vicinity of the site are shown in Figure 3, Regional Fault Map.

The closest active fault to the site is the San Jacinto Fault Zone located approximately 1.6 miles to the east-northeast (Ziony and Jones, 1989). Other nearby active faults are the Cucamonga Fault, the San Andreas Fault Zone, and the Red Hill Fault located 2.6 miles northwest, 4.9 miles northeast, and 5.9 miles west of the site, respectively (Ziony and Jones, 1989).

Several buried thrust faults, commonly referred to as “blind" thrusts, underlie the Los Angeles Basin and the Orange County Coastal Plain, at depth. These faults are not exposed at the ground surface and are typically identified at depths greater than three kilometers. The October 1, 1987 M_w 5.9 Whittier Narrows Earthquake and the January 17, 1994 M_w 6.7 Northridge Earthquake were a result of movement on the Puente Hills Blind Thrust and the Northridge Thrust, respectively. These blind thrusts and others in the Southern California area are not exposed at the surface and do not present a potential surface fault rupture hazard. However, these buried faults are considered active features and are capable of generating future earthquakes.

6.2 Seismicity

As with all of Southern California, the site has experienced historic earthquakes from various regional faults. The seismicity of the region surrounding the site was formulated based on research of an electronic database of earthquake data. The epicenters of recorded earthquakes with magnitudes equal to or greater than 5.0 in the site vicinity are depicted on Figure 4, Regional Seismicity Map. A partial list of moderate to major magnitude earthquakes that have occurred in the Southern California area within the last 100 years is included in the following table.

LIST OF HISTORIC EARTHQUAKES

Earthquake (Oldest to Youngest)	Date of Earthquake	Magnitude	Distance to Epicenter (Miles)	Direction to Epicenter
Near Redlands	July 23, 1923	6.3	14	SE
Long Beach	March 10, 1933	6.4	49	SW
Tehachapi	July 21, 1952	7.5	108	WNW
San Fernando	February 9, 1971	6.6	59	WNW
Whittier Narrows	October 1, 1987	5.9	39	W
Sierra Madre	June 28, 1991	5.8	35	WNW
Landers	June 28, 1992	7.3	56	E
Big Bear	June 28, 1992	6.4	33	E
Northridge	January 17, 1994	6.7	64	W
Hector Mine	October 16, 1999	7.1	72	ENE
Ridgecrest	July 5, 2019	7.1	112	N

The site could be subjected to strong ground shaking in the event of an earthquake. However, this hazard is common in Southern California and the effects of ground shaking can be mitigated if the proposed structures are designed and constructed in conformance with current building codes and engineering practices.

6.3 Seismic Design Criteria

The following table summarizes the site-specific design criteria obtained from the 2019 California Building Code (CBC; Based on the 2018 International Building Code [IBC] and ASCE 7-16), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The data was calculated using the online application *Seismic Design Maps*, provided by OSHPD. The short spectral response uses a period of 0.2 second. We evaluated the Site Class based on the discussion in Section 1613.2.2 of the 2019 CBC and Table 20.3-1 of ASCE 7-16. The values presented on the following page are for the risk-targeted maximum considered earthquake (MCE_R).

2019 CBC SEISMIC DESIGN PARAMETERS

Parameter	Value	2019 CBC Reference
Site Class	D	Section 1613.2.2
MCE_R Ground Motion Spectral Response Acceleration – Class B (short), S_S	2.241g	Figure 1613.2.1(1)
MCE_R Ground Motion Spectral Response Acceleration – Class B (1 sec), S_1	0.806g	Figure 1613.2.1(2)
Site Coefficient, F_A	1	Table 1613.2.3(1)
Site Coefficient, F_V	1.7*	Table 1613.2.3(2)
Site Class Modified MCE_R Spectral Response Acceleration (short), S_{MS}	2.241g	Section 1613.2.3 (Eqn 16-36)
Site Class Modified MCE_R Spectral Response Acceleration – (1 sec), S_{M1}	1.37g*	Section 1613.2.3 (Eqn 16-37)
5% Damped Design Spectral Response Acceleration (short), S_{DS}	1.494g	Section 1613.2.4 (Eqn 16-38)
5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	0.914g*	Section 1613.2.4 (Eqn 16-39)

Note:

*Per Section 11.4.8 of ASCE/SEI 7-16, a ground motion hazard analysis shall be performed for projects for Site Class "E" sites with Ss greater than or equal to 1.0g and for Site Class "D" and "E" sites with S1 greater than 0.2g. Section 11.4.8 also provides exceptions which indicates that the ground motion hazard analysis may be waived provided the exceptions are followed. Using the code-based values presented in the table above, in lieu of a performing a ground motion hazard analysis, requires the exceptions outlined in ASCE 7-16 Section 11.4.8 be followed.

The table below presents the mapped maximum considered geometric mean (MCE_G) seismic design parameters for projects located in Seismic Design Categories of D through F in accordance with ASCE 7-16.

ASCE 7-16 PEAK GROUND ACCELERATION

Parameter	Value	ASCE 7-16 Reference
Mapped MCE_G Peak Ground Acceleration, PGA	0.919g	Figure 22-7
Site Coefficient, F_{PGA}	1.1	Table 11.8-1
Site Class Modified MCE_G Peak Ground Acceleration, PGA_M	1.011g	Section 11.8.3 (Eqn 11.8-1)

The Maximum Considered Earthquake Ground Motion (MCE) is the level of ground motion that has a 2 percent chance of exceedance in 50 years, with a statistical return period of 2,475 years. According to the 2019 California Building Code and ASCE 7-16, the MCE is to be utilized for the evaluation of liquefaction, lateral spreading, seismic settlements, and it is our understanding that the intent of the Building code is to maintain "Life Safety" during a MCE event. The Design Earthquake Ground Motion (DE) is the level of ground motion that has a 10 percent chance of exceedance in 50 years, with a statistical return period of 475 years.

Deaggregation of the MCE peak ground acceleration was performed using the USGS online Unified Hazard Tool, 2014 Conterminous U.S. Dynamic edition (v4.2.0). The result of the deaggregation analysis indicates that the predominant earthquake contributing to the MCE peak ground acceleration is characterized as a 7.44 magnitude event occurring at a hypocentral distance of 6.17 kilometers from the site.

Deaggregation was also performed for the Design Earthquake (DE) peak ground acceleration, and the result of the analysis indicates that the predominant earthquake contributing to the DE peak ground acceleration is characterized as a 7.16 magnitude occurring at a hypocentral distance of 7.95 kilometers from the site.

Conformance to the criteria in the above tables for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

6.4 Liquefaction Potential

Liquefaction is a phenomenon in which loose, saturated, relatively cohesionless soil deposits lose shear strength during strong ground motions. Primary factors controlling liquefaction include intensity and duration of ground motion, gradation characteristics of the subsurface soils, in-situ stress conditions, and the depth to groundwater. Liquefaction is typified by a loss of shear strength in the liquefied layers due to rapid increases in pore water pressure generated by earthquake accelerations.

The current standard of practice, as outlined in the "Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California" and "Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California" requires liquefaction analysis to a depth of 50 feet below the lowest portion of the proposed structure. Liquefaction typically occurs in areas where the soils below the water table are composed of poorly consolidated, fine to medium-grained, primarily sandy soil. In addition to the requisite soil conditions, the ground acceleration and duration of the earthquake must also be of a sufficient level to induce liquefaction.

According to the County of San Bernardino General Plan (2005) and the City of Rialto General Plan (2010) the site is not located in an area designated as "liquefiable". Based on the historic high groundwater levels in the site vicinity, the lack of groundwater encountered in our borings, and water depth recorded in nearby water wells in the vicinity, it is our opinion that the potential for liquefaction of the soils underlying the site is very low.

6.5 Slope Stability

The topography of the site is generally level and the topography of the vicinity gently slopes to the south. According to the County of San Bernardino General Plan (2005), the site is not located within an area identified as having a potential for slope instability. The site and surrounding vicinity is relatively level to gently sloping to the south with no pronounced slopes. There are no known landslides near the site, nor is the site in the path of any known or potential landslides. The potential for slope instability or landslides adversely affecting the proposed project is considered low.

6.6 Earthquake-Induced Flooding

Earthquake-induced flooding is inundation caused by failure of dams or other water-retaining structures due to earthquakes. A review of the County of San Bernardino General Plan (2005) indicates that the site is not located within a potential inundation area for an earthquake-induced dam failure. Therefore, the probability of earthquake-induced flooding is considered very low.

6.7 Tsunamis, Seiches and Flooding

The site is not located within a coastal area. Therefore, tsunamis, seismic sea waves, are not considered a significant hazard at the site.

Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Flooding from a seismically induced seiche is considered unlikely.

The site is not within a 100-year flood zone or a 500-year flood zone. The potential for flooding to adversely impact the site is low (City of Rialto General Plan, 2010; FEMA, 2008).

6.8 Oil Fields & Methane

Based on a review of the California Geologic Energy Management Division (CalGEM) Well Finder website, the site is not located within the boundary of a known oil field and no oil wells are located in the immediate site vicinity. However, due to the voluntary nature of record reporting by the oil well drilling companies, wells may be improperly located or not shown on the location map and undocumented wells could be encountered during construction. Any wells encountered during construction will need to be properly abandoned in accordance with the current requirements of the CalGEM.

The site is not located within the boundaries of a known oil field; therefore, the potential for the presence of methane is considered low. However, should it be determined that a methane study is required for the proposed development it is recommended that a qualified methane consultant be retained to perform the study and provide mitigation measures as necessary.

6.9 Subsidence

Subsidence occurs when a large portion of land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. Soils that are particularly subject to subsidence include those with high silt or clay content. The site is not located within an area of known ground subsidence. No large-scale extraction of groundwater, gas, oil, or geothermal energy is occurring or planned at the site. There appears to be little or no potential for ground subsidence due to withdrawal of fluid or gas at the site.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 General

7.1.1 It is our opinion that neither soil nor geologic conditions were encountered during the investigation that would preclude the construction of the proposed project provided the recommendations presented herein are followed and implemented during design and construction.

7.1.2 Up to 4 feet of existing artificial fill was encountered during site exploration. Deeper fill may exist in other areas of the site that were not directly explored. It is our opinion that the existing fill, in its present condition, is not suitable for direct support of proposed foundations or slabs. The existing fill and site soils are suitable for re-use as engineered fill provided the recommendations in the Grading section of this report are followed (see Section 7.4).

7.1.3 Based on our observations onsite and our knowledge of the geologic setting, cobbles should be anticipated during earthwork at the subject site. Additionally, boulders may be encountered in the existing fill or alluvial soils. The contractor should be prepared for difficult excavation conditions. The presence of these materials and their impact on construction methods and equipment selection should be considered by both the developer and contractor prior to construction.

7.1.4 Screening of the earth materials will likely be required to remove oversize (greater than 6 inches) rock, prior to placement and compaction. Generation of oversized material (greater than 6 inches) should be anticipated.

7.1.5 Based on these considerations, it is recommended that the upper 5 feet of existing earth materials within the building footprint area be excavated and properly compacted for foundation and slab support. Deeper excavations should be conducted as needed to remove any encountered fill or soft soils as necessary at the direction of the Geotechnical Engineer (a representative of Geocon). Proposed foundations should be underlain by a minimum of 3 feet of newly placed engineered fill. The limits of existing fill and/or soft soil removal will be verified by the Geocon representative during site grading activities. The excavation should extend laterally a minimum distance of three feet beyond the building footprint areas, including building appurtenances, or a distance equal to the depth of fill below the foundation, whichever is greater. Recommendations for earthwork are provided in the *Grading* section of this report (see Section 7.4).

7.1.6 Subsequent to the recommended grading, the proposed structure may be supported on a conventional shallow spread foundation system deriving support in newly placed engineered fill. Recommendations for the design of a conventional foundation system are provided in Section 7.6.

7.1.7 All excavations must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).

7.1.8 It is anticipated that stable excavations for the recommended grading associated with the proposed structure can be achieved with sloping measures. However, if excavations in close proximity to an adjacent property line and/or structure are required, special excavation measures may be necessary in order to maintain lateral support of offsite improvements. Excavation recommendations are provided in the *Temporary Excavations* section of this report (Section 7.14).

7.1.9 Foundations for small outlying structures, such as block walls up to 6 feet high, planter walls or trash enclosures, which will not be tied to the proposed structure, may be supported on conventional foundations bearing on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and proper compaction cannot be performed or is undesirable, foundations may derive support directly in the undisturbed alluvial soils at and below a depth of 24 inches and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative.

7.1.10 Where new paving is to be placed, it is recommended that all existing fill and soft alluvial soils be excavated and properly compacted for paving support. The client should be aware that excavation and compaction of all existing fill and soft alluvial soils in the area of new paving is not required; however, paving constructed over existing uncertified fill or unsuitable alluvial soil may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper twelve inches of subgrade soil should be scarified and properly compacted for paving support. Paving recommendations are provided in *Preliminary Pavement Recommendations* section of this report (see Section 7.11).

7.1.11 Based on the results of percolation testing performed at the site, a stormwater infiltration system is considered feasible for this project. Recommendations for infiltration are provided in the *Stormwater Infiltration* section of this report (see Section 7.15).

7.1.12 Once the design and foundation loading configuration proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. If the proposed building loads will exceed those presented herein, the potential for settlement should be reevaluated by this office.

7.1.13 Any changes in the design, location or elevation of improvements, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

7.2 Soil and Excavation Characteristics

7.2.1 The in-situ soils can be excavated with moderate effort using conventional excavation equipment. Due to the granular nature of the soils, moderate to excessive caving should be anticipated in vertical excavations, especially where granular soils are encountered. Formwork may be required to prevent caving of foundation excavations. In addition, due to the presence of cobbles and possible boulders, the contractor should be prepared for difficult excavation conditions during drilling and earthwork activities.

7.2.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable OSHA rules and regulations to maintain safety and maintain the stability of adjacent existing improvements.

7.2.3 All onsite excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load. Penetrations below this 1:1 projection will require special excavation measures such as sloping and shoring. Excavation recommendations are provided in the *Temporary Excavations* section of this report (see Section 7.14).

7.2.4 The upper 5 feet of existing site soils encountered during this investigation are primarily granular in nature and are considered to be "non-expansive". Recommendations presented herein assume that proposed foundations and slabs will derive support in these materials.

7.3 Minimum Resistivity, pH and Water-Soluble Sulfate

7.3.1 Potential of Hydrogen (pH) and resistivity testing as well as chloride content testing were performed on representative samples of soil to generally evaluate the corrosion potential to surface utilities. The tests were performed in accordance with California Test Method Nos. 643 and 422 and indicate that the soils are considered "moderately corrosive" with respect to corrosion of buried ferrous metals on site. The results are presented in Appendix B (Figure B10) and should be considered for design of underground structures.

7.3.2 Laboratory tests were performed on representative samples of the site soils to measure the percentage of water-soluble sulfate content. Results from the laboratory water-soluble sulfate tests are presented in Appendix B (Figure B10) and indicate that the on-site materials possess a sulfate exposure class of "S0" to concrete structures as defined by 2019 CBC Section 1904 and ACI 318-19 Table 19.3.1.1.

7.3.3 Geocon West, Inc. does not practice in the field of corrosion engineering and mitigation. If corrosion sensitive improvements are planned, it is recommended that a corrosion engineer be retained to evaluate corrosion test results and incorporate the necessary precautions to avoid premature corrosion of buried metal pipes and concrete structures in direct contact with the soils.

7.4 Grading

7.4.1 A preconstruction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer, geotechnical engineer, and, if applicable, building official in attendance. Special soil handling requirements can be discussed at that time.

7.4.2 Earthwork should be observed, and compacted fill tested by representatives of Geocon West, Inc. The existing fill encountered during exploration is suitable for re-use as an engineered fill, provided any encountered oversize material (greater than 6 inches) and any encountered deleterious debris is removed.

7.4.3 Screening of the earth materials will likely be required to remove oversize (greater than 6 inches) rock, prior to placement and compaction. Generation of oversized material (greater than 6 inches) should be anticipated. The contractor should be prepared for difficult excavation conditions. The presence of these materials and their impact on construction methods and equipment selection should be considered by both the owner and contractor prior to construction.

7.4.4 Rocks larger than 6 inches but less than 4 feet in maximum dimension may be incorporated into the engineered fill provided the oversized material (larger than 6 inches) is placed so that voids between the rocks are not created. It is recommended that placement of oversized materials be performed in non-building areas, if available. Consideration should be given to placing oversized material at least 3 feet below the deepest foundation or utility.

7.4.5 The acceptability of placing rock materials greater than 4 feet in maximum dimension shall be evaluated during grading as specific cases arise and shall be approved in writing by the Geotechnical Engineer prior to placement.

7.4.6 Grading should commence with the removal of all existing vegetation and existing improvements from the area to be graded. Deleterious debris such as wood and root structures should be exported from the site and should not be mixed with the fill soils. Asphalt and concrete should not be mixed with the fill soils unless approved by the Geotechnical Engineer. All existing underground improvements planned for removal should be completely excavated and the resulting depressions properly backfilled in accordance with the procedures described herein. Once a clean excavation bottom has been established it must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.).

7.4.7 As a minimum, it is recommended that the upper 5 feet of existing site soils within the proposed building footprint area be excavated and properly compacted for foundation and slab support. Deeper excavation should be conducted as necessary to completely remove all existing artificial fill or soft soil at the direction of the Geotechnical Engineer (a representative of Geocon). Proposed foundations should be underlain by a minimum of 3 feet of newly placed engineered fill. It is recommended that the grading contractor verify the depth of all building foundations prior to commencement of site grading activities in order to correctly determine the required grading overexcavations for foundations. The excavation should extend laterally a minimum distance of 3 feet beyond the building footprint area or a distance equal to the depth of fill below the foundation, whichever is greater. The limits of existing fill and/or soft fill soils removal will be verified by the Geocon representative during site grading activities.

7.4.8 All excavations must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).

7.4.9 All fill and backfill soils should be placed in horizontal loose layers approximately 6 to 8 inches thick, moisture conditioned to near optimum moisture content, and properly compacted to a minimum 90 percent of the maximum dry density in accordance with ASTM D 1557 (latest edition).

7.4.10 Foundations for small outlying structures, such as block walls up to 6 feet high, planter walls or trash enclosures, which will not be tied to the proposed buildings, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and proper compaction cannot be performed or is undesirable, foundations may derive support directly in the undisturbed alluvial soils at or below a depth of 24 inches, and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative.

7.4.11 Where new paving is to be placed, it is recommended that all existing fill and soft alluvial soils be excavated and properly compacted for paving support. The client should be aware that excavation and compaction of all existing fill and soft soils in the area of new paving is not required; however, paving constructed over existing uncertified fill or unsuitable alluvial soil may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of soil should be scarified, moisture conditioned to near optimum moisture content, and compacted to at least 95 percent relative compaction for paving support. Paving recommendations are provided in *Preliminary Pavement Recommendations* section of this report (see Section 7.11).

7.4.12 All imported fill shall be observed, tested, and approved by Geocon West, Inc. prior to bringing soil to the site. Rocks larger than 6 inches in diameter shall not be used in the fill. If necessary, import soils used as structural fill should have an expansion index less than 20 and corrosivity properties that are equally or less detrimental to that of the existing onsite soils (see Figure B10). Import soils must be placed uniformly and at equal thickness or in a manner that is approved by the Geotechnical Engineer (a representative of Geocon).

7.4.13 Utility trenches should be properly backfilled in accordance with the requirements of the Green Book (latest edition). The pipe should be bedded with clean sands (Sand Equivalent greater than 30) to a depth of at least 1 foot over the pipe, and the bedding material must be inspected and approved in writing by the Geotechnical Engineer (a representative of Geocon). The use of gravel is not acceptable unless used in conjunction with filter fabric to prevent the gravel from having direct contact with soil. The remainder of the trench backfill may be derived from onsite soil or approved import soil, compacted as necessary, until the required compaction is obtained. The use of minimum 2-sack slurry as backfill is also acceptable. Prior to placing any bedding materials or pipes, the trench excavation bottom must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).

7.4.14 All trench and foundation excavation bottoms must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to placing bedding sands, fill, steel, gravel, or concrete.

7.5 Shrinkage

7.5.1 Shrinkage results when a volume of material removed at one density is compacted to a higher density. A shrinkage factor between 10 and 15 percent should be anticipated when excavating and compacting the upper 5 feet of existing earth materials on the site to an average relative compaction of 92 percent. The shrinkage factor does not include the removal of oversized material.

7.4.2 If import soils will be utilized in the building pad, the soils must be placed uniformly and at equal thickness at the direction of the Geotechnical Engineer (a representative of Geocon West, Inc.). Soils can be borrowed from non-building pad areas and later replaced with imported soils.

7.6 Foundation Design

7.6.1 Subsequent to the recommended grading, a conventional shallow spread foundation system may be utilized for support of the proposed structures provided foundations derive support in newly placed engineered fill. Proposed foundations should be underlain by a minimum of 3 feet of newly placed engineered fill.

7.6.2 Continuous footings may be designed for an allowable bearing capacity of 2,000 pounds per square foot (psf), and should be a minimum of 12 inches in width, 18 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.

7.6.3 Isolated spread foundations may be designed for an allowable bearing capacity of 2,500 psf, and should be a minimum of 24 inches in width, 18 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.

7.6.4 The allowable soil bearing pressure above may be increased by 250 psf and 500 psf for each additional foot of foundation width and depth, respectively, up to a maximum allowable soil bearing pressure of 4,000 psf.

7.6.5 The allowable bearing pressures may be increased by one-third for transient loads due to wind or seismic forces.

7.6.6 If depth increases are utilized for the exterior wall footings, this office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary. Additional grading should be conducted as needed in order to maintain the recommended 3-foot-thick blanket of engineered fill below proposed foundations.

7.6.7 Continuous footings should be reinforced with four No. 4 steel reinforcing bars, two placed near the top of the footing and two near the bottom. Reinforcement for spread footings should be designed by the project structural engineer.

7.6.8 The above foundation dimensions and minimum reinforcement recommendations are based on soil conditions and building code requirements only, and are not intended to be used in lieu of those required for structural purposes.

7.6.9 No special subgrade presaturation is required prior to placement of concrete. However, the moisture in the foundation subgrade should be sprinkled as necessary to maintain a moist condition at the time of concrete placement

7.6.10 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated. If unanticipated soil conditions are encountered, foundation modifications may be required.

7.6.11 This office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary.

7.7 Foundation Settlement

7.7.1 The maximum expected static settlement for a structure supported on a conventional foundation system designed with a maximum bearing pressure of 4,000 psf, and deriving support in the recommended bearing materials is estimated to be less than 1 inch and occur below the heaviest loaded structural element. Settlement of the foundation system is expected to occur on initial application of loading. Differential settlement is not expected to exceed ½ inch over a distance of 20 feet.

7.7.2 Once the design and foundation loading configurations for the proposed structures proceeds to a more finalized plan, the estimated settlements presented in this report should be reviewed and revised, if necessary. If the final foundation loading configurations are greater than the assumed loading conditions, the potential for settlement should be reevaluated by this office.

7.8 Miscellaneous Foundations

7.8.1 Foundations for small outlying structures, such as block walls up to 6 feet in height, planter walls or trash enclosures which will not be tied to the proposed structures may be supported on conventional foundations bearing on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and compaction cannot be performed or is undesirable, such as adjacent to property lines, foundations may derive support in the undisturbed alluvial soils at and below a depth of 24 inches below the existing ground surface, and should be deepened as necessary to maintain a minimum 12-inch embedment into undisturbed alluvial soils and must be observed and approved by a Geocon representative.

7.8.2 If the soils exposed in the excavation bottom are soft, compaction of the soft soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative. Miscellaneous foundations may be designed for a bearing value of 1,500 psf, and should be a minimum of 12 inches in width, 18 inches in depth below the lowest adjacent grade and 12 inches into the recommended bearing material. The allowable bearing pressure may be increased by up to one-third for transient loads due to wind or seismic forces.

7.8.3 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated.

7.9 Lateral Design

7.9.1 Resistance to lateral loading may be provided by friction acting at the base of foundations, slabs and by passive earth pressure. An allowable coefficient of friction of 0.4 may be used with the dead load forces in the new placed engineered fill or competent alluvial soils.

7.9.2 Passive earth pressure for the sides of foundations and slabs poured against newly placed engineered fill or the alluvial soils may be computed as an equivalent fluid having a density of 260 pcf with a maximum earth pressure of 2,600 pcf. When combining passive and friction for lateral resistance, the passive component should be reduced by one-third.

7.10 Concrete Slabs-on-Grade

7.10.1 Concrete slabs-on-grade near the ground surface that are subject to vehicle loading should be designed in accordance with the recommendations in the *Preliminary Pavement Recommendations* section of this report (Section 7.11).

7.10.2 Subsequent to the recommended grading, concrete slab-on-grade, not subject to vehicle or equipment loading, should be a minimum of 4 inches thick and minimum slab reinforcement should consist of No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions. Steel reinforcing should be positioned vertically near the slab midpoint.

7.10.3 It is our understanding that unreinforced slabs-on-grade are being considered as a design alternative for this project. While our typical recommendations provide minimum reinforcement for slabs-on-grade, the slabs may be designed by a qualified Structural Engineer. The structural engineer may design the slab thickness and reinforcing or eliminate the reinforcing if they so choose. The design provided by the structural engineer may supersede those provided herein.

7.10.4 Slabs-on-grade at the ground surface that may receive moisture-sensitive floor coverings or may be used to store moisture-sensitive materials should be underlain by a vapor retarder placed directly beneath the slab. The vapor retarder and acceptable permeance should be specified by the project architect or developer based on the type of floor covering that will be installed. The vapor retarder design should be consistent with the guidelines presented in Section 9.3 of the American Concrete Institute's (ACI) Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials (ACI 302.2R-06) and should be installed in general conformance with ASTM E 1643 (latest edition) and the manufacturer's recommendations. A minimum thickness of 15 mils extruded polyolefin plastic is recommended; vapor retarders which contain recycled content or woven materials are not recommended. The vapor retarder should have a permeance of less than 0.01 perms demonstrated by testing before and after mandatory conditioning. At the direction of the client, it is our understanding that a product by Stego Industries, LLC is preferred. Geocon does not object to the use of Stego. The vapor retarder should be installed in direct contact with the concrete slab with proper perimeter seal. If the California Green Building Code requirements apply to this project, the vapor retarder should be underlain by 4 inches of clean aggregate. It is important that the vapor retarder be puncture resistant since it will be in direct contact with angular gravel. As an alternative to the clean aggregate suggested in the Green Building Code, it is our opinion that the concrete slab-on-grade may be underlain by a vapor retarder over 4 inches of clean sand (sand equivalent greater than 30), since the sand will serve a capillary break and will minimize the potential for punctures and damage to the vapor barrier.

7.10.5 For seismic design purposes, a coefficient of friction of 0.4 may be utilized between concrete slabs and subgrade soils without a moisture barrier, and 0.15 for slabs underlain by a moisture barrier.

7.10.6 Unless designed and evaluated by the project structural engineer, exterior slabs for walkways or flatwork, not subject to traffic loads, should be at least 4 inches thick and reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions, positioned near the slab midpoint. Prior to construction of slabs, the upper 12 inches of subgrade should be moistened to near optimum moisture content and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition). Crack control joints should be spaced at intervals not greater than 10 feet and should be constructed using saw-cuts or other methods as soon as practical following concrete placement. Crack control joints should extend a minimum depth of one-fourth the slab thickness. The project structural engineer should design construction joints as necessary.

7.10.7 The recommendations of this report are intended to reduce the potential for cracking of slabs due to settlement. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade may exhibit some cracking due to minor soil movement and/or concrete shrinkage. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement and curing, and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.

7.11 Preliminary Pavement Recommendations

7.11.1 Where new paving is to be placed, it is recommended that all existing fill and soft or unsuitable materials be excavated and properly recompacted for paving support. The client should be aware that excavation and compaction of all existing artificial fill and soft soils in the area of new paving is not required; however, paving constructed over existing unsuitable material may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of paving subgrade should be scarified, moisture conditioned to near optimum moisture content, and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition).

7.11.2 The following pavement sections are based on an assumed R-Value of 35. Once site grading activities are complete an R-Value should be obtained by laboratory testing to confirm the properties of the soils serving as paving subgrade, prior to placing pavement.

7.11.3 The Traffic Indices listed below are estimates. Geocon does not practice in the field of traffic engineering. The actual Traffic Index for each area should be determined by the project civil engineer. If pavement sections for Traffic Indices other than those listed below are required, Geocon should be contacted to provide additional recommendations. Asphalt concrete pavement thicknesses were determined following procedures outlined in the *California Highway Design Manual* (Caltrans). Concrete pavement sections were determined using AASHTO design procedures. It is anticipated that the majority of traffic will consist of automobile and large truck traffic.

PRELIMINARY ASPHALT PAVEMENT DESIGN SECTIONS

Location	Estimated Traffic Index (TI)	Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)
Automobile Parking And Driveways	4.0	3.0	4.0
Trash Truck & Fire Lanes (Intermittent Heavy Use)	7.0	4.0	9.0
Truck Drive Aisles (Regular Heavy Use)	8.0	4.5	10.5

PRELIMINARY CONCRETE PAVEMENT DESIGN SECTIONS

Location	Traffic Index	Concrete (inches)	Class 2 Aggregate Base (inches)	Minimum Reinforcement*
Pedestrian Walkways (No Traffic)	--	4.0	None (on native)	No. 3, 18" O.C. Both Ways
Automobile Parking And Driveways	4.0	4.0	4.0	No. 3, 18" O.C. Both Ways
Trash Truck & Fire Lanes (Intermittent Heavy Use)	7.0	6.5	4.0	--
Truck Drive Aisles (Regular Heavy Use)	8.0	8.0	4.0	--
Building Slab (No vehicle/equipment loading)	--	4.0	None (on native, after over-ex)	No. 3, 18" O.C. Both Ways
*Note: Optional provided it is evaluated and designed by the project structural engineer.				

7.11.4 Asphalt concrete should conform to Section 203-6 of the "*Standard Specifications for Public Works Construction"* (Green Book). Class 2 aggregate base materials should conform to Section 26-1.02A of the "*Standard Specifications of the State of California, Department of Transportation"* (Caltrans). The use of Crushed Miscellaneous Base in lieu of Class 2 aggregate base is acceptable. Crushed Miscellaneous Base should conform to Section 200-2.4 of the "*Standard Specifications for Public Works Construction"* (Green Book).

7.11.5 Concrete paving supporting vehicular traffic should be underlain by a minimum of 4 inches of aggregate base and a properly compacted subgrade. The subgrade and base material should be compacted to 95 percent relative compaction as determined by ASTM Test Method D 1557 (latest edition).

7.11.6 A thickened edge or integral curb should be constructed on the outside of concrete slabs subjected to wheel loads. The thickened edge should be 1.2 times the slab thickness or a minimum thickness of 2 inches, whichever results in a thicker edge, and taper back to the recommended slab thickness 4 feet behind the face of the slab (e.g., 6-inch and 7.5-inch-thick slabs would have an 8- and 9.5-inch-thick edge, respectively).

7.11.7 In order to control the location and spread of concrete shrinkage cracks, crack-control joints (weakened plane joints) should be included in the design of the concrete pavement slab in accordance with applicable design standards.

7.11.8 The performance of pavements is highly dependent upon providing positive surface drainage away from the edge of pavements. Ponding of water on or adjacent to the pavement will likely result in saturation of the subgrade materials and subsequent cracking, subsidence and pavement distress. If planters are planned adjacent to paving, it is recommended that the perimeter curb be extended at least 12 inches below the bottom of the aggregate base to minimize the introduction of water beneath the paving.

7.12 Retaining Wall Design

7.12.1 The recommendations presented below are generally applicable to the design of rigid concrete or masonry retaining walls having a maximum height of 5 feet. In the event that walls higher than 5 feet are planned, Geocon should be contacted for additional recommendations.

7.12.2 Retaining wall foundations may be designed in accordance with the recommendations provided in the *Foundation Design* section of this report (see Section 7.6).

7.12.3 Retaining walls with a level backfill surface that are not restrained at the top should be designed utilizing a triangular distribution of pressure (active pressure) of 30 pcf.

7.12.4 Restrained walls are those that are not allowed to rotate more than 0.001H (where H equals the height of the retaining portion of the wall in feet) at the top of the wall. Assuming that proper drainage and permanent dewatering is maintained, where walls are restrained from movement at the top, walls may be designed utilizing a triangular distribution of pressure (at-rest pressure) of 61 pcf.

7.12.5 The wall pressures provided above assume that the retaining wall will be properly drained preventing the buildup of hydrostatic pressure. If retaining wall drainage is not implemented, the equivalent fluid pressure to be used in design of undrained walls is 93 pcf. The value includes hydrostatic pressures plus buoyant lateral earth pressures.

7.12.6 The wall pressures provided above assume that the proposed retaining walls will support relatively undisturbed alluvial soils or engineered fill derived from onsite soils. If import soil will be used to backfill proposed retaining walls, revised earth pressures may be required to account for the geotechnical properties of the import soil used as engineered fill. This should be evaluated once the use of import soil is established. All imported fill shall be observed, tested, and approved by Geocon West, Inc. prior to bringing soil to the site.

7.12.7 Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic or adjacent structures and should be designed for each condition as the project progresses.

7.13 Retaining Wall Drainage

7.13.1 Unless designed for hydrostatic pressures, retaining walls should be provided with a drainage system extended at least two-thirds the height of the wall. At the base of the drain system, a subdrain covered with a minimum of 12 inches of gravel should be installed, and a compacted fill blanket or other seal placed at the surface (see Figure 5). The clean bottom and subdrain pipe, behind a retaining wall, should be observed by the Geotechnical Engineer (a representative of Geocon), prior to placement of gravel or compacting backfill.

7.13.2 As an alternative, a plastic drainage composite such as Miradrain or equivalent may be installed in continuous, 4-foot wide columns along the entire back face of the wall, at 8 feet on center. The top of these drainage composite columns should terminate approximately 18 inches below the ground surface, where either hardscape or a minimum of 18 inches of relatively cohesive material should be placed as a cap (see Figure 6). These vertical columns of drainage material would then be connected at the bottom of the wall to a collection panel or a 1-cubic-foot rock pocket drained by a 4-inch subdrain pipe.

7.13.3 Subdrainage pipes at the base of the retaining wall drainage system should outlet to an acceptable location via controlled drainage structures. Drainage should not be allowed to flow uncontrolled over descending slopes.

7.13.4 Moisture affecting below grade walls is one of the most common post-construction complaints. Poorly applied or omitted waterproofing can lead to efflorescence or standing water. Particular care should be taken in the design and installation of waterproofing to avoid moisture problems, or actual water seepage into the structure through any normal shrinkage cracks which may develop in the concrete walls, floor slab, foundations and/or construction joints. The design and inspection of the waterproofing is not the responsibility of the geotechnical engineer. A waterproofing consultant should be retained in order to recommend a product or method, which would provide protection to subterranean walls, floor slabs and foundations.

7.14 Temporary Excavations

7.14.1 Excavations on the order of 5 feet in height may be required during grading and construction activities. The excavations are expected to expose fill and alluvial soils, which may be subject to caving. Due to the presence of cobbles, the contractor should be prepared for difficult excavation conditions. Vertical excavations up to 5 feet in height may be attempted where not surcharged; however, the contractor should be prepared for caving, sloughing, and raveling in open excavations. Due to the granular nature of soils and potential for caving, the contractor should also be prepared to form foundation excavations at the excavation bottom.

7.14.2 Vertical excavations greater than 5 feet will require sloping or shoring measures in order to provide a stable excavation. It is anticipated that stable excavations for construction of the proposed improvements can be achieved and maintained with sloping measures. Where sufficient space is available, temporary unsurcharged embankments could be sloped back at a uniform 1:1 slope gradient or flatter, up to a maximum height of 10 feet. A uniform slope does not have a vertical portion.

7.14.3 Where temporary slopes are utilized, the top of the slope should be barricaded to prevent vehicles and storage loads at the top of the slope within a horizontal distance equal to the height of the slope. If the temporary slopes are to be maintained during the rainy season, berms are suggested along the tops of the slopes where necessary to prevent runoff water from entering the excavation and eroding the slope faces. Geocon personnel should inspect the soils exposed in the cut slopes during excavation so that modifications of the slopes can be made if variations in the soil conditions occur. All excavations should be stabilized within 30 days of initial excavation.

7.15 Stormwater Infiltration

7.15.1 During the July 22, 2021 site exploration, boring B6 was utilized to perform percolation testing. The boring was advanced to the depth listed in the table below. Slotted casing was placed in the boring, and the annular space between the casing and excavation was filled with gravel. The boring was then filled with water to pre-saturate the soils. The casing was refilled with water and percolation test readings were performed after repeated flooding of the cased excavation. Based on the test results, the average infiltration rate (adjusted percolation rate), for the earth materials encountered, is provided in the following table. The field-measured percolation rate has been adjusted to infiltration rates in accordance with the County of San Bernardino Technical Guidance Document for Water Quality Management Plans (June 2013). Additional correction factors may be required and should be applied by the engineer in responsible charge of the design of the stormwater infiltration system and based on applicable guidelines. Percolation test field data and calculation of the measured percolation rate and design infiltration rate are provided on Figure 7.

Boring	Soil Type	Infiltration Depth (ft)	Average Infiltration Rate (in / hour)
B6	Sand (SP)	5 – 10½	16.9

7.15.2 The results of the percolation testing indicate that the soils are conducive to infiltration. It is our opinion that the soil zones encountered at the depths and locations as listed in the table above are suitable for infiltration of stormwater.

7.15.3 It is our further opinion that infiltration of stormwater and will not induce excessive hydro-consolidation (see Figures B3 through B8), will not create a perched groundwater condition, will not affect soil structure interaction of existing or proposed foundations due to expansive soils, will not saturate soils supported by existing or proposed retaining walls, and will not increase the potential for liquefaction. Resulting settlements are anticipated to be less than ¼ inch, if any.

7.15.4 Where infiltration systems will be utilized, it is recommended that a minimum 10-foot horizontal and vertical setback be maintained from existing or proposed foundations. Additional setbacks may be required by the governing jurisdiction and should be incorporated into the stormwater infiltration system design as necessary.

7.15.5 Where the 10-foot horizontal setback cannot be maintained between the infiltration system and an adjacent footing, and the infiltration system penetrates below the foundation influence line, the proposed stormwater infiltration system must be designed to resist the surcharge from the adjacent foundation. The foundation surcharge line may be assumed to project down away from the bottom of the foundation at a 1:1 gradient. The stormwater infiltration system must still be sufficiently deep to maintain the 10-foot vertical offset between the bottom of the footing and the zone of saturation.

7.15.6 Subsequent to the placement of the infiltration system, it is acceptable to backfill the resulting void space between the excavation sidewalls and the infiltration system with minimum two-sack slurry provided the slurry is not placed in the infiltration zone. It is recommended that pea gravel be utilized adjacent to the infiltration zone so communication of water to the soil is not hindered.

7.15.7 Due to the preliminary nature of the project at this time, the location of the stormwater infiltration system has not yet been determined. The design drawings should be reviewed and approved by the Geotechnical Engineer. The installation of the stormwater infiltration system should be observed and approved by the Geotechnical Engineer (a representative of Geocon).

7.16 Surface Drainage

7.16.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change in the original designed engineering properties. Proper drainage should be maintained at all times.

7.16.2 All site drainage should be collected and controlled in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with 2019 CBC 1804.4 or other applicable standards. In addition, drainage should not be allowed to flow uncontrolled over any descending slope. Discharge from downspouts, roof drains and scuppers are not recommended onto unprotected soils within 5 feet of the building perimeter. Planters which are located adjacent to foundations should be sealed to prevent moisture intrusion into the soils providing foundation support. Landscape irrigation is not recommended within 5 feet of the building perimeter footings except when enclosed in protected planters.

7.16.3 Positive site drainage should be provided away from structures, pavement, and the tops of slopes to swales or other controlled drainage structures. The building pad and pavement areas should be fine graded such that water is not allowed to pond.

7.16.4 Landscaping planters immediately adjacent to paved areas are not recommended due to the potential for surface or irrigation water to infiltrate the pavement's subgrade and base course. Either a subdrain, which collects excess irrigation water and transmits it to drainage structures, or an impervious above-grade planter boxes should be used. In addition, where landscaping is planned adjacent to the pavement, it is recommended that consideration be given to providing a cutoff wall along the edge of the pavement that extends at least 12 inches below the base material.

7.17 Plan Review

7.17.1 Grading, foundation, and, if applicable, shoring plans should be reviewed by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to finalization to verify that the plans have been prepared in substantial conformance with the recommendations of this report and to provide additional analyses or recommendations.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon West, Inc. should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon West, Inc.

2. This report is issued with the understanding that it is the responsibility of the owner, or of his representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

3. The findings of this report are valid as of the date of this report. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.

4. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

LIST OF REFERENCES

California Division of Mines and Geology, 1998, *State of California Seismic Hazard Zone Map for the Devore Quadrangle,* Official Map, Revised: June 1, 1995

California Geologic Energy Management Division, 2021, Geologic Energy Management Division Well Finder, http://maps.conservation.ca.gov.doggr/index.html#close.

California Geological Survey, 2021a, CGS Information Warehouse, Regulatory Map Portal, http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps.

California Geological Survey, 2021b, Earthquake Zones of Required Investigation, https://maps.conservation.ca.gov/cgs/EQZApp/app/.

California Geological Survey, 2018a, *Earthquake Fault Zones, A Guide for Government Agencies, Property Owners/Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California,* Special Publication 42, Revised 2018.

Jennings, C. W. and Bryant, W. A., 2010, *Fault Activity Map of California,* California Geological Survey Geologic Data Map No. 6.

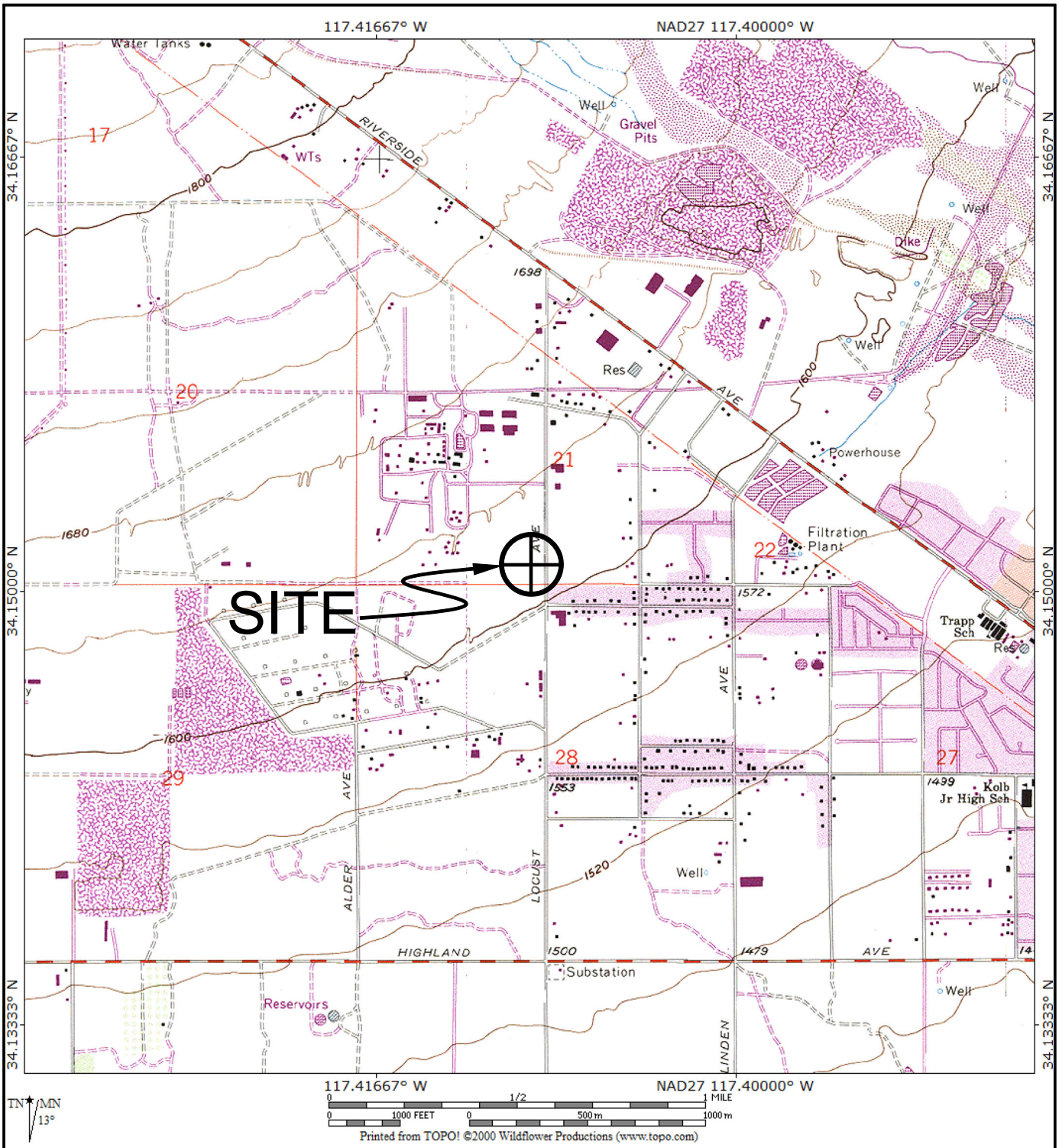
Morton, D. M. and Miller, F. K., 2003, *Preliminary Geologic Map of the San Bernardino 30' x 60' Quadrangle, California,* Scale 1:100,000, U. S. Geological Survey Open-File Report 03-293, Sheet 1 of 5.

Rialto, City of, 2010, General Plan Update, Safety and Noise Chapter.

San Bernardino County General Plan, Safety Element, 2005.

U.S. Geological Survey, 2021, *National Water Information System: Web Interface,* Web Site Address: http://waterdata.usgs.gov/nwis/gw

Ziony, J. I., and Jones, L. M., 1989, *Map Showing Late Quaternary Faults and 1978–1984 Seismicity of the Los Angeles Region, California*, U.S. Geological Survey Miscellaneous Field Studies Map MF-1964.



REFERENCE: U.S.G.S. TOPOGRAPHIC MAPS, 7.5 MINUTE SERIES, SAN BERNARDINO, CA QUADRANGLE

GEOCON WEST, INC.

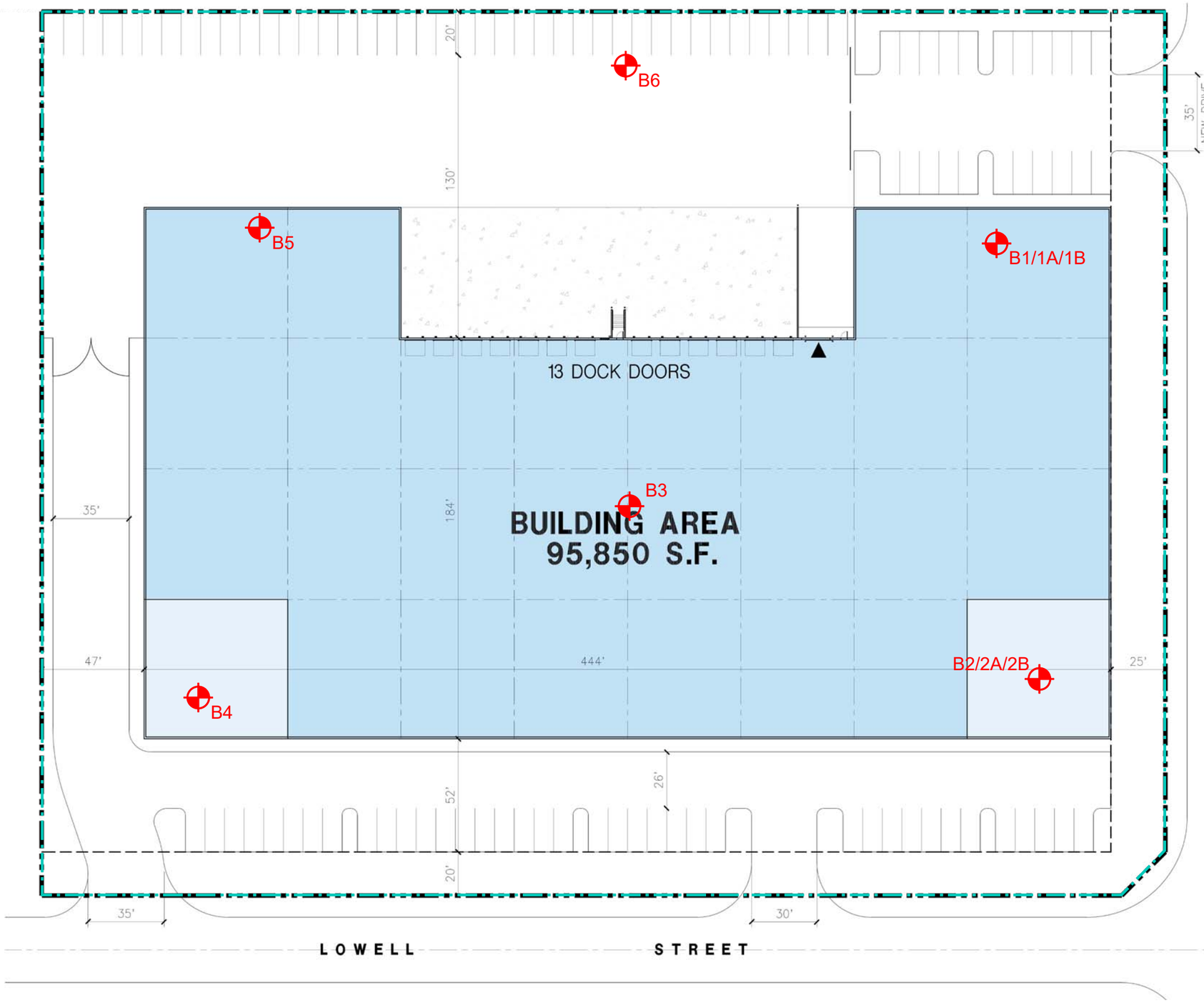
ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: RA | CHECKED BY: SFK

VICINITY MAP

NW CORNER LOCUST AVENUE
AND LOWELL STREET
RIALTO, CALIFORNIA

AUGUST 2021 | PROJECT NO. W1393-99-01 | FIG. 1



LEGEND

B6 Approximate Location of Boring

Approximate Location of Property Line

0 50' 100'

GEOCON WEST, INC.
ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: PZ	CHECKED BY: JTA

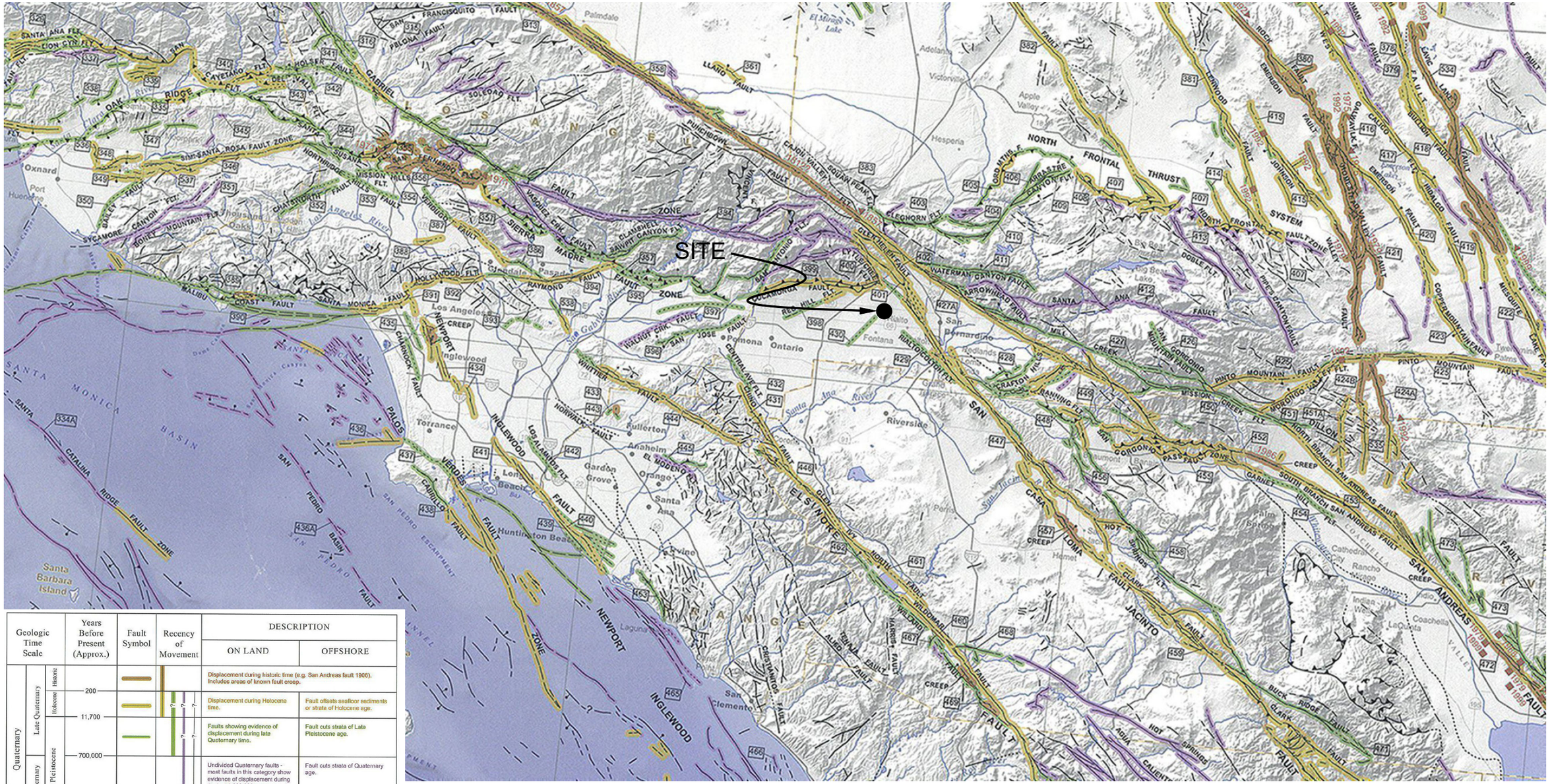
SITE PLAN

NW CORNER OF LOCUST AVENUE
AND LOWELL STREET
RIALTO, CALIFORNIA

AUGUST 2021	PROJECT NO. W1393-99-01	FIG. 2

1691

Reference: Jennings, C.W. and Bryant, W. A., 2010, Fault Activity Map of California, California Geological Survey Geologic Data Map No. 6.



Geologic Time Scale			Years Before Present (Approx.)	Fault Symbol	Recency of Movement	DESCRIPTION: ON LAND	DESCRIPTION: OFFSHORE
Quaternary	Late Quaternary	Historic				Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault creep.	
		Holocene	200			Displacement during Holocene time.	Fault offsets seafloor sediments or strata of Holocene age.
		Pleistocene	11,700			Faults showing evidence of displacement during late Quaternary time.	Fault cuts strata of Late Pleistocene age.
	Early Quaternary		700,000			Undivided Quaternary faults - most faults in this category show evidence of displacement during the last 1,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age.	Fault cuts strata of Quaternary age.
Pre-Quaternary			1,600,000*			Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive.	Fault cuts strata of Pliocene or older age.
			4.5 billion (Age of Earth)				

* Quaternary now recognized as extending to 2.6 Ma (Walker and Geissman, 2009). Quaternary faults in this map were established using the previous 1.6 Ma criterion.

N

0 12 24 Miles

GEOCON WEST, INC.

ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

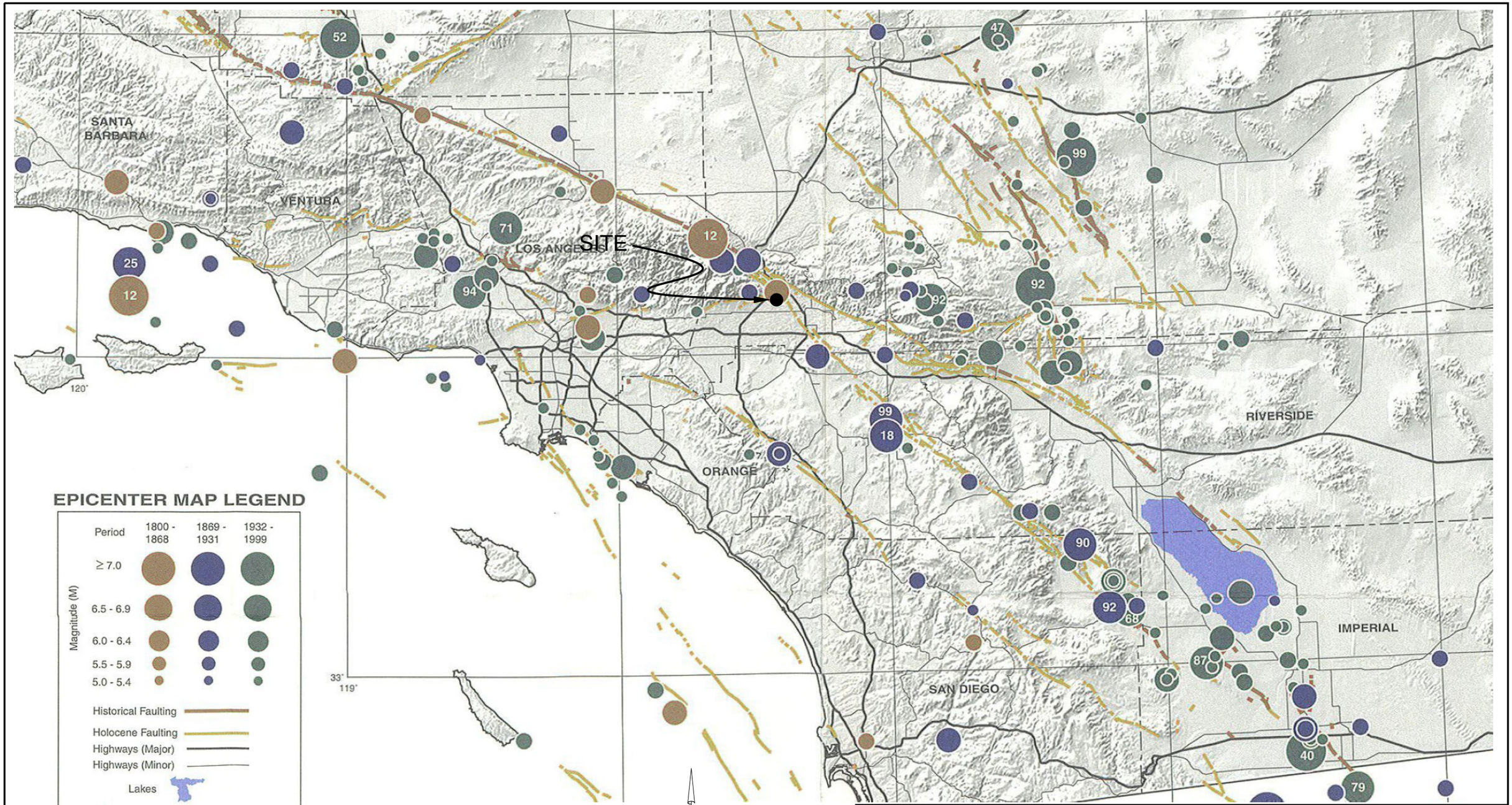
DRAFTED BY: RA | CHECKED BY: SFK

REGIONAL FAULT MAP

NW CORNER OF LOCUST AVENUE AND LOWELL STREET
RIALTO, CALIFORNIA

AUGUST 2021 | PROJECT NO. W1393-99-01 | FIG. 3

1692



EPICENTER MAP LEGEND

Period	1800 - 1868	1869 - 1931	1932 - 1999
≥ 7.0			
6.5 - 6.9			
6.0 - 6.4			
5.5 - 5.9			
5.0 - 5.4			

Magnitude (M)

- Historical Faulting
- Holocene Faulting
- Highways (Major)
- Highways (Minor)
- Lakes
- 65 — Last two digits of M ≥ 6.5 earthquake year

Reference: Toppozada, T., Branum, D., Petersen, M., Hallstrom, C., Cramer, C., and Reichle, M., 2000, Epicenters and Areas Damaged by M≥5 California Earthquakes, 1800 - 1999, California Geological Survey, Map Sheet 49.

0 20 40 Miles

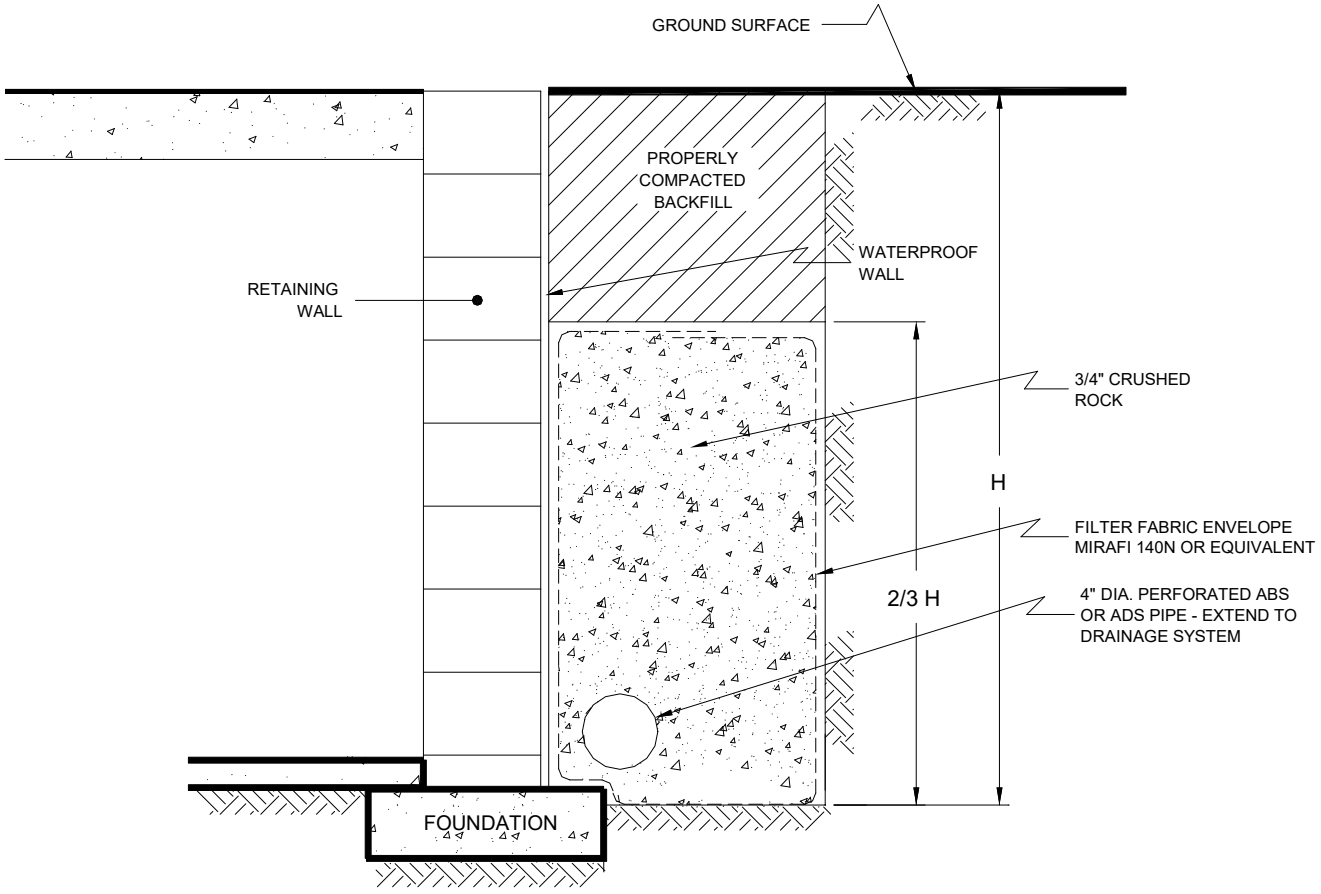
GEOCON WEST, INC.
ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: RA | CHECKED BY: SFK

REGIONAL SEISMICITY MAP

NW CORNER OF LOCUST AVENUE
AND LOWELL STREET
RIALTO, CALIFORNIA

AUGUST 2021 | PROJECT NO. W1393-99-01 | FIG.4



NO SCALE

GEOCON WEST, INC.

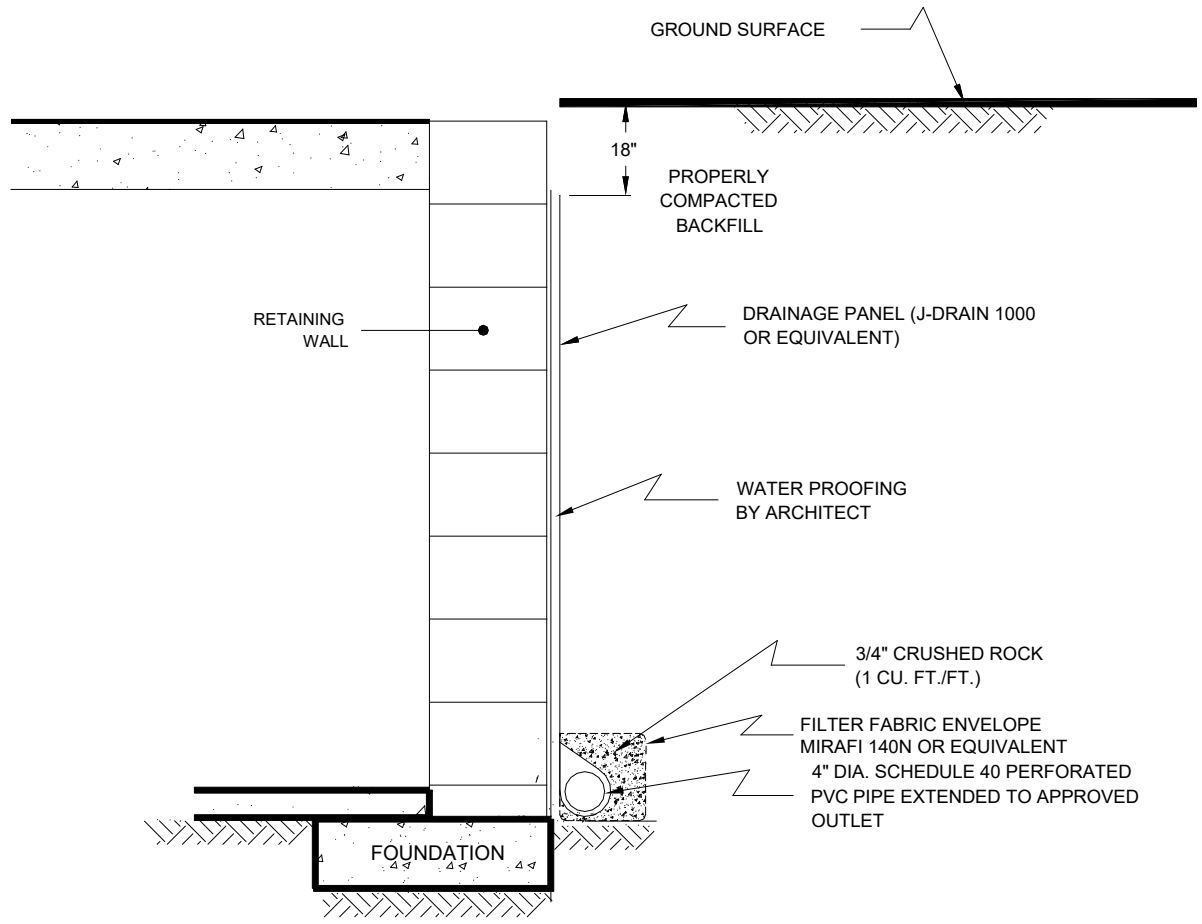
ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: PZ	CHECKED BY: JTA

RETAINING WALL DRAIN DETAIL

NW CORNER OF LOCUST AVENUE
AND LOWELL STREET
RIALTO, CALIFORNIA

AUGUST 2021	PROJECT NO. W1393-99-01	FIG. 5



NO SCALE

GEOCON WEST, INC.

ENVIRONMENTAL GEOTECHNICAL MATERIALS
3303 N. SAN FERNANDO BLVD. - SUITE 100 - BURBANK, CA 91504
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: PZ	CHECKED BY: JTA

RETAINING WALL DRAIN DETAIL

NW CORNER OF LOCUST AVENUE
AND LOWELL STREET
RIALTO, CALIFORNIA

AUGUST 2021	PROJECT NO. W1393-99-01	FIG. 6

PERCOLATION TEST DATA SHEET

Project:	Locust/Lowell	Project No:	W1393-99-01	Date:	7/22/2021
Test Hole No:	B6	Tested By:	JS		
Depth of Test Hole, D_T:	10.5	USCS Soil Classification:	SP		
Test Hole Dimensions (inches)			Length	Width	
Diameter (if round) =	8	Sides (if rectangular) =	---	---	

Sandy Soil Criteria Test*

Trial No.	Start Time	Stop Time	Δt Time Interval (min)	D_0 Initial Depth to Water (in)	D_f Final Depth to Water (in)	ΔD Change in Water Level (in)	Greater than or Equal to 6"? (y/n)
1	14:30	14:37	7	60.0	114.6	54.6	y
2	14:38	14:42	4	60.0	106.8	46.8	y

*If two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements, taken every 10 minutes. Otherwise, pre-soak (fill) overnight. Obtain at least twelve measurements per hole over at least six hours (approximately 30 minute intervals) with a precision of at least 0.25".

Trial No.	Start Time	Stop Time	Δt Time Interval (min)	D_0 Initial Depth to Water (in)	D_f Final Depth to Water (in)	ΔD Change in Water Level (in)	Percolation Rate (min/in)
1	14:44	14:54	10	60.0	117.0	57.0	0.18
2	14:55	15:05	10	60.0	115.8	55.8	0.18
3	15:05	15:15	10	60.0	116.3	56.3	0.18
4	15:16	15:26	10	60.0	116.2	56.2	0.18
5	15:27	15:37	10	60.0	116.5	56.5	0.18
6	15:38	15:48	10	60.0	116.2	56.2	0.18
7							
8							

Infiltration Rate Calculation:

Time Interval, Δt =	10	minutes	Ho =	66.0	inches
Final Depth to Water, Df =	116.2	inches	Hf =	9.8	inches
Test Hole Radius, r =	4	inches	ΔH =	56.2	inches
Initial Depth to Water, Do =	60.0	inches	Havg =	37.9	inches
Total Depth of Test Hole, DT =	126.0	inches			

$$I_t = \frac{\Delta H(60r)}{\Delta t(r + 2H_{avg})}$$

Infiltration Rate, It = **16.9** inches/hour

Figure 7

APPENDIX A

APPENDIX A

FIELD INVESTIGATION

The site was explored on July 22, 2021 by excavating six 8-inch diameter borings utilizing a truck-mounted hollow stem auger drilling machine. Borings B1 and B2 had several attempts but the planned boring depths were not reached due to refusal on cobbles. The borings were excavated to depths between 9 and 20½ feet below existing ground surface. Representative and relatively undisturbed samples were obtained by driving a 3 inch O. D., California Modified Sampler into the "undisturbed" soil mass with blows from a 140-pound auto-hammer falling 30 inches. The California Modified Sampler was equipped with 1-inch high by 2⅜-inch diameter brass sampler rings to facilitate soil removal and testing. Bulk samples were also obtained.

The soil conditions encountered in the borings were visually examined, classified and logged in general accordance with the Unified Soil Classification System (USCS). The logs of the borings are presented on Figures A1 through A10. The logs depict the soil and geologic conditions encountered and the depth at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the logs were revised based on subsequent laboratory testing. The locations of the borings are shown on Figure 2.

PROJECT NO. W1393-99-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 1** ELEV. (MSL.) -- DATE COMPLETED **7/22/2021** EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0	BULK 0-5'				**ARTIFICIAL FILL** Sand with Gravel, medium dense, slightly moist, brown, fine- to medium-grained, fine gravel, concrete fragments.			
2	B1@2.5'			SP	**ALLUVIUM** Sand with Gravel and Cobbles, very dense, slightly moist to moist, brown, fine- to medium-grained, up to 35% gravel and cobbles, fine to coarse gravel, cobbles (to 7").	50 (4")	--	--
4					- no recovery, medium dense			
6	B1@5'				- no recovery		--	--
8	B1@7.5'					50 (5.5")	--	--
					Total depth of boring: 9 feet (refusal) Fill to 1.5 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A1,
Log of Boring 1, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 1A** ELEV. (MSL.) -- DATE COMPLETED **7/22/2021** EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**ARTIFICIAL FILL** Sand, poorly-graded, medium dense, moist, dark brown, fine- to medium-grained, trace fine gravel.			
2					**ALLUVIUM** Sand with Gravel and Cobbles, well-graded, very dense, slightly moist, brown, fine- to coarse-grained, up to 35% gravel and cobbles, fine to coarse gravel.			
4				SW				
6					- large cobble/boulder			
					Total depth of boring: 7 feet (refusal) Fill to 2 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A2,
Log of Boring 1A, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 1B** ELEV. (MSL.) -- DATE COMPLETED **7/22/2021** EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**ARTIFICIAL FILL** Sand, poorly graded, medium dense, moist, brown, fine- to medium-grained, trace fine gravel.			
2					**ALLUVIUM** Sand with Gravel and Cobbles, poorly-graded, very dense, slightly moist, light brown, fine- to medium-grained, up to 35% gravel and cobbles, fine to coarse gravel.			
4								
6								
8				SP				
10	B1B@10'					50 (1")		
12								
14								
16	B1B@15'				- medium dense, no recovery	37		
					Total depth of boring: 17.5 feet (refusal) Fill to 1.5 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A3,
Log of Boring 1B, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. W1393-99-01

BORING 2

ELEV. (MSL.) -- DATE COMPLETED **7/22/2021**

EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	BULK 0-5'			SP	**ALLUVIUM** Sand with gravel, poorly-graded, dense, slightly moist to moist, brown, fine- to medium-grained, up to 30% gravel, fine to medium gravel.			
2								
4	B2@3'				- cobbles, no recovery, dense	86	--	--
6	B2@6'			GP	Gravel with Sand and Cobbles, very dense, slightly moist, light brown, fine- to coarse-grained, up to 30% sand, up to 15% cobbles, medium to coarse gravel, cobbles (to 8").	50 (6")	126.0	0.9
8								
10	B2@9'					50 (6")	--	--
12					Total depth of boring: 12 feet (refusal) No fill. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A4,
Log of Boring 2, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. W1393-99-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 2A** ELEV. (MSL.) -- DATE COMPLETED **7/22/2021** EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SP	**ALLUVIUM** Sand with Gravel, dense, slightly moist to moist, brown, fine- to medium-grained, fine gravel.			
2								
4				GP	Gravel with Sand and Cobbles, very dense, slightly moist, brown, fine- to medium-grained, up to 30% sand, up to 20% cobbles, medium to coarse gravel.			
6								
8				SP	Sand with Gravel, poorly-graded, very dense, slightly moist, brown, fine- to medium-grained, up to 30% gravel, medium to coarse gravel.			
10								
12					- some cobbles			
					Total depth of boring: 12.5 feet (refusal) No fill. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A5,
Log of Boring 2A, Page 1 of 1

SAMPLE SYMBOLS

☐ ... SAMPLING UNSUCCESSFUL ◧ ... STANDARD PENETRATION TEST ■ ... DRIVE SAMPLE (UNDISTURBED)

⊠ ... DISTURBED OR BAG SAMPLE ◥ ... CHUNK SAMPLE ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. W1393-99-01

BORING 2B

ELEV. (MSL.) -- DATE COMPLETED 7/22/2021

EQUIPMENT HOLLOW STEM AUGER BY: JS

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ALLUVIUM** Sand with Gravel, medium dense to dense, slightly moist to moist, brown, fine- to medium-grained, up to 30% gravel, medium to coarse gravel.			
2					- cobbles			
4								
6								
8								
10				SP				
12					- cobbles (to 5")			
14								
16	B2B@15'				- very dense, increase in gravel and cobbles	50 (1")	--	--
18								
20	B2B@20'					50 (5")	129.2	1.4
					Total depth of boring: 20.5 feet (refusal) No fill. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A6,
Log of Boring 2B, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. W1393-99-01

BORING 3

ELEV. (MSL.) -- DATE COMPLETED **7/22/2021**

EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	BULK 0-5'				**ARTIFICIAL FILL** Sand, poorly graded, medium dense, moist, very dark brown, fine- to meidum-grained, trace fine gravel.			
2	B3@2.5'					26	107.8	6.7
4	B3@5'				**ALLUVIUM** Sand with Gravel and Cobbles, well-graded, very dense, slightly moist, light brown, fine-to coarse-grained, up to 35% gravel, up to 10% cobbles, fine to coarse gravel.	50 (5")	130.4	1.2
6								
8	B3@7.5'				- no recovery	50 (5.5")	--	--
10	B3@10'				- no recovery	50 (6")	--	--
12				SW				
	B3@12.5'				- dense	57	132.3	1.9
14								
	B3@15'				- very dense, yellowish brown, decrease in gravel content	50 (5")	110.0	3.5
16								
18								
20	B3@20'					50 (5.5")	90.7	1.4
					Total depth of boring: 20.5 feet Fill to 4 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A7,
Log of Boring 3, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

BORING 4

ELEV. (MSL.) -- DATE COMPLETED 7/22/2021

EQUIPMENT HOLLOW STEM AUGER BY: JS

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	BULK 0-5'				**ALLUVIUM** Sand with Gravel and Cobbles, well-graded, dense, slightly moist, light brown to brown, fine- to coarse-grained, up to 35% gravel, up to 20% cobbles, fine to coarse gravel.			
2	B4@2.5'					55	129.4	0.9
4								
6	B4@5'					50 (6")	122.9	1.6
8	B4@7.5'			SW	- very dense, grades to cobbly/gravelly sand	50 (4")	--	--
10	B4@10'					50 (6")	124.1	1.9
12	B4@12.5'				- dense	60	133.4	1.3
14					- very dense, increase in cobbles			
16	B4@15'					50 (5.5")	--	--
18								
20	B4@20'					50 (5")	128.5	2.3

Total depth of boring: 20.5 feet
No fill.
No groundwater encountered.
Backfilled with soil cuttings and tamped.

*Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.

NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.

W1393-99-01 BORING LOGS.GPJ

Figure A8,
Log of Boring 4, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

BORING 5

ELEV. (MSL.) -- DATE COMPLETED **7/22/2021**

EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	BULK 0-5'				**ARTIFICIAL FILL** Sand, poorly graded, medium dense, moist, dark brown, fine- to medium-grained.			
2					**ALLUVIUM**			
4	B5@3'				Sand with Gravel, well-graded, dense, slightly moist, light brown to brown, fine- to coarse-grained, up to 35% gravel, up to 10% cobbles, fine to coarse gravel, some cobbles.	63	121.3	1.3
6	B5@6'				- very dense	50 (4")	139.7	2.4
8	B5@9'			SW		50 (6")	124.6	1.6
10								
12	B5@12'				- no recovery	50 (5")	--	--
14								
16	B5@15'					50 (6")	--	--
18								
20	B5@20'				- moist, dark yellowish brown	50 (2")	121.2	2.0

Total depth of boring: 20.5 feet
Fill to 2 feet.
No groundwater encountered.
Backfilled with soil cuttings and tamped.

*Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.

NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.

W1393-99-01 BORING LOGS.GPJ

Figure A9,
Log of Boring 5, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. W1393-99-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 6** ELEV. (MSL.) -- DATE COMPLETED **7/22/2021** EQUIPMENT **HOLLOW STEM AUGER** BY: **JS**	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**ARTIFICIAL FILL** Sand, poorly graded, medium dense, slightly moist, dark brown, fine- to medium-grained, trace fine gravel.			
2	B6@2.5'					15	106.3	2.7
4					**ALLUVIUM** Sand with Gravel and Cobbles, well-graded, very dense, slightly moist, brown, fine- to coarse-grained, up to 35% gravel, up to 15% cobbles, fine to coarse gravel.			
6	B6@5'			SW		50 (5")	--	--
8								
10	B6@10'					50 (6")	125.7	1.1
					Total depth of boring: 10.5 feet Fill to 3 feet. No groundwater encountered. Percolation testing performed. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.			

W1393-99-01 BORING LOGS.GPJ

Figure A10,
Log of Boring 6, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

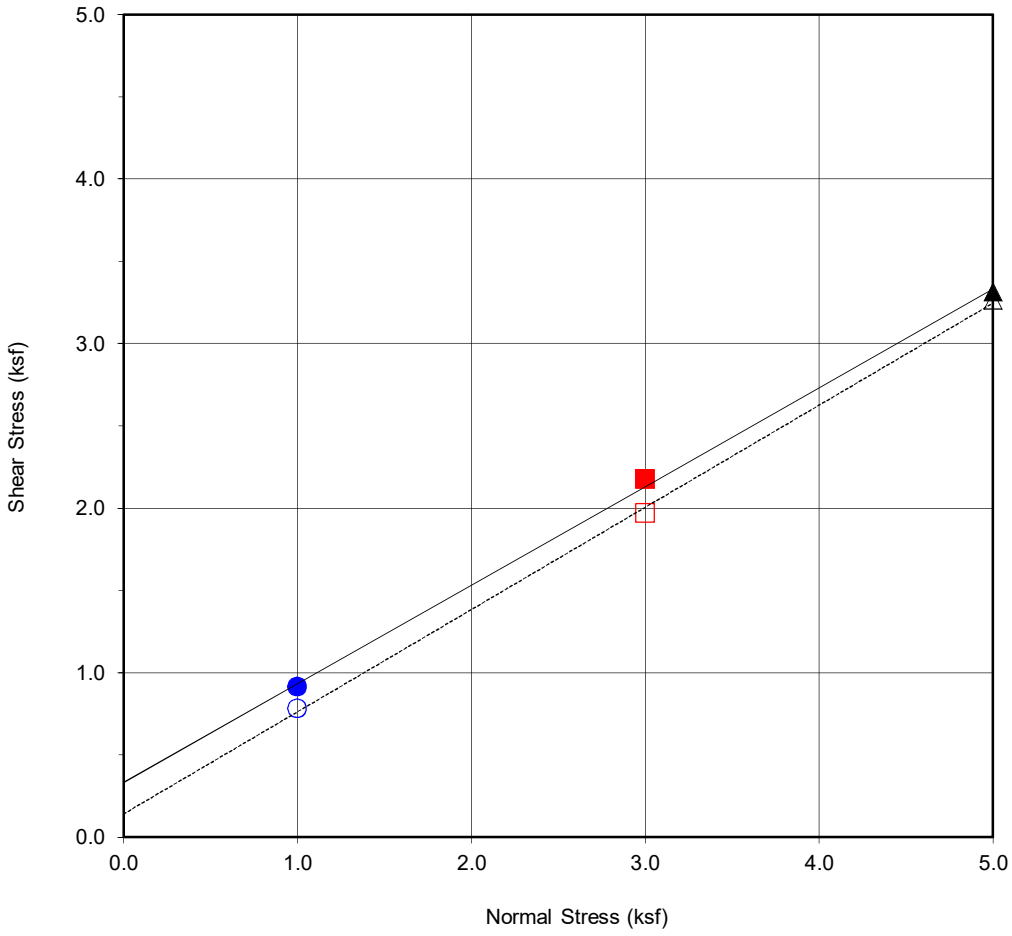
NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

APPENDIX B

APPENDIX B

LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM), or other suggested procedures. Selected samples were tested for direct shear strength, consolidation characteristics, corrosivity, in-place dry density and moisture content. The results of the laboratory tests are summarized in Figures B1 through B10. The in-place dry density and moisture content of the samples tested are presented in the boring logs, Appendix A.



Boring No.	**B1+B4**
Sample No.	**B1+B4@0-5'**
Depth (ft)	**0-5'**
Sample Type:	Ring

Soil Identification:

Brown Sand with Gravel (SP)

Strength Parameters

	C (psf)	ϕ (^{o})
Peak	332	31.0
Ultimate	141	31.8

Normal Strest (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.91	■ 2.17	▲ 3.31
Shear Stress @ End of Test (ksf)	○ 0.78	□ 1.97	△ 3.26
Deformation Rate (in./min.)	0.01	0.01	0.01
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	10.1	10.2	11.2
Initial Dry Density (pcf)	114.9	115.0	113.7
Initial Degree of Saturation (%)	58.2	58.8	62.5
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	14.6	13.9	13.8

GEOCON

DIRECT SHEAR TEST RESULTS

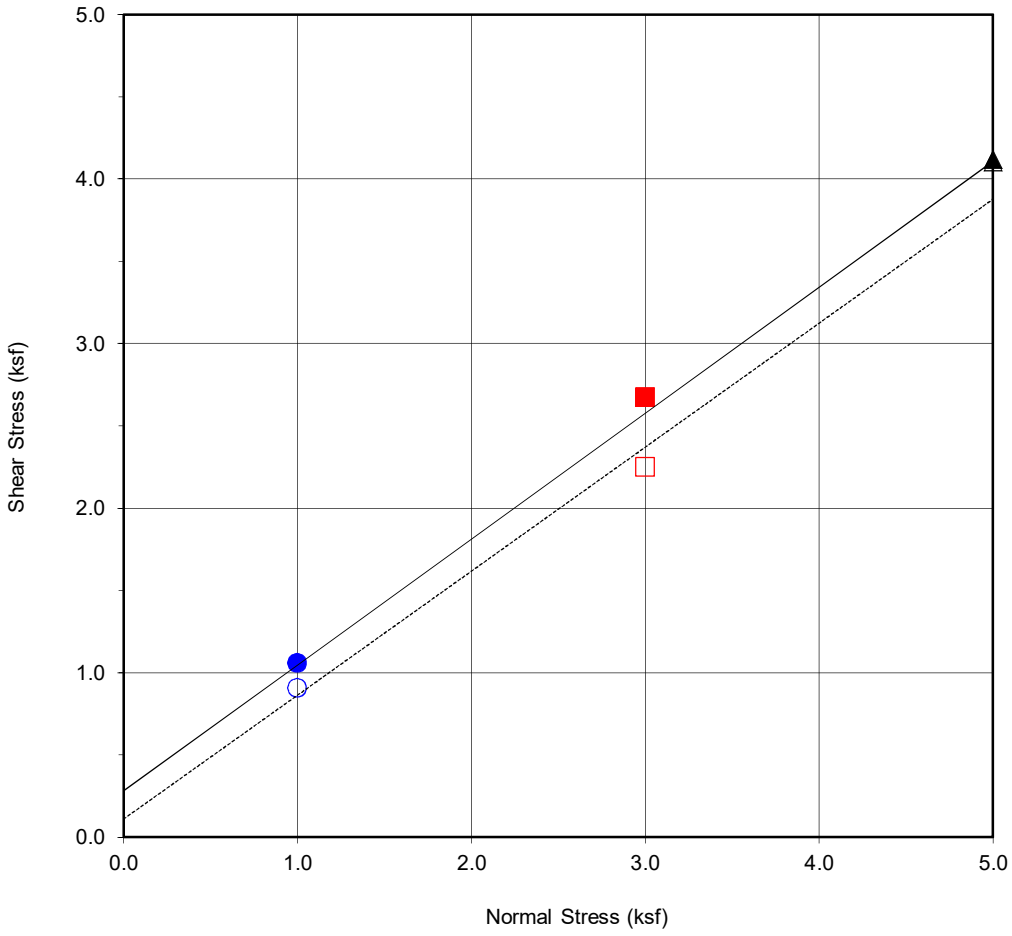
Consolidated Drained ASTM D-3080

Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B1



Boring No.	**B-4**
Sample No.	**B4@2.5'**
Depth (ft)	**2.5'**
Sample Type:	Ring

Soil Identification:

Brown Sand with Gravel (SW)

Strength Parameters

	C (psf)	ϕ (^{o})
Peak	281	37.4
Ultimate	110	37.0

Normal Strest (kip/ft2)	1	3	5
Peak Shear Stress (kip/ft²)	● 1.06	■ 2.67	▲ 4.12
Shear Stress @ End of Test (ksf)	○ 0.91	□ 2.25	△ 4.10
Deformation Rate (in./min.)	0.01	0.01	0.01
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	6.1	7.8	6.0
Initial Dry Density (pcf)	121.1	121.0	123.4
Initial Degree of Saturation (%)	41.8	53.5	44.6
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	10.7	13.5	11.4

GEOCON

DIRECT SHEAR TEST RESULTS

Consolidated Drained ASTM D-3080

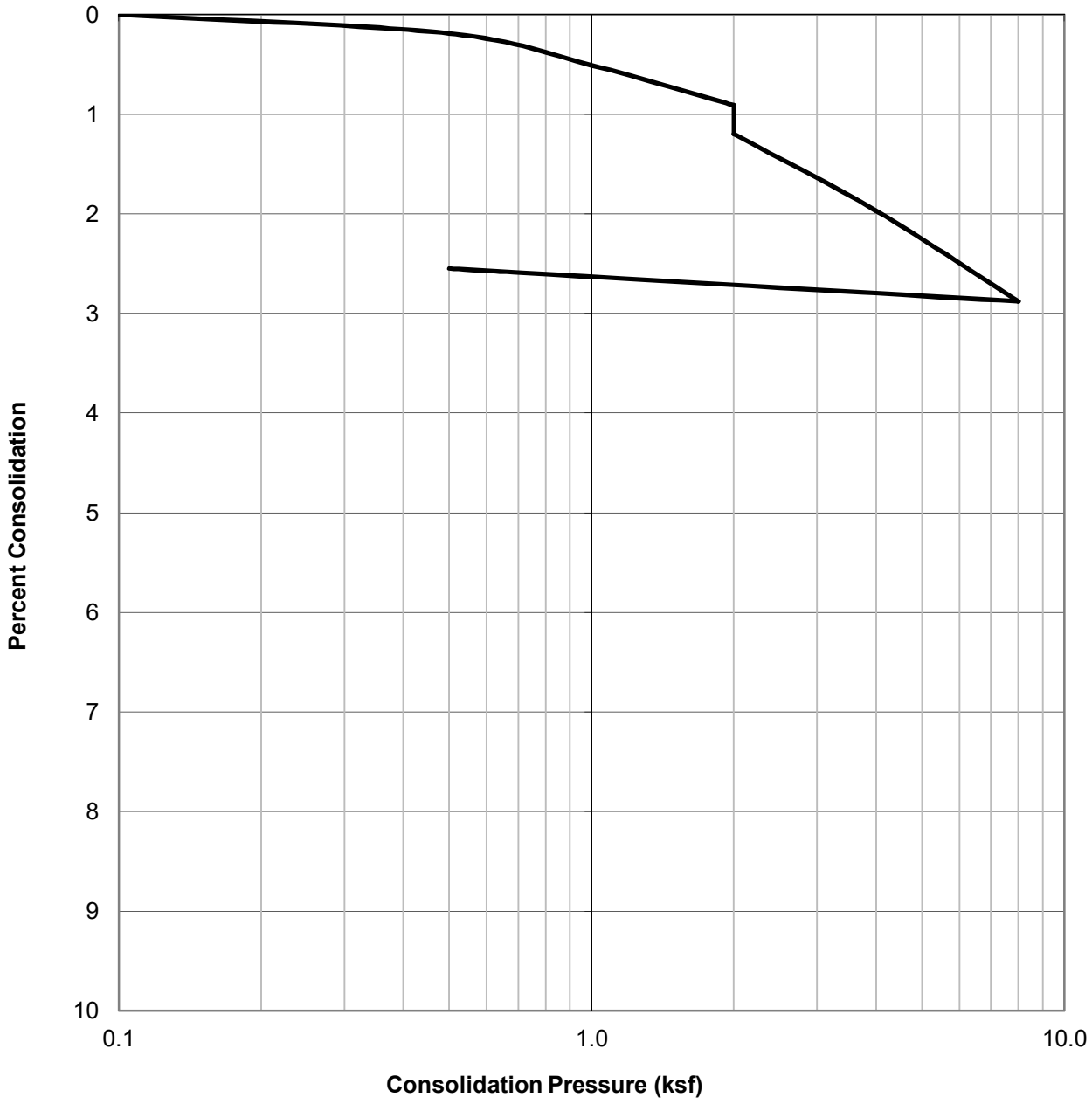
Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B2

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B2@6'	Gravel with Sand and Cobbles (GP)	122.9	2.2	11.7

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

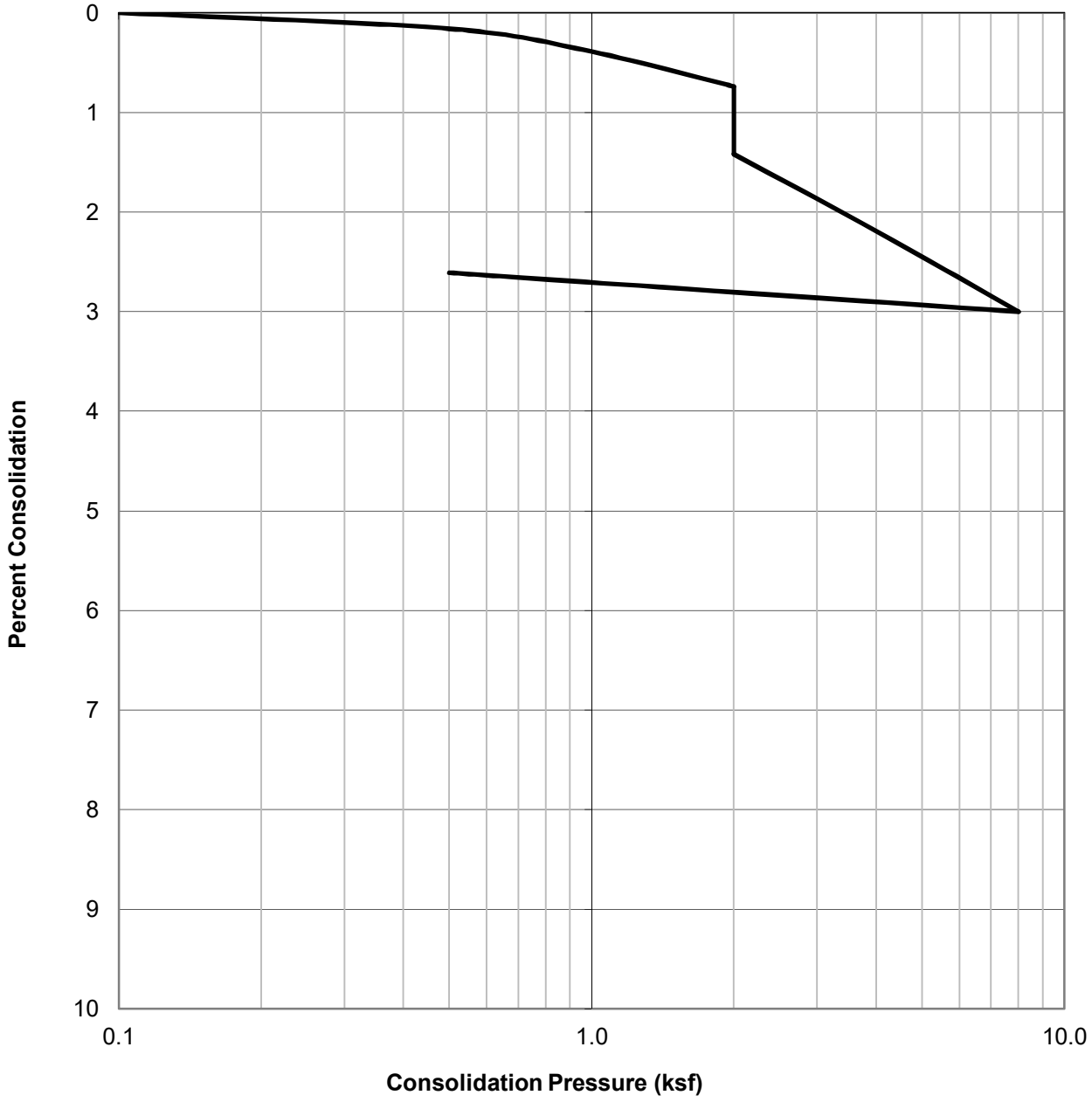
Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B3

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@6'	Brown Sand with Gravel (SP)	127.8	2.9	11.3

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

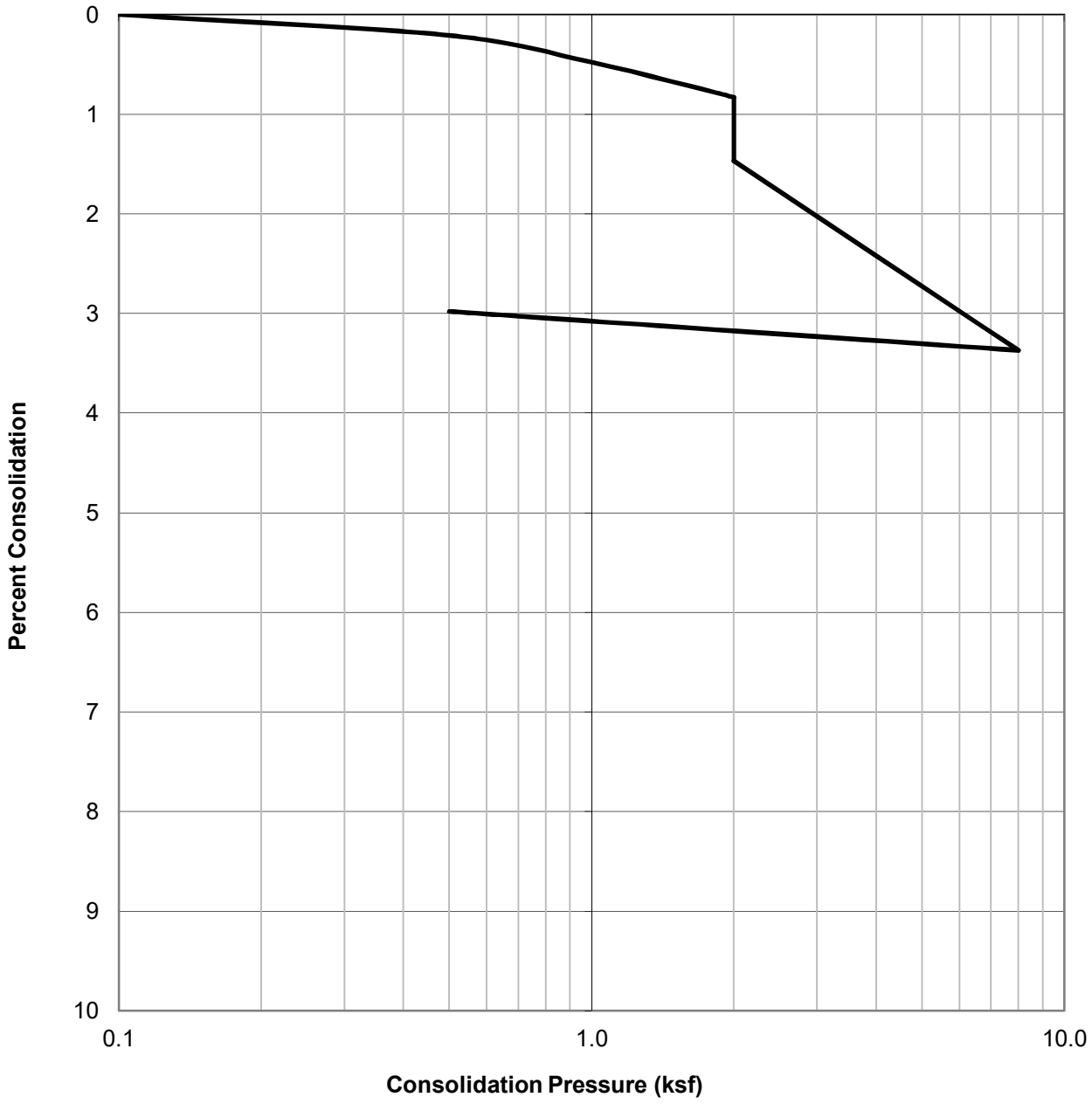
Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B4

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B5@9'	Brown Sand with Gravel (SW)	121.6	2.4	13.0

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

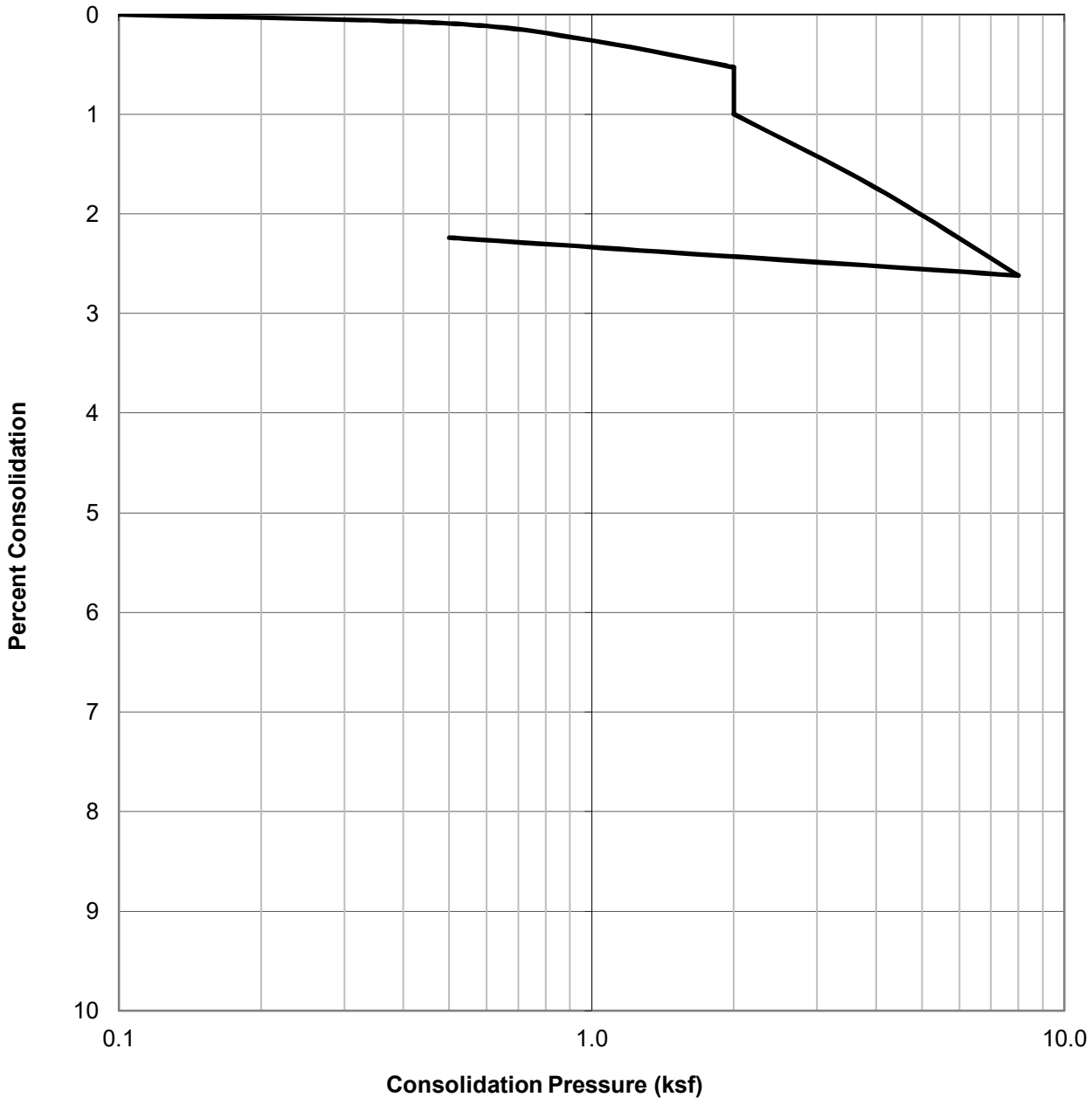
Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B5

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B3@12.5'	Light Brown Sand with Gravel and Cobbles (SW)	124.7	2.4	11.8

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

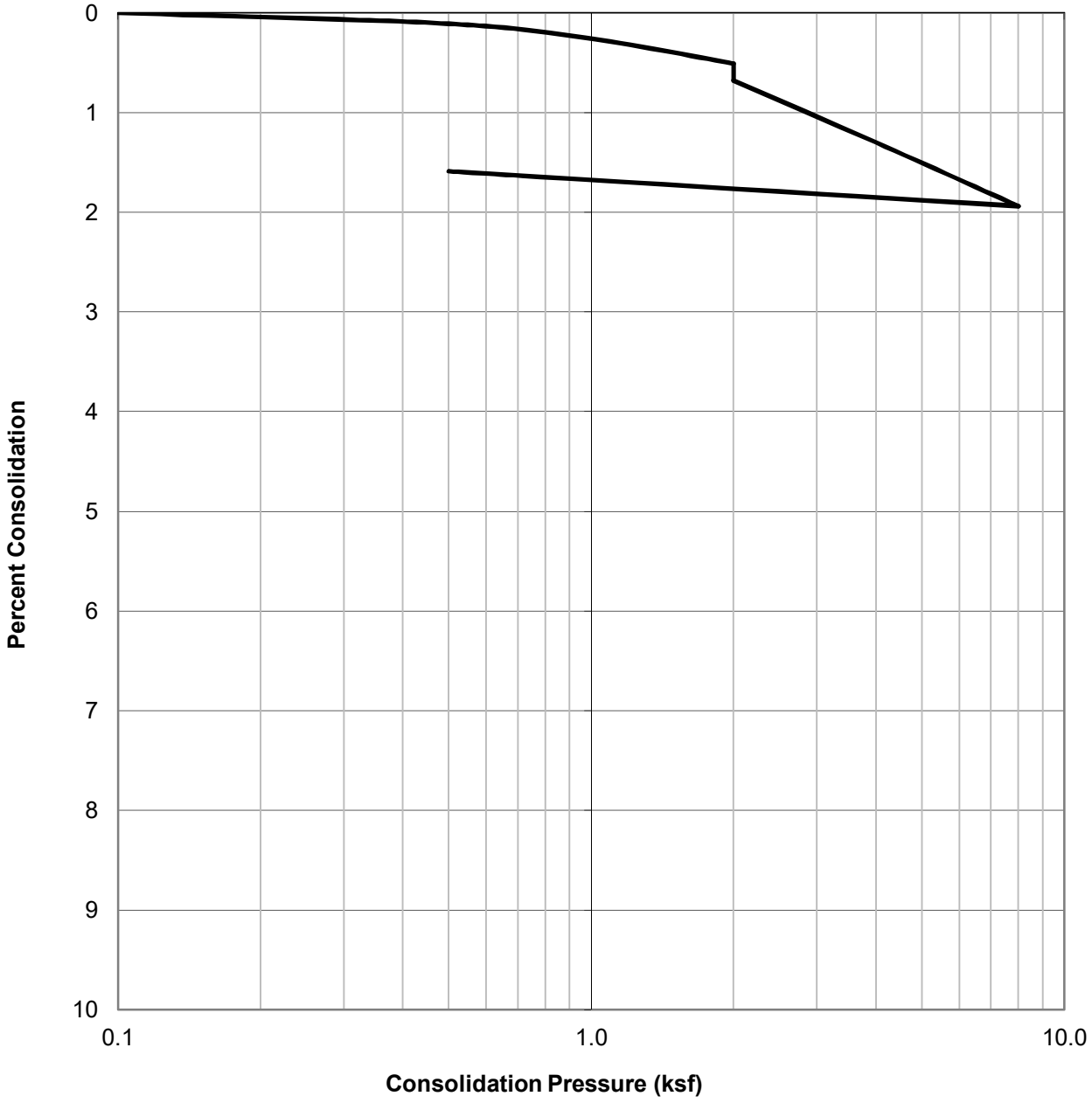
Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B6

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B4@12.5'	Brown Sand with Gravel (SW)	130.1	2.4	11.2

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

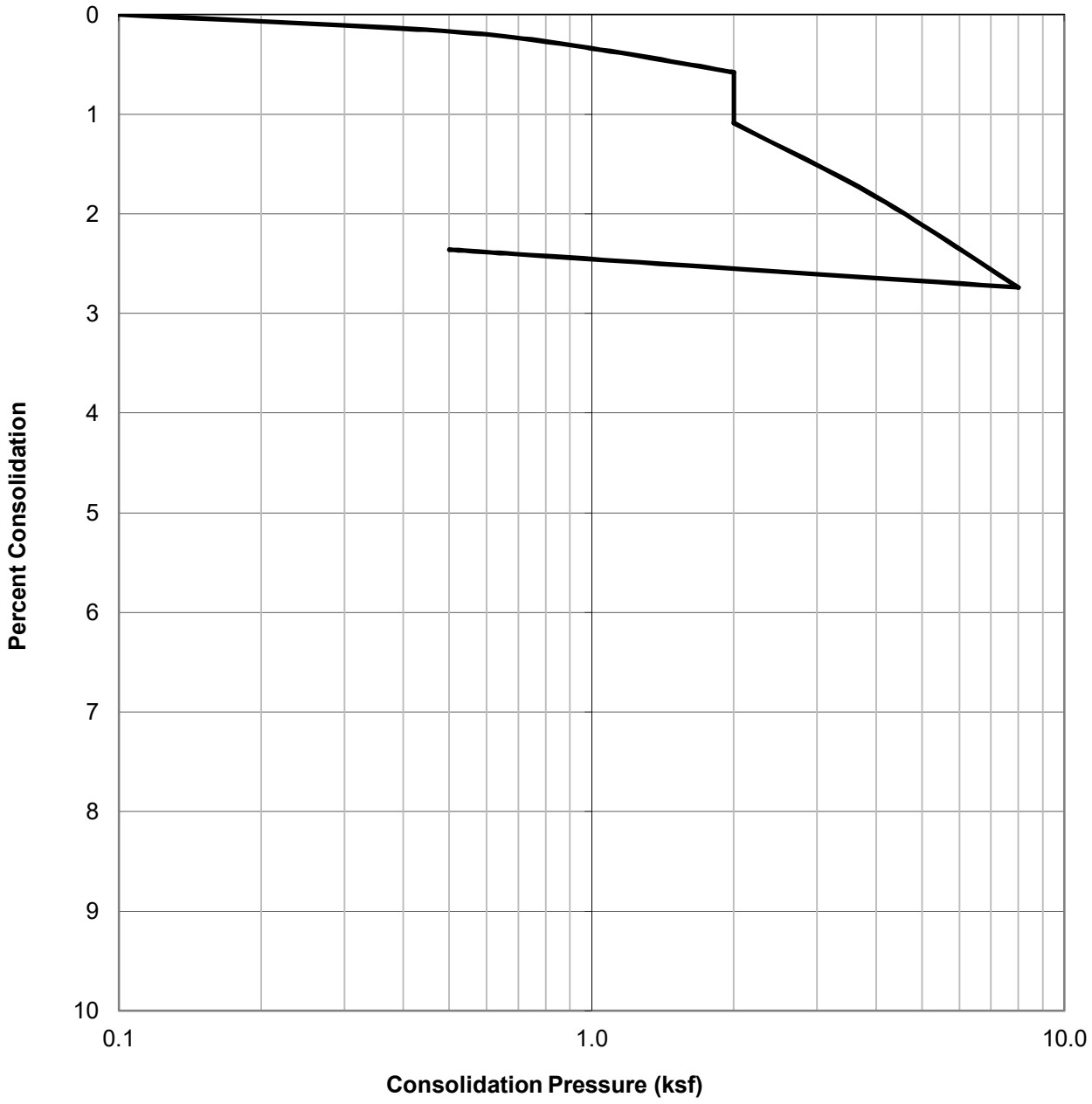
Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B7

WATER ADDED AT 2.0 KSF



SAMPLE ID.	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B2B@20'	Brown Sand with Gravel (SP)	126.1	2.8	11.1

GEOCON

CONSOLIDATION TEST RESULTS

ASTM D-2435

Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

August 2021 Figure B8

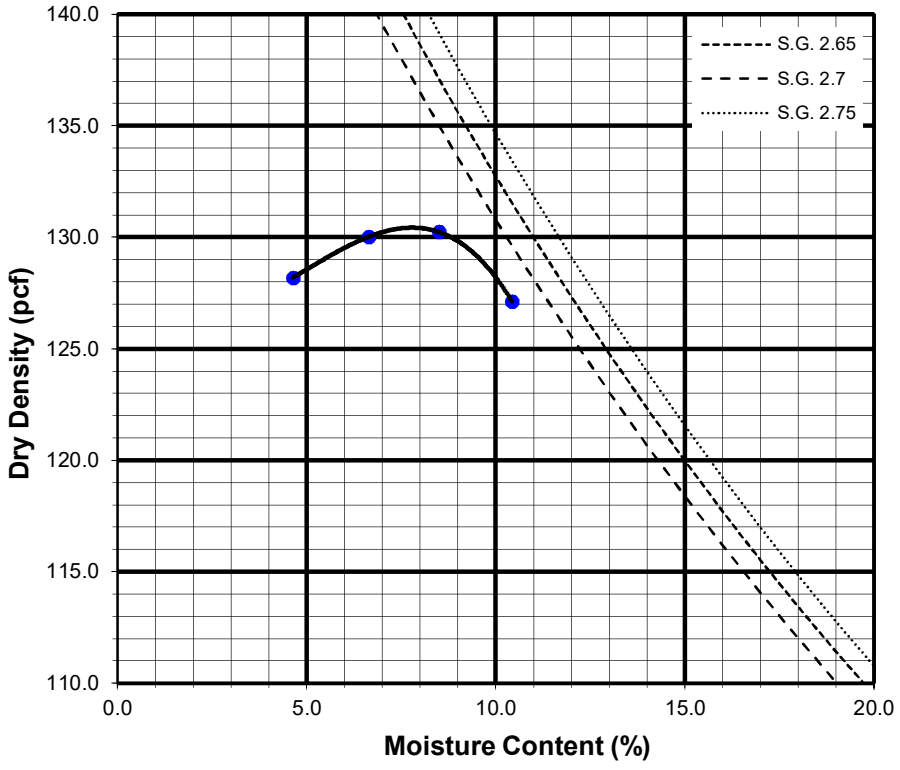
Sample No:

B1+B4@0-5'	Brown Sand with Gravel (SP)

TEST NO.		1	2	3	4	5	6
Wt. Compacted Soil + Mold	(g)	6312	6380	6420	6406		
Weight of Mold	(g)	4292	4292	4292	4292		
Net Weight of Soil	(g)	2020	2088	2128	2114		
Wet Weight of Soil + Cont.	(g)	2397.9	2470.4	2538.1	2493.6		429.1
Dry Weight of Soil + Cont.	(g)	2308.4	2340.2	2371.2	2293.8		420.7
Weight of Container	(g)	378.7	378.8	409.0	379.0		95.2
Moisture Content	(%)	4.6	6.6	8.5	10.4	0.0	2.6
Wet Density	(pcf)	134.1	138.6	141.3	140.4		
Dry Density	(pcf)	128.2	130.0	130.2	127.1	0.0	0.0

Maximum Dry Density (pcf)	**130.6**
Bulk Specific Gravity (dry)	**2.64**
Corrected Maximum Dry Density (pcf)	**147.8**

Optimum Moisture Content (%)	**7.6**
Oversized Fraction (%)	**55.8**
Corrected Moisture Content (%)	**3.3**



Preparation Method: A

GEOCON

COMPACTION CHARACTERISTICS USING MODIFIED EFFORT TEST RESULTS

ASTM D-1557

Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue and Lowell Street Rialto, California

August 2021 Figure B9

SUMMARY OF LABORATORY POTENTIAL
OF HYDROGEN (pH) AND RESISTIVITY TEST RESULTS
CALIFORNIA TEST NO. 643

Sample No.	pH	Resistivity (ohm centimeters)
B1+B4@0-5'	7.7	6000 (Moderately Corrosive)

SUMMARY OF LABORATORY CHLORIDE CONTENT TEST RESULTS
EPA NO. 325.3

Sample No.	Chloride Ion Content (%)
B1+B4@0-5'	0.015

SUMMARY OF LABORATORY WATER SOLUBLE SULFATE TEST RESULTS
CALIFORNIA TEST NO. 417

Sample No.	Water Soluble Sulfate (% SO_4)	Sulfate Exposure*
B1+B4@0-5'	0.000	S0

GEOCON

CORROSIVITY TEST RESULTS

Checked by: PZ

Project No.: W1393-99-01

NW Corner of Locust Avenue
and Lowell Street
Rialto, California

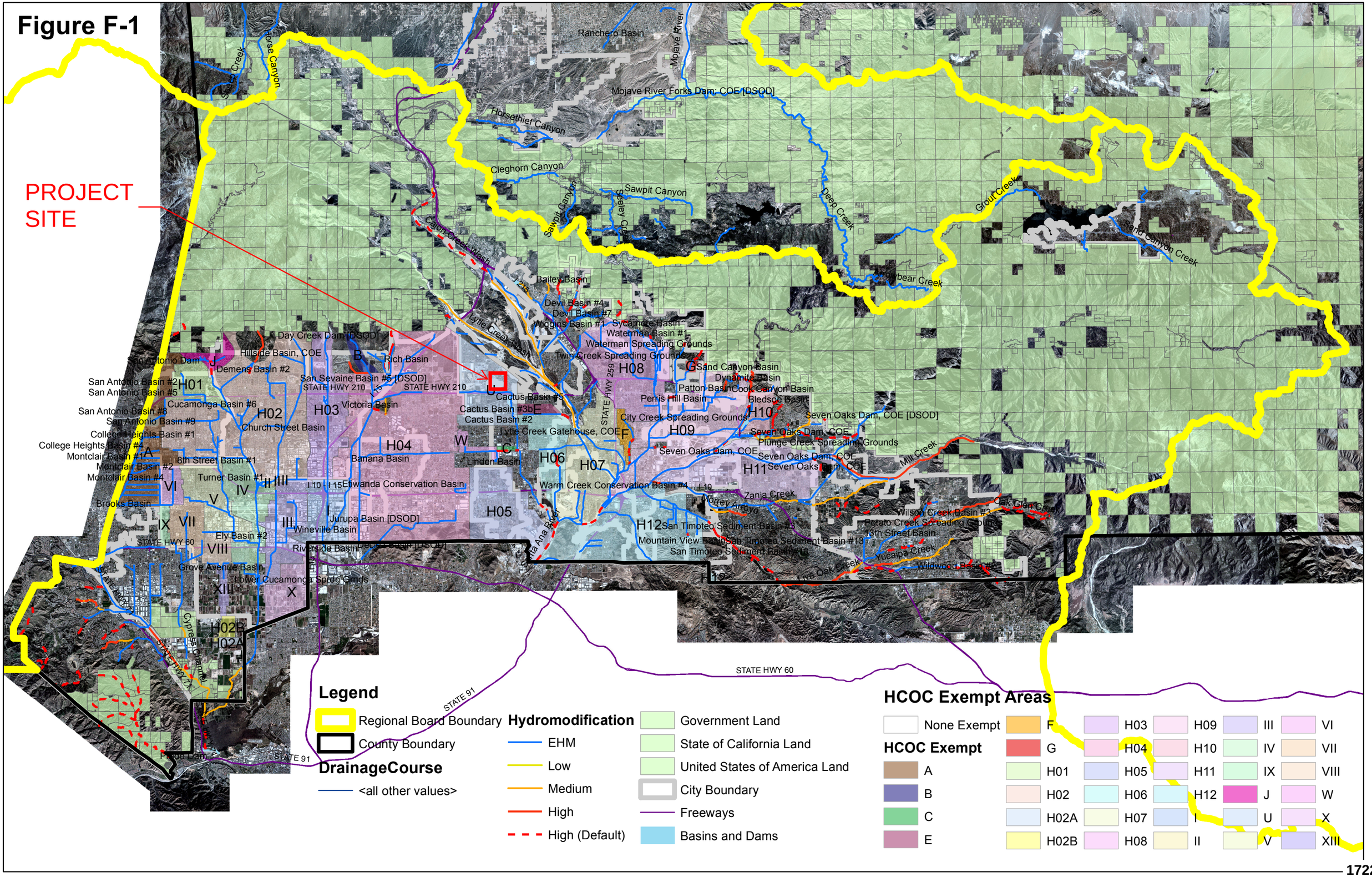
August 2021 Figure B10

APPENDIX F

HYDROMODIFICATION EXEMPTION DOCUMENTATION

Figure F-1

PROJECT SITE



Legend

- Regional Board Boundary
- County Boundary

DrainageCourse

- <all other values>

Hydromodification

- EHM
- Low
- Medium
- High
- High (Default)

- Government Land
- State of California Land
- United States of America Land
- City Boundary
- Freeways
- Basins and Dams

HCOC Exempt Areas

- None Exempt

HCOC Exempt

A, B, C, E, F, G, H01, H02, H02A, H02B, H03, H04, H05, H06, H07, H08, H09, H10, H11, H12, I, II, III, IV, V, VI, VII, VIII, IX, J, U, W, X, XIII

Hydromodification

A.1 Hydrologic Conditions of Concern (HCOC) Analysis

HCOC Exemption:

1. **Sump Condition:** All downstream conveyance channel to an adequate sump (for example, Prado Dam, Santa Ana River, or other Lake, Reservoir or naturally erosion resistant feature) that will receive runoff from the project are engineered and regularly maintained to ensure design flow capacity; no sensitive stream habitat areas will be adversely affected; or are not identified on the Co-Permittees Hydromodification Sensitivity Maps.

2. **Pre = Post**: The runoff flow rate, volume and velocity for the post-development condition of the Priority Development Project do not exceed the pre-development (i.e, naturally occurring condition for the 2-year, 24-hour rainfall event utilizing latest San Bernardino County Hydrology Manual.

    a. Submit a substantiated hydrologic analysis to justify your request.

3. **Diversion to Storage Area**: The drainage areas that divert to water storage areas which are considered as control/release point and utilized for water conservation.

    a. See Appendix F for the HCOC Exemption Map and the on-line Watershed Geodatabase (http://sbcounty.permitrack.com/wap) for reference.

4. **Less than One Acre**: The Priority Development Project disturbs less than one acre. The Co-permittee has the discretion to require a Project Specific WQMP to address HCOCs on projects less than one acre on a case by case basis. The project disturbs less than one acre and is not part of a common plan of development.

5. **Built Out Area**: The contributing watershed area to which the project discharges has a developed area percentage greater than 90 percent.

    a. See Appendix F for the HCOC Exemption Map and the on-line Watershed Geodatabase (http://sbcounty.permitrack.com/wap) for reference.

Summary of HCOC Exempted Area

	HCOC Exemption reasoning				
	1	2	3	4	5
Area					
A			X		X
B			X		
C					X
E			X		
F					X
G			X		X
H01	X		X		
H02	X		X		
H02A	X		X		
H02B			X		
H03			X		
H04	X		X		
H05	X				
H06			X		
H07	X				
H08	X		X		
H09	X				
H10	X		X		
H11	X		X		
H12	X				
J			X		
U			X		
W			X		
I			X		
II			X		
III					X
IV			X		X
V			X*		
VI					X
VII					X
VIII			X		
IX					X
X			X		
XIII			X		

*Detention/Conservation Basin

APPENDIX H

ACOUSTICAL ASSESSMENT

Acoustical Assessment
Locust Avenue and Lowell Street Development Project
City of Rialto, California

Kimley»Horn
Expect More. Experience Better.

Prepared by:

Kimley-Horn and Associates, Inc.
1100 W. Town and Country Road, Suite 700
Orange, California 92868
Contact: Ms. Olivia Chan
714.939.1030

May 2022

TABLE OF CONTENTS

1 INTRODUCTION
1.1 Project Location and Setting 1
1.2 Project Description....1

2 ACOUSTIC FUNDAMENTALS
2.1 Sound and Environmental Noise....6
2.2 Groundborne Vibration....10

3 REGULATORY SETTING
3.1 Federal 12
3.2 State of California....12
3.3 Local 13

4 EXISTING CONDITIONS
4.1 Existing Noise Sources....15
4.2 Noise Measurements 15
4.3 Sensitive Receptors 16

5 SIGNIFICANCE CRITERIA AND METHODOLOGY
5.1 CEQA Threshsolds 17
5.2 Methodology....17
5.3 Summary of the Rialto Airport Specific Plan EIR 18

6 POTENTIAL IMPACTS AND MITIGATION
6.1 Acoustical Impacts 19
6.2 Cumulative Noise Impacts....27

7 REFERENCES
References....29

TABLES
Table 1 Typical Noise Levels....6
Table 2 Definitions of Acoustical Terms....7
Table 3 Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibrations....11
Table 4 Existing Noise Measurements....15
Table 5 Sensitive Receptors....16
Table 6 Typical Construction Noise Levels....19
Table 7 Project Construction Noise Levels....21
Table 8 Typical Construction Equipment Vibration Levels 26

EXHIBITS
Exhibit 1 Regional Location Map....3
Exhibit 2 Local Vicinity Map 4
Exhibit 3 Conceptual Site Plan 5

APPENDICES
Appendix A: Noise Data

LIST OF ABBREVIATED TERMS

APN	Assessor's Parcel Number
ADT	Average daily traffic
dBA	A-weighted sound level
CEQA	California Environmental Quality Act
CNEL	Community equivalent noise level
L_{dn}	Day-night noise level
dB	Decibel
du/ac	Dwelling units per acre
L_{eq}	Equivalent noise level
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HVAC	Heating ventilation and air conditioning
Hz	Hertz
in/sec	Inches per second
L_{max}	Maximum noise level
µPa	Micropascals
L_{min}	Minimum noise level
PPV	Peak particle velocity
RMS	Root mean square
VdB	Vibration velocity level

1 INTRODUCTION

This report documents the results of an Acoustical Assessment completed for the Thrifty Oil Project ("Project" or "Proposed Project"). The purpose of this analysis is to identify the air quality emissions associated with construction and operations of the Project as part of the Rialto Airport Environmental Impact Report (EIR) Addendum, located in the City of Rialto, California. This comparative analysis has been undertaken to analyze whether the proposed Project would result in any new or substantially more severe significant environmental impacts as compared to the conclusions discussed in the certified Final Program Environmental Impact Report (FEIR) for the Rialto Airport Specific Plan (November 1997) (Approved Project).

1.1 Project Location and Setting

The Project site is in the northern area of the City of Rialto in San Bernardino County, approximately one mile north of State Route (SR) 210; refer to **Exhibit 1, Regional Location Map**. The Project site is approximately 4.78 acres and regional access to the Project site is provided via SR-210. Local access to the Project site is provided via Lowell Street which is a two-lane undivided roadway, trending in an east-west direction and Locust Avenue which is a two-lane undivided roadway, trending in a north-south direction. The site is bordered by a recycling center to the north; Lowell Street and vacant land designated for General Industrial uses to the south; Locust Avenue, a truck trailer storage yard, and an industrial warehouse to the east; and a manufacturing facility to the west; refer to **Exhibit 2, Project Vicinity Map**.

1.2 Project Description

The Project proposes to develop a warehouse building with approximately 91,880 square feet (sf) of warehouse space and 9,000 sf of two-story office area for a total building area of 100,880 sf; refer to **Exhibit 3, Conceptual Site Plan**. The Project includes minimal production, use, storage, transport or disposal of hazardous materials for construction and operational activities. The Project is speculative in nature; the end user(s) and their hours of operation are unknown at this time. However, to be conservative, it has been assumed that the building would operate 24 hours per day/7 days per week for the Addendum's analyses referenced herein. The Project will not include refrigerated uses on-site.

The Project proposes two office spaces (each would include two-story areas consisting of 4,500 sf), one on the southwest corner of the warehouse building and one on the southeast corner of the warehouse building. The warehouse building would be designed to have a maximum building height of approximately 34.5'. The warehouse building would provide ingress and egress via 40' wide driveway and one 32' wide driveway on Lowell Street and one 50' wide driveway on Locust Avenue. Drive aisles along the northern, southern and western frontages would range from 26 to 40 feet in width to allow for onsite movement for workers and emergency vehicles alike. The building will be provided with 87 vehicle parking stalls, 12 dock doors, and one drive thru door on the north side of the building. Vehicle parking will be provided on the north, west, and south sides of the site, while all truck doors will be located on the north side of the building.

As noted above, Project site's ingress and egress would be provided via three driveways with two located on Lowell Street and one located on Locust Avenue. The 32-foot wide driveway located on the south side

of the Project site would allow for right-in-right-out access onto Lowell Street for passenger vehicles and emergency vehicles. The 40-foot wide driveway located at the southwest corner of the Project site would allow for right-in and left-out secondary truck access onto Lowell Street. The 50-foot wide driveway located at the northeast corner of the Project site would allow for left-in-right-out primary truck access onto Locust Avenue.

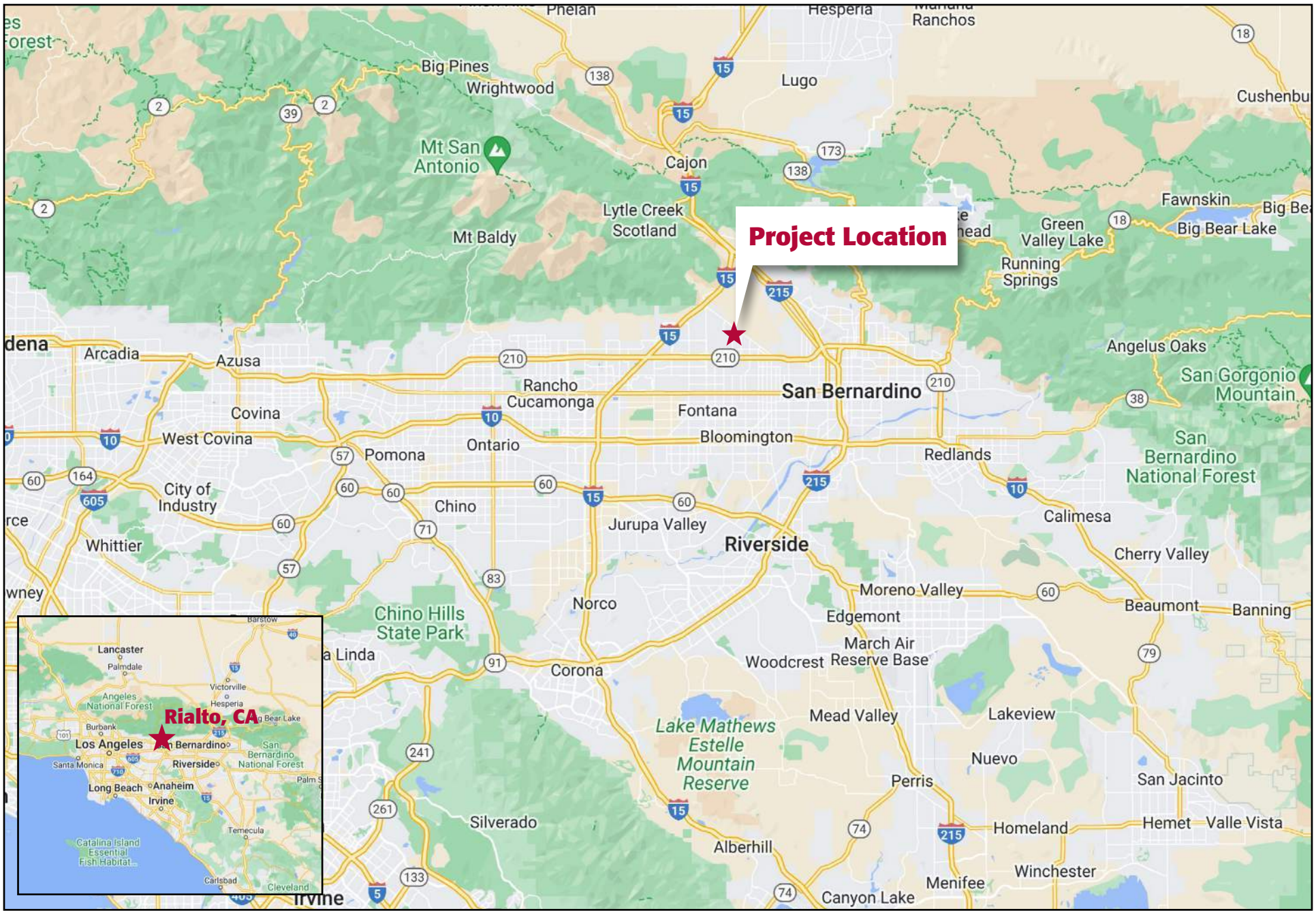
Construction is anticipated to occur over a duration of approximately nine months, commencing in the fourth quarter of 2022.

Parking

The Project is anticipated to provide 87 vehicle parking stalls. Additionally, the warehouse building includes 12 dock doors and one drive thru door located on the northern side of the building. All auto parking would be located on the parking will be provided on the north and west, and south sides of the site portions of the Project site.

Landscaping

The Project site would be landscaped in accordance with the landscape design guidelines set forth in Municipal Code Section 18.61.250 and Section 18.61.270, Landscaping would comply with City requirements for the efficient use of water in the landscape design plan.



Source: Google Maps, 2022

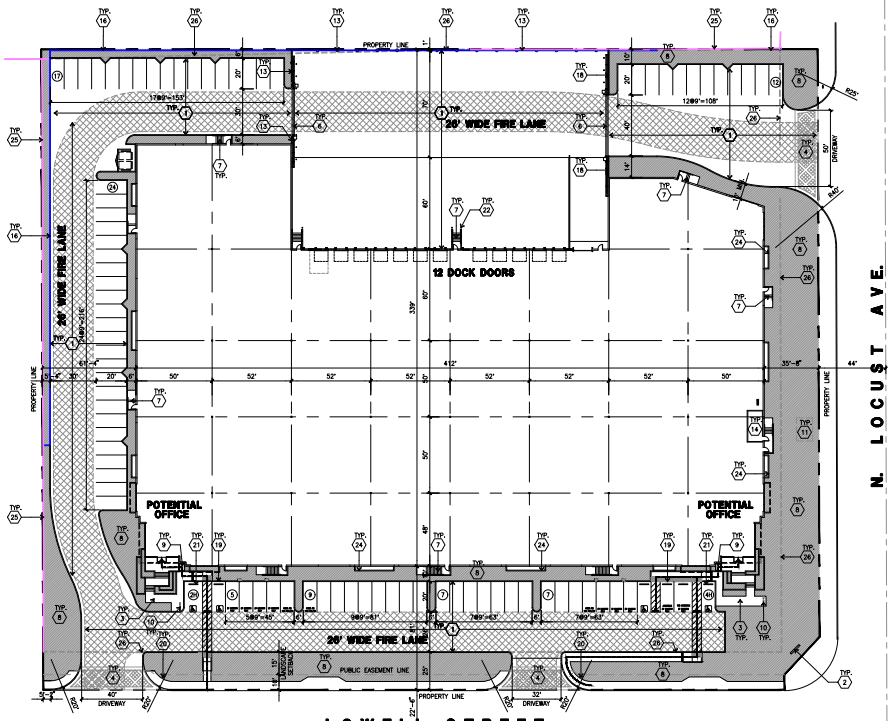
Exhibit 1: Regional Vicinity Map

Locust Avenue and Lowell Street Development Project



Source: Nearmap, 2022

Exhibit 2: Local Vicinity Map
Locust Avenue and Lowell Street Development Project



OVERALL SITE PLAN

SCALE: 1" = 30'-0"

VICINITY MAP



PROJECT DATA

SITE AREA		
	In s.f. (Less pedestrian easement)	208,131 s.f.
	In acres	4.78 ac
BUILDING AREA		
	Office	4,500 s.f.
	Office 2nd floor	4,500 s.f.
	Warehouse	91,880 s.f.
	TOTAL	100,880 s.f.
COVERAGE		48.5%
AUTO PARKING REQUIRED		
	Office: 1/250 s.f.	36 stalls
	Whse: 1st 10'k @ 1/1000 s.f.	10 stalls
	w hse: above 10'k @ 1/2000 s.f.	41 stalls
	TOTAL	87 stalls
AUTO PARKING PROVIDED		
	Standard (9' x 20')	87 stalls
ZONING ORDINANCE FOR CITY		
	Zoning Designation - Rialto Airport Specific Plan - I-GM (General Manufacturing)	
MAXIMUM BUILDING HEIGHT ALLOWED		
	Height - 35' w ith 1:1 Setback Ratio	
MAXIMUM FLOOR AREA RATIO		
	FAR - 3:1	
SETBACKS		
	Building	Landscape
	Locust Ave/Front - 25'	15'
	Low ell St/Side - 15'	15'
	Rear - 0'-15'	0

PROPERTY OWNER

THRIFTY OIL CO.
13116 IMPERIAL HIGHWAY
SANTA FE SPRINGS CA 90670
TEL: 562-921-3581
ATTN: STEPHANE WANDEL

ADDRESS OF THE PROPERTY

TBD

ASSESSOR'S PARCEL NUMBER

0232-192-12-0-000

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF RIALTO, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL NO. 5 OF PARCEL MAP NO. 7173, IN BERNARDINO, STATE OF CALIFORNIA, AS PER INCLUSIVE OF PARCEL MAPS, IN THE OFFICE THE CITY OF RIALTO, COUNTY OF SAN MAP RECORDED IN BOOK 77 PAGES 64 TO 68 OF THE COUNTY RECORDER OF SAID COUNTY.

APN: 0239-192-12-0-000

ZONING

ZONING DESIGNATION – RIALTO AIRPORT SPECIFIC PLAN
– I-GM (GENERAL MANUFACTURING)

APPLICANT

THRIFTY OIL CO.
13116 IMPERIAL HIGHWAY
SANTA FE SPRINGS CA 90670
TEL: 562-921-3581
ATTN: STEPHANE WANDEL

APPLICANT'S REPRESENTATIVE

HPA, INC.
18831 BARDEEN AVE SUITE 100
IRVINE CA 92612
TEL: 949-862-2137
ATTN: JOSEPH KIM

SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONC. PAVEMENT.
2. FUTURE MONUMENT SIGN
3. CONCRETE WALKWAY
4. DRIVEWAY APRONS TO BE CONSTRUCTED PER "L" DRAWINGS.
5. 5'-6"X5'-6"X4" MIN. THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. SLOPE TO BE 1/4" - 1'2" MAX. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY W/ 1'20 MAX. AS REQ. BY CITY INSPECTOR.
6. PROVIDE METAL, MANUAL OPERATED GATES W/ KNOX-PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
7. EXTERIOR CONC. STAIR.
8. LANDSCAPE. SEE "L" DWGS.
9. ACCESSIBLE LIFT.
10. BIKE RACK.
11. APPROXIMATE LOCATION OF TRANSFORMER.
12. NOT USED.
13. 8'H WROUGHT IRON FENCE
14. ELECTRICAL ROOM
15. SITE LIGHT FIXTURE
16. PROPOSED RETAINING WALL.
17. TRASH ENCLOSURE PER CITY STANDARD.
18. 12'H CONCRETE TILT SCREEN WALL
19. HANDICAPPED PARKING STALL SIGN
20. HANDICAPPED ENTRY SIGN
21. PRE-CAST CONC. WHEEL STOP
22. CONC. FILLED GUARD POST "6 DIA. U.N.O. 42" H.
23. EMPLOYEE BREAK AREA WITH TRELLIS
24. NON-STRUCTURAL ARCHITECTURAL TREATMENT WITH SMOOTH PLASTER FINISH
25. EXISTING RETAINING WALL TO REMAIN.
26. EXISTING RETAINING WALL TO BE DEMOLISHED

SITE LEGEND

- LANDSCAPED AREA
- CONCRETE PAVING SEE "C" DRWGS. FOR THICKNESS
- STANDARD PARKING STALL (9' X 20')
- HANDICAP PARKING STALL (12' X 20')
- 26' FIRE LANE.
- PROPERTY LINE
- PATH OF TRAVEL

SITE PLAN GENERAL NOTES

1. THE SOILS REPORT PREPARED BY _____ SHOULD BE A PART OF THESE CONTRACT DOCUMENTS.
2. IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE.
3. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINE U.N.O.
4. SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES. DETAILS ON SHEET AD.1 ARE MINIMUM STANDARDS.
5. THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM, PRIOR TO INSTALLATION & AT LEAST 60 DAYS BEFORE BLDG. COMPLETION.
6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
9. SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.
10. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY W/ 1:20 MAX. SLOPE. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4". SEE "L" DRAWINGS FOR FINISH.
11. PROVIDE TWO FIRE HYDRANT ON THE SITE. FINAL LOCATION WILL DETERMINATE IN DURING SUBMITTAL.
12. PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.
13. CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND IRRIGATION OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
14. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
15. NOT USED
16. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
17. NOT USED.
18. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB
19. APPROVED CONCEPTUAL LANDSCAPE PLAN PRIOR TO GRADING PERMIT

OFFICIAL USE ONLY

Source: HPA Architecture

Exhibit 3: Site Plan
Locust Avenue and Lowell Street Development Project

2 ACOUSTIC FUNDAMENTALS

2.1 Sound and Environmental Noise

Acoustics is the science of sound. Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a medium (e.g. air) to human (or animal) ear. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second, or hertz (Hz).

Noise is defined as loud, unexpected, or annoying sound. The fundamental model consists of a noise source, a receptor, and the propagation path between the two. The loudness of the noise source, obstructions, or atmospheric factors affecting the propagation path, determine the perceived sound level and noise characteristics at the receptor. Acoustics deal primarily with the propagation and control of sound. A typical noise environment consists of ambient noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this ambient noise is the sound from individual local sources. These sources can vary from an occasional aircraft or train passing by to continuous noise from traffic on a major highway. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a large range of numbers. To avoid this, the decibel (dB) scale was devised. The dB scale uses the hearing threshold of 20 micro-pascals (µPa) as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The dB scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels correspond closely to human perception of relative loudness. **Table 1: Typical Noise Levels** provides typical noise levels.

Table 1: Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	– 110 –	Rock Band
Jet fly-over at 1,000 feet		
	– 100 –	
Gas lawnmower at 3 feet		
	– 90 –	
Diesel truck at 50 feet at 50 miles per hour		Food blender at 3 feet
	– 80 –	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower, 100 feet	**– 70 –**	Vacuum cleaner at 10 feet
Commercial area		Normal Speech at 3 feet
Heavy traffic at 300 feet	**– 60 –**	
		Large business office
Quiet urban daytime	**– 50 –**	Dishwasher in next room
Quiet urban nighttime	**– 40 –**	Theater, large conference room (background)
Quiet suburban nighttime		
	– 30 –	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	– 20 –	
		Broadcast/recording studio
	– 10 –	
Lowest threshold of human hearing	**– 0 –**	Lowest threshold of human hearing

Source: California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

Noise Descriptors

The dB scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The equivalent noise level (L_{eq}) represents the equivalent continuous sound pressure level over the measurement period, while the day-night noise level (L_{dn}) and Community Equivalent Noise Level (CNEL) are measures of sound energy during a 24-hour period, with dB weighted sound levels from 7:00 p.m. to 7:00 a.m. Most commonly, environmental sounds are described in terms of L_{eq} that has the same acoustical energy as the summation of all the time-varying events. Each is applicable to this analysis and defined in **Table 2: Definitions of Acoustical Terms**.

Table 2: Definitions of Acoustical Terms

Term	Definitions
Decibel (dB)	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in µPa (or 20 micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in dB as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g. 20 µPa). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level (dBA)	The sound pressure level in dB as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level (L_{eq})	The average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
Maximum Noise Level (L_{max}) Minimum Noise Level (L_{min})	The maximum and minimum dBA during the measurement period.
Exceeded Noise Levels (L_{01}, L_{10}, L_{50}, L_{90})	The dBA values that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day-Night Noise Level (L_{dn})	A 24-hour average L_{eq} with a 10-dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity at nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
Community Noise Equivalent Level (CNEL)	A 24-hour average L_{eq} with a 5-dBA weighting during the hours of 7:00 a.m. to 10:00 a.m. and a 10-dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

The A-weighted decibel (dBA) sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be used. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source.

A-Weighted Decibels

The perceived loudness of sounds is dependent on many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable and can be approximated by dBA values. There is a strong correlation between dBA and the way the human ear perceives sound. For this reason, the dBA has become the standard tool of environmental noise assessment. All noise levels reported in this document are in terms of dBA, but are expressed as dB, unless otherwise noted.

Addition of Decibels

The dB scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic dB is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound.[1] When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than one source under the same conditions.[2] Under the dB scale, three sources of equal loudness together would produce an increase of approximately 5 dBA.

Sound Propagation and Attenuation

Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics.[3] No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed.

Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm

[1] FHWA, *Noise Fundamentals,* 2017. Available at: https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm
[2] Ibid.
[3] California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, Page 2-29, September 2013.

reduces noise levels by 5 to 10 dBA.[4] The way older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more.

Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA.[5] Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in dBA, the following relationships should be noted[6]:

- Except in carefully controlled laboratory experiments, a 1-dBA change cannot be perceived by humans.
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A minimum 5-dBA change is required before any noticeable change in community response would be expected. A 5-dBA increase is typically considered substantial.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Effects of Noise on People

Hearing Loss. While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise. The Occupational Safety and Health Administration has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over 8 hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

[4] James P. Cowan, *Handbook of Environmental Acoustics,* 1994.

[5] Compiled from James P. Cowan, *Handbook of Environmental Acoustics,* 1994 and Cyril M. Harris, Handbook of Noise Control, 1979.

[6] Compiled from California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013, and FHWA, *Noise Fundamentals,* 2017.

Annoyance. Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. A noise level of about 55 dBA L_{dn} is the threshold at which a substantial percentage of people begin to report annoyance[7].

2.2 Ground-Borne Vibration

Sources of ground-borne vibrations include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides, etc.) or man-made causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g. factory machinery) or transient (e.g. explosions or heavy equipment use during construction). Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is vibration decibels (VdB) (the vibration velocity level in decibel scale). Other methods are the peak particle velocity (PPV) and the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

Table 3: Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibrations, displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where ground-borne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Ground vibration can be a concern in instances where buildings shake, and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. Common sources for ground-borne vibration are planes, trains, and construction activities such as earth-moving which requires the use of heavy-duty earth moving equipment. For the purposes of this analysis, a PPV descriptor with units of inches per second (in/sec) is used to evaluate construction-generated vibration for building damage and human complaints.

[7] Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, August 1992.

Table 3: Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibrations			
Maximum PPV (in/sec)	**Vibration Annoyance Potential Criteria**	**Vibration Damage Potential Threshold Criteria**	**FTA Vibration Damage Criteria**
0.008	--	Extremely fragile historic buildings, ruins, ancient monuments	--
0.01	Barely Perceptible	--	--
0.04	Distinctly Perceptible	--	--
0.1	Strongly Perceptible	Fragile buildings	--
0.12	--	--	Buildings extremely susceptible to vibration damage
0.2	--	--	Non-engineered timber and masonry buildings
0.25	--	Historic and some old buildings	--
0.3	--	Older residential structures	Engineered concrete and masonry (no plaster)
0.4	Severe	--	--
0.5	--	New residential structures, Modern industrial/commercial buildings	Reinforced-concrete, steel or timber (no plaster)
PPV = peak particle velocity; in/sec = inches per second; FTA = Federal Transit Administration			
Source: California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, 2020 and Federal Transit administration, Transit Noise and Vibration Assessment Manual, 2018.			

3 REGULATORY SETTING

To limit population exposure to physically or psychologically damaging as well as intrusive noise levels, the Federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise.

3.1 Federal

Federal Transit Administration Noise and Vibration Guidance

The Federal Transit Administration (FTA) has published the Transit Noise and Vibration Impact Assessment Manual to provide guidance on procedures for assessing impacts at different stages of transit project development. The report covers both construction and operational noise impacts and describes a range of measures for controlling excessive noise and vibration. In general, the primary concern regarding vibration relates to potential damage from construction. The guidance document establishes criteria for evaluating the potential for damage for various structural categories from vibration.

3.2 State of California

California Government Code

California Government Code Section 65302(f) mandates that the legislative body of each county and city adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines established by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of “normally acceptable”, “conditionally acceptable”, “normally unacceptable”, and “clearly unacceptable” noise levels for various land use types. Single-family homes are “normally acceptable” in exterior noise environments up to 60 CNEL and “conditionally acceptable” up to 70 CNEL. Multiple-family residential uses are “normally acceptable” up to 65 CNEL and “conditionally acceptable” up to 70 CNEL. Schools, libraries, and churches are “normally acceptable” up to 70 CNEL, as are office buildings and business, commercial, and professional uses.

Title 24 – Building Code

The State’s noise insulation standards are codified in the California Code of Regulations, Title 24: Part 1, Building Standards Administrative Code, and Part 2, California Building Code. These noise standards are applied to new construction in California for interior noise compatibility from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are located near major transportation noise sources, and where such noise sources create an exterior noise level of 65 dBA CNEL or higher. Acoustical studies that accompany building plans must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new multi-family residential and non-residential buildings, the acceptable interior noise limit for new construction is 45 dBA CNEL.

3.3 Local

City of Rialto General Plan

The City has adopted the Safety and Noise Chapter as a part of the Rialto General Plan. According to the Rialto General Plan, land uses such as residences have acceptable exterior noise levels of up to 65 dBA CNEL.[8] Based on the guidelines in the Rialto General Plan, an exterior noise level of 65 dBA CNEL is generally considered the maximum exterior noise level for sensitive receptors. The following Rialto General Plan goals, policies, and actions for addressing noise are applicable to the Project:

Goal 5-10: Minimize the impact of point source and ambient noise levels throughout the community.

Policy 5-10.2: Consider noise impacts as part of the development review process, particularly the location of parking, ingress/egress/loading, and refuse collection areas relative to surrounding residential development and other noise-sensitive land uses.

Policy 5-10.3: Ensure that acceptable noise levels are maintained near schools, hospitals, and other noise sensitive areas in accordance with the Municipal Code and noise standards contained in Exhibit 5-5.

Policy 5-10.4: Limit the hours of operation at all noise generation sources that are adjacent to noise-sensitive areas.

Policy 5-10.5: Require all exterior noise sources (construction operations, air compressors, pumps, fans and leaf blowers) to use available noise suppression devices and techniques to reduce exterior noise to acceptable levels that are compatible with adjacent land uses.

Goal 5-11: Minimize the impacts of transportation-related noise.

Policy 5-11.3: Require development of truck-intensive uses to minimize noise impacts on adjacent uses through appropriate site design.

Policy 5-11.4: Develop a program for monitoring noise levels and investigating complaints.

City of Rialto Municipal Code

Standards established under the City of Rialto Municipal Code (Municipal Code) are used to analyze noise impacts originating from the Project. Operational noise impacts are typically governed by Rialto Municipal Code Chapter 9.50, Noise Control. Section 9.50.030 lists prohibited acts such as creating excessive noise adjacent to any school, church, court, library, hospital, or care facility such that the users are disturbed or annoyed. Although the Rialto Municipal Code includes prohibited acts, it does not provide specific noise level performance standards for operations.

[8] The Rialto General Plan considers a noise level of up to 75 dBA CNEL to be acceptable for the Downtown Mixed Use area.

The City has also set restrictions to control noise impacts from construction activities. Section 9.50.070 states that the erection, alteration, repair, addition, movement, demolition, or improvement of any structure shall only occur between the hours of 7:00 a.m. and 5:30 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays from October 1 through April 30 and shall only occur between 6:00 a.m. and 7:00 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays from May 1 through September 30. Although the Rialto Municipal Code limits the hours of construction, it does not provide specific noise level performance standards for construction.

4 EXISTING CONDITIONS

4.1 Existing Noise Sources

The City is impacted by various noise sources. Mobile sources of noise, especially cars, trucks, and trains are the most common and significant sources of noise. Other noise sources are the various land uses (i.e. residential, commercial, institutional, and recreational and parks activities) throughout the City that generate stationary-source noise.

Mobile Sources

The predominant mobile noise source in the Project area is the traffic noise along Lowell Street and Locust Avenue which are located directly south and east of the Project Site, respectively. SR-210 is approximately 1.1 miles to the south of the Project site.

Stationary Sources

The primary sources of stationary noise in the Project vicinity are those associated with the operations and maintenance of adjacent warehouses to the west, north, and east of the Project Site and residential uses located to the north and east of the Project site. The noises associated with these sources may represent a single-event noise occurrence or short-term noise typically associated with the parking lot noise. Other noises include mechanical equipment (e.g., heating ventilation and air conditioning [HVAC] equipment), dogs barking, idling vehicles, and residents talking. Furthermore, The Project site and surrounding areas are dominated by constant roadway and freeway noise.

4.2 Noise Measurements

To quantify existing ambient noise levels in the Project area, Kimley-Horn conducted four short-term (10-minute) measurements on May 5, 2022; see **Appendix A: Noise Data.** The noise measurement sites were representative of typical existing noise exposure within the Project site and at nearby sensitive receptors. The 10-minute daytime measurements were taken between 11:30 a.m. and 1:00 p.m. Short-term L_{eq} measurements are considered representative of the noise levels throughout the day. The average noise levels and sources of noise measured at each location are listed in **Table 4: Existing Noise Measurements**.

Table 4: Existing Noise Measurements

Site	Location	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)	Time
1	Along the western side of Locust Avenue approximately 180 feet south of West Tudor Street	74.0	61.8	85.7	11:37 a.m.
2	Western terminus of the West Townsend Street cul-de-sac	45.6	37.2	55.8	11:57 a.m.
3	Western terminus of the West Carpenter Street cul-de-sac	48.2	42.7	58.3	12:13 p.m.
4	Along the southern side of West Lowell Street approximately 260 feet west of Locust Avenue	60.3	46.4	80.9	12:29 p.m.
5	Northern terminus of the North Laurel Avenue cul-de-sac	58.1	48.3	76.7	12:49 p.m.

Source: Noise measurements taken by Kimley-Horn and Associates, May 5, 2022. See Appendix A for noise measurement results.

4.3 Sensitive Receptors

Sensitive populations are more susceptible to the effects of noise pollution than is the general population. Sensitive receptors that are in proximity to stationary sources of noise and vibration are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The nearest sensitive land uses to the Project consist of single-family residences located approximately 700 feet to the east. Sensitive land uses nearest to the Project are shown in **Table 5: Sensitive Receptors**.

Table 5: Sensitive Receptors

Receptor Description	Distance and Direction from the Project[1]
Single-Family Residences	700 feet to the east
Single-Family Residences	1,588 feet to the north
Single-Family Residences	1,344 feet to the northeast

1. Distances have been measured from nearby buildings to the closest boundary of the Project construction site.

Source: Google Earth, 2022.

5 SIGNIFICANCE CRITERIA AND METHODOLOGY

5.1 CEQA Thresholds

Appendix G of the California Environmental Quality Act (CEQA) Guidelines contains analysis guidelines related to noise impacts. These guidelines have been used by the City to develop thresholds of significance for this analysis. A project would create a significant environmental impact if it would:

- Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Generate excessive ground-borne vibration or ground-borne noise levels; and
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the Project area to excessive noise levels.

5.2 Methodology

Construction

Construction noise levels were based on typical noise levels generated by construction equipment published by the Federal Transit Administration (FTA) and FHWA. Construction noise is assessed in dBA Leq. This unit is appropriate because Leq can be used to describe noise level from operation of each piece of equipment separately, and levels can be combined to represent the noise level from all equipment operating during a given period.

Reference noise levels are used to estimate operational noise levels at nearby sensitive receptors based on a standard noise attenuation rate of 6 dB per doubling of distance (line-of-sight method of sound attenuation for point sources of noise). Noise level estimates do not account for the presence of intervening structures or topography, which may reduce noise levels at receptor locations. Therefore, the noise levels presented herein represent a conservative, reasonable worst-case estimate of actual temporary construction noise.

Operations

The analysis of the operational noise environment is based on noise attenuation calculations (inverse square law) and empirical observations. Reference noise level data are used to estimate the Project operational noise impacts from stationary sources. Noise levels were collected from published sources from similar types of activities and used to estimate noise levels expected with the Project's stationary sources. The reference noise levels are used to represent a worst-case noise environment as noise level from stationary sources can vary throughout the day. Operational noise is evaluated based on the noise compatibility standards within the City's General Plan.

Vibration

Ground-borne vibration levels associated with construction activities for the Project were evaluated utilizing typical ground-borne vibration levels associated with construction equipment, obtained from FTA published data for construction equipment. Potential ground-borne vibration impacts related to building/structure damage and interference with sensitive existing operations were evaluated, considering the distance from construction activities to nearby land uses and typically applied criteria for structural damage and human annoyance.

5.3 Summary of the Rialto Airport Specific Plan EIR

The Rialto Airport Specific Plan EIR considered noise from construction activities as well as noise from operations, including stationary and mobile sources. With implementation of mitigation measures, all noise impacts were determined to be less than significant.

6 POTENTIAL IMPACTS AND MITIGATION

6.1 Acoustical Impacts

Threshold 6.1 Would the Project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction

Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g. land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. During construction, exterior noise levels could affect nearby sensitive receptors. The nearest sensitive receptors consist of single-family residential uses located approximately 700 feet east of the Project construction area (Project site boundary to sensitive receptor boundary). However, it is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at a single point near sensitive receptors.

Construction activities would include demolition, site preparation, grading, building construction, paving, and architectural coating. Such activities would require concrete/industrial saws, excavators, and dozers during demolition; dozers and tractors during site preparation; tractors, excavators, graders, and dozers during grading; cranes, forklifts, generators, tractors, and welders during building construction; pavers, rollers, mixers, and paving equipment during paving; and air compressors during architectural coating. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 to 4 minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical noise levels associated with individual construction equipment are listed in **Table 6: Typical Construction Noise Levels.**

Table 6: Typical Construction Noise Levels

Equipment	Typical Noise Level (dBA Lmax) at 50 feet from Source	Typical Noise Level (dBA Lmax) at 975 feet from Source[1]
Air Compressor	80	54
Backhoe	80	54
Compactor	80	54
Concrete Mixer	85	59
Concrete Pump	82	56
Concrete Vibrator	76	50
Crane, Derrick	88	62
Crane, Mobile	83	57
Dozer	85	59
Generator	82	56
Grader	85	59
Impact Wrench	85	59
Jack Hammer	88	62

Table 6: Typical Construction Noise Levels		
Equipment	**Typical Noise Level (dBA Lmax) at 50 feet from Source**	**Typical Noise Level (dBA Lmax) at 975 feet from Source[1]**
Loader	80	54
Paver	85	59
Pneumatic Tool	85	59
Pump	77	51
Roller	85	59
Saw	76	50
Scraper	85	59
Shovel	82	56
Truck	84	58

1. Calculated using the inverse square law formula for sound attenuation: $dBA_2 = dBA_1+20Log(d_1/d_2)$
Where: dBA_2 = estimated noise level at receptor; dBA_1 = reference noise level; d_1 = reference distance; d_2 = receptor location distance
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

As shown in **Table 6**, exterior noise levels could affect the nearest existing sensitive receptors in the vicinity. Sensitive uses in the Project site vicinity include residential uses located approximately 700 feet to the east. These sensitive receptors may be exposed to elevated noise levels during Project construction. However, construction noise would be acoustically dispersed throughout the Project site and not concentrated in one area near surrounding sensitive uses. The City's Municipal Code does not establish quantitative construction noise standards. Instead, the Municipal Code establishes limited hours of construction activities. As a result, this analysis conservatively uses the FTA's threshold of 80 dBA (8-hour L_{eq}) for residential uses to evaluate construction noise impacts.[9] All motorized equipment used in such activity shall be equipped with functioning mufflers as mandated by the state.

Construction activities may also cause increased noise along site access routes due to movement of equipment and workers. Compliance with the Municipal Code would minimize impacts from construction noise, as construction would be limited to daytime hours on weekdays and Saturdays. By following Municipal Code standards, Project construction activities would result in a less than significant noise impact.

Following FTA's methodology for quantitative construction noise assessments, FHWA's Roadway Construction Noise Model (RCNM) was used to predict construction noise. The noise levels calculated in **Table 7: Project Construction Noise Levels**, show estimated exterior construction noise. In accordance with FTA methodology, when calculating construction noise, all construction equipment is assumed to operate simultaneously at a construction area nearest to sensitive receptors to represent a worst-case noise scenario as construction activities would routinely be spread throughout the construction site and would operate at different intervals. Therefore, the distances used in the RCNM model were approximately 975 feet for the nearest residential property (center of the Project site to the nearest residential property line).

Table 7 shows that the maximum construction noise levels would not exceed the applicable FTA construction thresholds. The highest exterior noise level at the nearest residential receptors would occur during the building construction and paving stages and would be 63.6 dBA which is below the FTA's 80 dBA threshold. Construction equipment would operate throughout the Project site and the associated noise levels would not occur at a fixed location for extended periods of time. Although sensitive uses may

[9] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, Table 7-2, Page 179, September 2018.

be exposed to elevated noise levels during project construction, these noise levels would be acoustically dispersed throughout the Project site and not concentrated in one area near sensitive uses.

Table 7: Project Construction Noise Levels

Construction Phase	Land Use	Direction	Distance (feet)[1]	Worst Case Modeled Exterior Noise Level (dBA L_{eq})	Noise Threshold [2] (dBA L_{eq})	Exceeded?
Demolition	Residential	East	975	60.6	80	**No**
	Residential	North	1,800	55.3	80	**No**
	Residential	Northeast	1,585	56.4	80	**No**
Site Preparation	Residential	East	975	61.8	80	**No**
	Residential	North	1,800	56.5	80	**No**
	Residential	Northeast	1,585	57.6	80	**No**
Grading	Residential	East	975	61.5	80	**No**
	Residential	North	1,800	56.1	80	**No**
	Residential	Northeast	1,585	57.3	80	**No**
Construction	Residential	East	975	63.6	80	**No**
	Residential	North	1,800	58.2	80	**No**
	Residential	Northeast	1,585	59.3	80	**No**
Paving	Residential	East	975	63.6	80	**No**
	Residential	North	1,800	56.2	80	**No**
	Residential	Northeast	1,585	59.3	80	**No**
Architectural Coating	Residential	East	975	47.9	80	**No**
	Residential	North	1,800	42.6	80	**No**
	Residential	Northeast	1,585	43.7	80	**No**

1. Per the methodology described in the FTA *Transit Noise and Vibration Impact Assessment Manual* (September 2018), distances are measured from the nearby buildings to the center of the Project construction site. Therefore, distance may not match those identified in **Table 6**, which are measured from the property line.
2. The City does not have a quantitative noise threshold for construction and only limits the hours of the construction activities. Therefore, FTA's construction noise threshold is conservatively used for this analysis (FTA, *Transit Noise and Vibration Impact Assessment Manual*, September 2018).

Source: Federal Highway Administration, *Roadway Construction Noise Model,* 2006. Refer to Appendix A for noise modeling results.

The City of Rialto has set restrictions to control noise impacts from construction activities. Section 9.50.070 states that the erection, alteration, repair, addition, movement, demolition, or improvement of any structure shall only occur between the hours of 7:00 a.m. and 5:30 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays from October 1 through April 30 and shall only occur between 6:00 a.m. and 7:00 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays from May 1 through September 30. Although the Rialto Municipal Code limits the hours of construction, it does not provide specific noise level performance standards for construction. By following the City's standards, the impact from construction noise would be less than significant level.

Operations

Implementation of the proposed Project would create new sources of noise in the Project vicinity. The major noise sources associated with the project including the followings:

- Mechanical equipment (i.e. trash compactors, air conditioners, etc.);
- Slow moving trucks on the Project site, approaching and leaving the loading areas;
- Activities at the loading areas (i.e. maneuvering and idling trucks, equipment noise);
- Parking areas (i.e. car door slamming, car radios, engine start-up, and car pass-by); and
- Off-Site Traffic Noise
- Back-Up Alarms

Mechanical Equipment. The nearest sensitive receptors are residences to the Project site located approximately 700 feet to the east. Potential stationary noise sources related to long-term operation of the Project site would include mechanical equipment. Mechanical equipment (e.g. heating ventilation and air conditioning [HVAC] equipment) typically generates noise levels of approximately 52 dBA at 50 feet.[10] For the purposes of a conservative analysis, the closest mechanical equipment is assumed to be at the edge of the proposed warehouse building, approximately 735 feet to the west of the nearest sensitive receptors. At 735 feet, mechanical equipment noise would be 28.7 dBA, which is well below the City's 65 dBA standard. Operation of mechanical equipment would not increase ambient noise levels beyond the acceptable compatible land use noise levels. Therefore, the proposed Project would result in a less than significant impact related to stationary noise levels.

Truck and Loading Dock Noise. During loading and unloading activities, noise would be generated by the trucks' diesel engines, exhaust systems, and brakes during low gear shifting braking activities; backing up toward the docks; dropping down the dock ramps; and maneuvering away from the docks. Loading or unloading activities would occur at the loading docks for each building. Vehicular access to the proposed Project site would consist of two driveways located along Lowell Street and one driveway along Locust Avenue. Typically, heavy truck operations generate a noise level of 68 dBA at a distance of 30 feet. The closest sensitive receptors are located approximately 735 feet east of the building edge. At this distance, noise levels would be 40.2 dBA without considering attenuation from intervening walls or structures, which is below the City's acceptable limits of 65 dBA for residential noise. Noise levels at other sensitive receptors that are further away would be lower. Additionally, these noise levels would also be further attenuated by intervening structures. Loading dock doors would also be surrounded with protective aprons, gaskets, or similar improvements that, when a trailer is docked, would serve as a noise barrier between the interior warehouse activities and the exterior loading area. This would attenuate noise emanating from interior activities, and as such, interior loading and associated activities would be permissible during all hours of the day. Noise levels associated with trucks and loading or unloading activities would not exceed the City's standards and impacts would be less than significant.

Parking Noise. The proposed Project would provide 87 vehicle parking stalls. The Project would have parking stalls on the north, west, and south of the proposed building. Nominal parking noise would occur within the on-site parking facilities. Traffic associated with parking lots is typically not of sufficient volume to exceed community noise standards, which are based on a time-averaged scale such as the CNEL scale. The instantaneous maximum sound levels generated by a car door slamming, engine starting up, and car pass-bys range from 53 to 61 dBA[11] at 50 feet and may be an annoyance to adjacent noise-sensitive receptors, however there are no sensitive receptors within 50 feet of the Project site. Sound levels of

[10] Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, 2015.
[11] Kariel, H. G., *Noise in Rural Recreational Environments*, Canadian Acoustics 19(5), 3-10, 1991.

speech typically range from 33 dBA at 50 feet for normal speech to 50 dBA at 50 feet for very loud speech.[12] It should be noted that parking lot noises are instantaneous noise levels compared to noise standards in the hourly L_{eq} metric, which are averaged over the entire duration of a time period.

Actual noise levels over time resulting from parking lot activities would be far lower than the reference levels identified above. Parking lot noise would occur within the surface parking lot on-site and would be up to 39.7 dBA (without considering attenuation from intervening walls or structures) at the nearest sensitive receptor located approximately 735 feet to the east of the nearest auto parking stall, which is below the City's acceptable limits of 65 dBA for residential noise. Parking lot noise also currently occurs at the adjacent properties under existing conditions. Parking lot noise would be consistent with the existing noise in the vicinity and would be partially masked by background noise from traffic along Lowell Street and Locust Avenue. Noise associated with parking lot activities is not anticipated to exceed the City's noise standards during operation. Therefore, noise impacts from parking lots would be less than significant.

Off-Site Traffic Noise. Implementation of the Project would be consistent with the allowable uses for the Project site as determined by the Rialto Airport Specific Plan. Therefore, traffic volumes associated with the proposed Project would be consistent with what was anticipated for the site in the Rialto Airport Specific Plan EIR. In general, a traffic noise increase of less than 3 dBA is barely perceptible to people, while a 5-dBA increase is readily noticeable.[13] Traffic volumes on Project area roadways would have to approximately double for the resulting traffic noise levels to increase by 3 dBA.[14] Therefore, permanent increases in ambient noise levels of less than 3 dBA would be less than significant. Project related trips would occur along Locust Avenue and Lowell Street. According to the Traffic Scoping Agreement, the proposed Project would generate approximately 173 daily trips. The project area is currently developed with other industrial uses and an additional 173 daily trips is not anticipated to result in a doubling of traffic. Therefore, off-site traffic noise would be less than significant.

Back-Up Alarms. Medium and heavy-duty trucks reversing into loading docks would produce noise from back-up alarms (also known as back-up beepers). Back-up beepers produce a typical volume of 97 dBA at one meter from the source. The property line of the nearest sensitive receptor would be located approximately 735 feet east of the project driveway where trucks could be reversing and maneuvering into the loading area. At this distance, exterior noise levels from back-up beepers would be approximately 50 dBA, which is below the City's acceptable limits of 65 dBA for residential noise.

Mitigation Measures: The Rialto Airport Specific Plan EIR includes measures to reduce potential impacts associated the implementation of the Rialto Airport Specific Plan Project. The following measures from the EIR are applicable to the proposed Project:

[12] Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, 2015.
[13] Federal Highway Administration, *Highway Traffic Noise Analysis and Abatement Policy and Guidance, Noise Fundamentals*, https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm, accessed July 12, 2021.
[14] California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, 2013.

Mitigation Measures from the Rialto Airport Specific Plan EIR

5.8-1A Construction activities shall comply with the City of Rialto Noise Standards relating to construction noise. Enforcement of City standards relating to construction-related noise discernable at residential boundaries is required and construction activities shall be limited to the hours between 7:00 a.m. and 7:00 p.m. Monday through Saturdays (excluding Sundays and Federal holidays).

5.8-1B All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, to the satisfaction of the City Engineer.

5.8-1C Stationary construction equipment shall be staged such that emitted noise is directed away from sensitive noise receivers, to the satisfaction of the City Engineer.

5.8-1D Stockpiling and vehicle staging areas shall be located as far as practical from noise sensitive receptors during construction activities, to the satisfaction of the City of Engineer.

5.8-2A The project applicable shall submit detailed design plans and an acoustical study, prepared by a City-approved acoustical expert, for each site plan, which delineates appropriate setbacks from adjacent existing and planned sensitive receptors, which is consistent with City of Rialto Noise Standards. The study shall demonstrate that all feasible sound attenuation has been incorporated into the design, such as noise walls and other noise barriers, and other appropriate measures (refer also to Mitigation Measure No. 5.8-3). [NOTE: This MM has been satisfied through the preparation of this Acoustical Assessment.]

5.8-2B Development of the proposed project land uses shall adhere to City of Rialto and California State Noise Insulation Standards (California Administrative Code, Title 25, Chapter 1, Subchapter 1, Article 4). These standards require that the interior noise levels for residential living spaces and for hotel rooms be no greater than 45 dB CNEL. If additional attenuation is necessary, measures (i.e. increases in window STC rating, reduction of window area) can be specified at such time.

5.8-2C Any loudspeaker system installation shall conform to the following standards:

a. The use of a hand held paging system shall be encouraged. A combination of loudspeakers and hand held paging may be authorized upon review of the system by City of Rialto.
b. The outdoor loudspeakers system shall have limited hours of operation, to the satisfaction of the Development Services Director. In no event shall any use of outdoor speakers be authorized for operation on weekends or holidays.
c. All loudspeakers shall be mounted at a 75 degree angle facing the ground to avoid voice travel. All loudspeakers mounted on perimeter walls shall be located at least two (2) feet below the top of the wall.
d. All loudspeakers shall be directed toward the interior of each lot. Each speaker layout system shall be subject to review and approval by the Development Services Department.

5.8-2D Mechanical equipment shall be located and designed so that it will not be audible at adjacent residential land uses. This includes adhering to specifications for quiet equipment, and locating/shielding equipment away from homes. It is recommended that any mechanical equipment be located on the side of the building furthest from residential areas and/or constructed with a parapet surrounding the equipment.

5.8-2E The following measures are recommended to minimize noise impacts from activities within parking areas:

a. Maximize the use of berms and landscaping to help shield and attenuate noise from cars within parking lots.
b. Loading dock should be located away from residential areas. Loading hours should be limited so that deliveries do not occur between midnight and 6 a.m.

5.8-3F Adequate setbacks and/or sound attenuation measures shall be required for on-site residential uses adjacent to Route 30 and Cactus Avenue and/or commercial and recreation uses along Alder Avenue to ensure compliance with City/State noise standards.

5.8-3G The project applicant shall submit detailed design plans and an acoustical study, prepared by a City-approved acoustical expert, for each site plan, which delineates appropriate setbacks from adjacent existing and/planned sensitive receptors, which is consistent with City of Rialto Noise Standards. The study shall demonstrate that all feasible sound attenuation has been incorporated into the design, such as noise walls and other noise barriers, and other appropriate measures. [NOTE: This MM has been satisfied through the preparation of this Acoustical Assessment.]

Level of Significance: Less than significant impact.

Threshold 6.2 Would the Project generate excessive ground-borne vibration or ground-borne noise levels?

Increases in ground-borne vibration levels attributable to the proposed Project would be primarily associated with short-term construction-related activities. Construction on the Project site would have the potential to result in varying degrees of temporary ground-borne vibration, depending on the specific construction equipment used and the operations involved.

The Federal Transit Administration (FTA) has published standard vibration velocities for construction equipment operations in their 2018 *Transit Noise and Vibration Impact Assessment Manual*. The types of construction vibration impacts include human annoyance and building damage. In general, the FTA architectural damage criterion for continuous vibrations (i.e., 0.2 in/sec) appears to be conservative. The types of construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. For example, for a building that is constructed

with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 0.20 in/sec is considered safe and would not result in any construction vibration damage.

Table 8: Typical Construction Equipment Vibration Levels, lists vibration levels at 25 feet and 50 feet for typical construction equipment. Ground-borne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. As indicated in **Table 8**, based on FTA data, vibration velocities from typical heavy construction equipment operations that would be used during Project construction range from 0.001 to 0.031 in/sec PPV at 50 feet from the closest structure (warehouse building to the west and north), which is below the FTA's 0.20 PPV threshold.

Table 8: Typical Construction Equipment Vibration Levels

Equipment	Peak Particle Velocity at 25 Feet (in/sec)	Peak Particle Velocity at 50 Feet (in/sec)
Large Bulldozer	0.089	0.031
Caisson Drilling	0.089	0.031
Loaded Trucks	0.076	0.027
Jackhammer	0.035	0.012
Small Bulldozer/Tractors	0.003	0.001

1. Calculated using the following formula: $PPV_{equip} = PPV_{ref} \times (125/D)^{1.5}$, where: PPV_{equip} = the peak particle velocity in in/sec of the equipment adjusted for the distance; PPV_{ref} = the reference vibration level in in/sec from Table 7-4 of the Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018; D = the distance from the equipment to the receiver.

Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018.

It is also acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to the nearest structure. Therefore, vibration impacts associated with the proposed Project would be less than significant.

Once operational, the Project would not be a significant source of ground-borne vibration. Ground-borne vibration surrounding the Project currently result from heavy-duty vehicular travel (e.g. refuse trucks, heavy duty trucks, delivery trucks, and transit buses) on the nearby local roadways. Operations of the proposed Project would include truck deliveries. Due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity. According to the FTA's Transit Noise and Vibration Impact Assessment, trucks rarely create vibration levels that exceed 70 VdB (equivalent to 0.012 inches per second PPV) when they are on roadways. Therefore, trucks operating at the Project site or along surrounding roadways would not exceed FTA thresholds for building damage or annoyance. Impacts would be less than significant in this regard.

Mitigation Measures:

Mitigation Measures from the Final EIR

Mitigation Measures 5.8-1C, 5.8-1D, and 5.8-2E, listed above would lessen groundborne vibration and noise levels.

Level of Significance: Less than significant impact.

Threshold 6.3 For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?

The nearest airport to the Project site is the San Bernardino International Airport located approximately 9.5 miles to the southwest. Therefore, the Project is not within 2.0 miles of a public airport or within an airport land use plan. Additionally, there are no private airstrips located within the Project vicinity. Therefore, the Project would not expose people residing or working in the Project area to excessive airport- or airstrip-related noise levels and no mitigation is required.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

6.2 Cumulative Noise Impacts

Cumulative Construction Noise

The Project's construction activities would not result in a substantial temporary increase in ambient noise levels. Construction noise would be periodic and temporary noise impacts that would cease upon completion of construction activities. The Project would contribute to other proximate construction project noise impacts if construction activities were conducted concurrently. However, based on the noise analysis above, the Project's construction-related noise impacts would be less than significant following the City of Rialto Municipal Code.

Construction activities at other planned and approved projects near the Project site would be required to comply with applicable City rules related to noise and would take place during daytime hours on the days permitted by the applicable Municipal Code, and projects requiring discretionary City approvals would be required to evaluate construction noise impacts, comply with the City's standard conditions of approval, and implement mitigation, if necessary, to minimize noise impacts. Construction noise impacts are by nature localized. Based on the fact that noise dissipates as it travels away from its source, noise impacts would be limited to the Project site and vicinity. Therefore, Project construction would not result in a cumulatively considerable contribution to significant cumulative impacts, assuming such a cumulative impact existed, and impacts in this regard are not cumulatively considerable.

Cumulative Operational Noise

Cumulative Off-Site Traffic Noise. Cumulative noise impacts describe how much noise levels are projected to increase over existing conditions with the development of the proposed Project and other foreseeable projects. Cumulative noise impacts generally occur as a result of increased traffic on local roadways due to buildout of the proposed Project and other projects in the vicinity. However, the Project is projected to result in 173 daily vehicular trips and would not increase noise associated with off-site traffic. Therefore, the proposed Project's contribution would not be cumulatively considerable.

Cumulative Stationary Noise. As discussed above, stationary and operational noise caused by the proposed Project would be less than significant and cumulative stationary noise impacts would not occur. Similar to the proposed Project, other planned and approved projects would be required to mitigate for

stationary noise impacts at nearby sensitive receptors, if necessary. As stationary noise sources are generally localized, there is a limited potential for other projects to contribute to cumulative noise impacts.

No known past, present, or reasonably foreseeable projects would combine with the operational noise levels generated by the Project to increase noise levels above acceptable standards because each project must comply with applicable City regulations that limit operational noise. Therefore, the Project, together with other projects, would not create a significant cumulative impact, and even if there was such a significant cumulative impact, the Project would not make a cumulatively considerable contribution to significant cumulative operational noises.

Given that noise dissipates as it travels away from its source, operational noise impacts from on-site activities and other stationary sources would be limited to the Project site and vicinity. Thus, cumulative operational noise impacts from related projects, in conjunction with Project specific noise impacts, would not be cumulatively significant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

7 REFERENCES

1. California Department of Transportation, *California Vehicle Noise Emission Levels*, 1987.
2. California Department of Transportation, *Traffic Noise Analysis Protocol*, 2020.
3. California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.
4. California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, 2020.
5. City of Rialto, *General Plan*, December 2010
6. City of Rialto, *Municipal Code*
7. City of Rialto, *Draft Rialto Airport Specific Plan Program Environmental Impact Report,* May 1997
8. Cyril M. Harris, *Handbook of Noise Control*, 1979.
9. Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, 2015.
10. Federal Highway Administration, *Noise Fundamentals*, 2017.
11. Federal Highway Administration, *Roadway Construction Noise Model User's Guide Final Report,* 2006.
12. Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, August 1992.
13. Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018.
14. HPA Architecture, *Conceptual Site Plan for Thrifty Oil Project*, April 5, 2022.
15. James P. Cowan, *Handbook of Environmental Acoustics*, 1994.
16. Kariel, H. G., *Noise in Rural Recreational Environments, Canadian Acoustics 19(5), 3-10*, 1991.
17. Kimley-Horn*, Thrifty Rialto Warehouse – Traffic Scoping Agreement*, May 11, 2022.

Appendix A

NOISE DATA

Noise Measurement Field Data

Project:	Thrifty Locust Warehouse	**Job Number:**	095931005
Site No.:	1	**Date:**	5/5/2022
Analyst:	Serena Lin, Ryan Callahan	**Time:**	11:37 - 11:47 AM
Location:	Along the western side of Locust Avenue		
Noise Sources:	road traffic, trucks, construction, industrial operations		
Comments:			

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
74.0	61.8	85.7	110.8

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	76°
Wind (mph):	> 5
Sky:	Clear
Bar. Pressure:	29.96"
Humidity:	31%

Photo:



Kimley»Horn

Summary

File Name on Meter	NOI.022.s
File Name on PC	LxTse_0005586-20220505 113759-NOI.022.l
Serial Number	0005586
Model	SoundExpert® LxT
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2022-05-05 11:37:59
Stop	2022-05-05 11:47:59
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre-Calibration	2022-05-04 16:22:30
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamplifier	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Frequency Weighting	A Weighting	
OBA Max Spectrum	At LMax	
Overload	122.5 dB	
	A	**C**
Under Range Peak	**79.0**	76.0
Under Range Limit	**25.3**	26.0
Noise Floor	16.1	16.8

Results

L_{Aeq}	74.0	
LAE	101.8	
EA	1.674 mPa^2h	
$L_{Apeak\ (max)}$	2022-05-05 11:41:01	110.8
L_{ASmax}	2022-05-05 11:40:18	85.7
L_{ASmin}	2022-05-05 11:45:31	61.8

SEA	-99.9 dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	2	3.0
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0
LA_{peak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0
LA_{peak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0
LA_{peak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0

Community Noise	**Ldn**	**LDay 07:00-22:00**
	74.0	74.0

LC_{eq}	80.7 dB	
LA_{eq}	74.0 dB	
LC_{eq} - LA_{eq}	6.7 dB	
LAI_{eq}	76.9 dB	
LA_{eq}	74.0 dB	
LAI_{eq} - LA_{eq}	2.9 dB	

	A	
	dB	**Time Stamp**
L_{eq}	74.0	
$L_{S(max)}$	85.7	2022/05/05 11:40:18
$L_{S(min)}$	61.8	2022/05/05 11:45:31
$L_{Peak(max)}$	110.8	2022/05/05 11:41:01

Overload Count	0	
Overload Duration	0.0 s	
OBA Overload Count	0	
OBA Overload Duration	0.0 s	

Statistics

LA5.00	79.6 dB	
LA10.00	78.1 dB	
LA33.30	73.7 dB	
LA50.00	70.3 dB	
LA66.60	67.7 dB	
LA90.00	64.3 dB	

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**
Direct	2019-10-29 12:18:45	-28.39
PRMLxT1L	2022-05-04 16:22:30	-28.73
PRMLxT1L	2022-04-26 07:34:56	-28.67
PRMLxT1L	2022-04-20 12:08:42	-27.27
PRMLxT1L	2022-04-19 14:36:50	-28.55
PRMLxT1L	2022-04-19 13:55:24	-28.54
PRMLxT1L	2022-04-12 16:27:20	-28.61
PRMLxT1L	2022-04-06 08:45:00	-28.57
PRMLxT1L	2022-04-06 08:44:10	-28.58

Noise Measurement Field Data

Project:	Thrifty Locust Warehouse	**Job Number:**	095931005
Site No.:	2	**Date:**	5/5/2022
Analyst:	Serena Lin, Ryan Callahan	**Time:**	11:57 AM - 12:07 PM
Location:	West Townsend Street cul-de-sac		
Noise Sources:	distant construction, birds, cars, airplane, music		
Comments:			

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
45.6	37.2	55.8	87.5

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	77°
Wind (mph):	> 5
Sky:	Clear
Bar. Pressure:	29.96"
Humidity:	30%

Photo:



Kimley»Horn

Summary

File Name on Meter	NOI.023.s
File Name on PC	LxTse_0005586-20220505 115710-NOI.023.l
Serial Number	0005586
Model	SoundExpert® LxT
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2022-05-05 11:57:10
Stop	2022-05-05 12:07:10
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre-Calibration	2022-05-04 16:22:30
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamplifier	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Frequency Weighting	A Weighting	
OBA Max Spectrum	At LMax	
Overload	122.5 dB	
	A	**C**
Under Range Peak	**79.0**	76.0
Under Range Limit	**25.3**	26.0
Noise Floor	16.1	16.8

Results

LA_{eq}	45.6	
LAE	73.4	
EA	2.425 µPa²h	
$LA_{peak\ (max)}$	2022-05-05 11:57:17	87.5
LAS_{max}	2022-05-05 12:01:38	55.8
LAS_{min}	2022-05-05 12:06:43	37.2

SEA	-99.9 dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0
LApeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0
LApeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0
LApeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0

Community Noise	**Ldn**	**LDay 07:00-22:00**
	45.6	45.6

LCeq	63.5 dB	
LAeq	45.6 dB	
LCeq - LAeq	17.9 dB	
LAIeq	48.9 dB	
LAeq	45.6 dB	
LAIeq - LAeq	3.3 dB	

	A	
	dB	**Time Stamp**
Leq	45.6	
LS(max)	55.8	2022/05/05 12:01:38
LS(min)	37.2	2022/05/05 12:06:43
LPeak(max)	87.5	2022/05/05 11:57:17

Overload Count	0	
Overload Duration	0.0 s	
OBA Overload Count	0	
OBA Overload Duration	0.0 s	

Statistics

LA5.00	49.5 dB
LA10.00	48.4 dB
LA33.30	45.3 dB
LA50.00	44.3 dB
LA66.60	43.2 dB
LA90.00	40.5 dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**
Direct	2019-10-29 12:18:45	-28.39
PRMLxT1L	2022-05-04 16:22:30	-28.73
PRMLxT1L	2022-04-26 07:34:56	-28.67
PRMLxT1L	2022-04-20 12:08:42	-27.27
PRMLxT1L	2022-04-19 14:36:50	-28.55
PRMLxT1L	2022-04-19 13:55:24	-28.54
PRMLxT1L	2022-04-12 16:27:20	-28.61
PRMLxT1L	2022-04-06 08:45:00	-28.57
PRMLxT1L	2022-04-06 08:44:10	-28.58

Noise Measurement Field Data

Project:	Thrifty Locust Warehouse	**Job Number:**	095931005
Site No.:	3	**Date:**	5/5/2022
Analyst:	Serena Lin, Ryan Callahan	**Time:**	12:13 - 12:23 PM
Location:	West Carpenter Street cul-de-sac		
Noise Sources:	many birds, distant construction, passing cars		
Comments:			

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
48.2	42.7	58.3	86.2

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	78°
Wind (mph):	> 5
Sky:	Clear
Bar. Pressure:	29.95"
Humidity:	28%

Photo:



Kimley»Horn

Summary

File Name on Meter	NOI.024.s
File Name on PC	LxTse_0005586-20220505 121310-NOI.024.l
Serial Number	0005586
Model	SoundExpert® LxT
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2022-05-05 12:13:10
Stop	2022-05-05 12:23:10
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre-Calibration	2022-05-04 16:22:30
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamplifier	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Frequency Weighting	A Weighting	
OBA Max Spectrum	At LMax	
Overload	122.5 dB	
	A	**C**
Under Range Peak	**79.0**	76.0
Under Range Limit	**25.3**	26.0
Noise Floor	16.1	16.8

Results

L_{Aeq}	48.2	
LAE	75.9	
EA	4.355 µPa²h	
$L_{Apeak\ (max)}$	2022-05-05 12:13:11	86.2
L_{ASmax}	2022-05-05 12:17:47	58.3
L_{ASmin}	2022-05-05 12:18:35	42.7

SEA	-99.9 dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0
LA_{peak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0
LA_{peak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0
LA_{peak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0

Community Noise	**Ldn**	**LDay 07:00-22:00**
	48.2	48.2

LC_{eq}	60.9 dB	
LA_{eq}	48.2 dB	
LC_{eq} - LA_{eq}	12.8 dB	
LAI_{eq}	51.3 dB	
LA_{eq}	48.2 dB	
LAI_{eq} - LA_{eq}	3.1 dB	

	A	
	dB	**Time Stamp**
L_{eq}	48.2	
$L_{S(max)}$	58.3	2022/05/05 12:17:47
$L_{S(min)}$	42.7	2022/05/05 12:18:35
$L_{Peak(max)}$	86.2	2022/05/05 12:13:11

Overload Count	0	
Overload Duration	0.0 s	
OBA Overload Count	0	
OBA Overload Duration	0.0 s	

Statistics

LA5.00	52.6 dB	
LA10.00	50.7 dB	
LA33.30	47.8 dB	
LA50.00	46.4 dB	
LA66.60	45.8 dB	
LA90.00	45.0 dB	

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**
Direct	2019-10-29 12:18:45	-28.39
PRMLxT1L	2022-05-04 16:22:30	-28.73
PRMLxT1L	2022-04-26 07:34:56	-28.67
PRMLxT1L	2022-04-20 12:08:42	-27.27
PRMLxT1L	2022-04-19 14:36:50	-28.55
PRMLxT1L	2022-04-19 13:55:24	-28.54
PRMLxT1L	2022-04-12 16:27:20	-28.61
PRMLxT1L	2022-04-06 08:45:00	-28.57
PRMLxT1L	2022-04-06 08:44:10	-28.58

Noise Measurement Field Data

Project:	Thrifty Locust Warehouse	**Job Number:**	095931005
Site No.:	4	**Date:**	5/5/2022
Analyst:	Serena Lin, Ryan Callahan	**Time:**	12:29 - 12:39 PM
Location:	Southern side of West Lowell Street		
Noise Sources:	trucks, birds, cars, distant construction		
Comments:			

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
60.3	46.4	80.9	94.8

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	78°
Wind (mph):	> 5
Sky:	Clear
Bar. Pressure:	29.95"
Humidity:	28%

Photo:



Kimley»Horn

Summary

File Name on Meter	NOI.025.s
File Name on PC	LxTse_0005586-20220505 122957-NOI.025.l
Serial Number	0005586
Model	SoundExpert® LxT
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2022-05-05 12:29:57
Stop	2022-05-05 12:39:57
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre-Calibration	2022-05-04 16:22:30
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamplifier	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Frequency Weighting	A Weighting	
OBA Max Spectrum	At LMax	
Overload	122.5 dB	
	A	**C**
Under Range Peak	**79.0**	76.0
Under Range Limit	**25.3**	26.0
Noise Floor	16.1	16.8

Results

LA_{eq}	60.3	
LAE	88.1	
EA	71.004 µPa²h	
$LA_{peak\ (max)}$	2022-05-05 12:30:15	94.8
LAS_{max}	2022-05-05 12:30:15	80.9
LAS_{min}	2022-05-05 12:36:20	46.4

SEA	-99.9 dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0
LA_{peak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0
LA_{peak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0
LA_{peak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0

Community Noise	**Ldn**	**LDay 07:00-22:00**
	60.3	60.3

LC_{eq}	68.7 dB	
LA_{eq}	60.3 dB	
LC_{eq} - LA_{eq}	8.4 dB	
LAI_{eq}	62.3 dB	
LA_{eq}	60.3 dB	
LAI_{eq} - LA_{eq}	2.1 dB	

	A	
	dB	**Time Stamp**
L_{eq}	60.3	
$L_{S(max)}$	80.9	2022/05/05 12:30:15
$L_{S(min)}$	46.4	2022/05/05 12:36:20
$L_{Peak(max)}$	94.8	2022/05/05 12:30:15

Overload Count	0	
Overload Duration	0.0 s	
OBA Overload Count	0	
OBA Overload Duration	0.0 s	

Statistics

LA5.00	63.5 dB	
LA10.00	59.7 dB	
LA33.30	53.7 dB	
LA50.00	51.8 dB	
LA66.60	50.5 dB	
LA90.00	48.4 dB	

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**
Direct	2019-10-29 12:18:45	-28.39
PRMLxT1L	2022-05-04 16:22:30	-28.73
PRMLxT1L	2022-04-26 07:34:56	-28.67
PRMLxT1L	2022-04-20 12:08:42	-27.27
PRMLxT1L	2022-04-19 14:36:50	-28.55
PRMLxT1L	2022-04-19 13:55:24	-28.54
PRMLxT1L	2022-04-12 16:27:20	-28.61
PRMLxT1L	2022-04-06 08:45:00	-28.57
PRMLxT1L	2022-04-06 08:44:10	-28.58

Noise Measurement Field Data

Project:	Thrifty Locust Warehouse	**Job Number:**	095931005
Site No.:	5	**Date:**	5/5/2022
Analyst:	Serena Lin, Ryan Callahan	**Time:**	12:49 - 12:59 PM
Location:	North Laurel Avenue cul-de-sac		
Noise Sources:	truck traffic, construction or industrial operations, truck back up sounds		
Comments:			

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
58.1	48.3	76.7	95.7

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	79°
Wind (mph):	> 5
Sky:	Clear
Bar. Pressure:	29.95"
Humidity:	27%

Photo:



Kimley»Horn

Summary

File Name on Meter	NOI.026.s
File Name on PC	LxTse_0005586-20220505 124912-NOI.026.l
Serial Number	0005586
Model	SoundExpert® LxT
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2022-05-05 12:49:12
Stop	2022-05-05 12:59:12
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre-Calibration	2022-05-04 16:22:30
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamplifier	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Frequency Weighting	A Weighting	
OBA Max Spectrum	At LMax	
Overload	122.5 dB	
	A	**C**
Under Range Peak	**79.0**	76.0
Under Range Limit	**25.3**	26.0
Noise Floor	16.1	16.8

Results

LA_{eq}	58.1	
LAE	85.9	
EA	42.901 µPa²h	
$LA_{peak\ (max)}$	2022-05-05 12:55:54	95.7
LAS_{max}	2022-05-05 12:55:55	76.7
LAS_{min}	2022-05-05 12:49:42	48.3

SEA	-99.9 dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0
LA_{peak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0
LA_{peak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0
LA_{peak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0

Community Noise	**Ldn**	**LDay 07:00-22:00**
	58.1	58.1

LC_{eq}	70.6 dB	
LA_{eq}	58.1 dB	
LC_{eq} - LA_{eq}	12.5 dB	
LAI_{eq}	62.3 dB	
LA_{eq}	58.1 dB	
LAI_{eq} - LA_{eq}	4.2 dB	

	A	
	dB	**Time Stamp**
L_{eq}	58.1	
$L_{S(max)}$	76.7	2022/05/05 12:55:55
$L_{S(min)}$	48.3	2022/05/05 12:49:42
$L_{Peak(max)}$	95.7	2022/05/05 12:55:54

Overload Count	0
Overload Duration	0.0 s
OBA Overload Count	0
OBA Overload Duration	0.0 s

Statistics

LA5.00	62.2 dB
LA10.00	59.8 dB
LA33.30	58.3 dB
LA50.00	54.1 dB
LA66.60	52.6 dB
LA90.00	50.8 dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**
Direct	2019-10-29 12:18:45	-28.39
PRMLxT1L	2022-05-04 16:22:30	-28.73
PRMLxT1L	2022-04-26 07:34:56	-28.67
PRMLxT1L	2022-04-20 12:08:42	-27.27
PRMLxT1L	2022-04-19 14:36:50	-28.55
PRMLxT1L	2022-04-19 13:55:24	-28.54
PRMLxT1L	2022-04-12 16:27:20	-28.61
PRMLxT1L	2022-04-06 08:45:00	-28.57
PRMLxT1L	2022-04-06 08:44:10	-28.58

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/20/2022
Case Description: Demolition

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single Family (East)	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	975	0
Excavator	No	40		80.7	975	0
Excavator	No	40		80.7	975	0
Excavator	No	40		80.7	975	0
Dozer	No	40		81.7	975	0
Dozer	No	40		81.7	975	0

Results

Equipment	Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Noise Limit Exceedance (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Concrete Saw	63.8	56.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	54.9	50.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	54.9	50.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	54.9	50.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	55.9	51.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	55.9	51.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	63.8	60.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single Family (North)	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	1800	0
Excavator	No	40		80.7	1800	0
Excavator	No	40		80.7	1800	0
Excavator	No	40		80.7	1800	0
Dozer	No	40		81.7	1800	0
Dozer	No	40		81.7	1800	0

Results

Equipment	Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Noise Limit Exceedance (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Concrete Saw	58.5	51.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	49.6	45.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	49.6	45.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	49.6	45.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	50.5	46.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	50.5	46.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	58.5	55.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single Family (Northeast	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	1585	0
Excavator	No	40		80.7	1585	0
Excavator	No	40		80.7	1585	0
Excavator	No	40		80.7	1585	0
Dozer	No	40		81.7	1585	0
Dozer	No	40		81.7	1585	0

Results

		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw		59.6	52.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator		50.7	46.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator		50.7	46.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator		50.7	46.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		51.6	47.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		51.6	47.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	59.6	56.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/20/2022
Case Description: Site Preparation

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single Family (East)	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	975	0
Dozer	No	40		81.7	975	0
Dozer	No	40		81.7	975	0
Tractor	No	40	84		975	0
Tractor	No	40	84		975	0
Tractor	No	40	84		975	0
Tractor	No	40	84		975	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	55.9	51.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	55.9	51.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	55.9	51.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	58.2	54.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	58.2	54.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	58.2	54.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	58.2	54.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	58.2	61.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single Family (North)	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	1800	0
Dozer	No	40		81.7	1800	0
Dozer	No	40		81.7	1800	0
Tractor	No	40	84		1800	0
Tractor	No	40	84		1800	0
Tractor	No	40	84		1800	0
Tractor	No	40	84		1800	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	50.5	46.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	50.5	46.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	50.5	46.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	52.9	48.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	52.9	48.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	52.9	48.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	52.9	48.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	52.9	56.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single Family (Northeast	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	1585	0
Dozer	No	40		81.7	1585	0
Dozer	No	40		81.7	1585	0
Tractor	No	40	84		1585	0
Tractor	No	40	84		1585	0
Tractor	No	40	84		1585	0
Tractor	No	40	84		1585	0

Results

		Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer		51.6	47.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		51.6	47.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		51.6	47.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor		54	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor		54	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor		54	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor		54	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	54	57.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/20/2022
Case Description: Grading

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single Family (East)	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	975	0
Grader	No	40	85		975	0
Dozer	No	40		81.7	975	0
Tractor	No	40	84		975	0
Tractor	No	40	84		975	0
Tractor	No	40	84		975	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	54.9	50.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	59.2	55.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	55.9	51.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	58.2	54.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	58.2	54.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	58.2	54.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	59.2	61.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single Family (North)	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	1800	0
Grader	No	40	85		1800	0
Dozer	No	40		81.7	1800	0
Tractor	No	40	84		1800	0
Tractor	No	40	84		1800	0
Tractor	No	40	84		1800	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	49.6	45.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	53.9	49.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	50.5	46.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	52.9	48.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	52.9	48.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	52.9	48.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	53.9	56.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single Family (Northeast	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	1585	0
Grader	No	40	85		1585	0
Dozer	No	40		81.7	1585	0
Tractor	No	40	84		1585	0
Tractor	No	40	84		1585	0
Tractor	No	40	84		1585	0

Results

		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator		50.7	46.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader		55	51	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		51.6	47.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor		54	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor		54	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor		54	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	55	57.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/20/2022
Case Description: Building Construction

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single Family (East)	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Tractor	No	40	84		975	0
Crane	No	16		80.6	975	0
All Other Equipment > 5 HP	No	50	85		975	0
All Other Equipment > 5 HP	No	50	85		975	0
All Other Equipment > 5 HP	No	50	85		975	0
Generator	No	50		80.6	975	0
Tractor	No	40	84		975	0
Tractor	No	40	84		975	0
Welder / Torch	No	40		74	975	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor	58.2	54.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	54.7	46.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	59.2	56.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	59.2	56.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	59.2	56.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	54.8	51.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	58.2	54.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	58.2	54.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	48.2	44.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	59.2	63.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single Family (North)	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Tractor	No	40	84		1800	0
Crane	No	16		80.6	1800	0
All Other Equipment > 5 HP	No	50	85		1800	0
All Other Equipment > 5 HP	No	50	85		1800	0
All Other Equipment > 5 HP	No	50	85		1800	0
Generator	No	50		80.6	1800	0
Tractor	No	40	84		1800	0
Tractor	No	40	84		1800	0
Welder / Torch	No	40		74	1800	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor	52.9	48.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	49.4	41.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	53.9	50.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	53.9	50.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	53.9	50.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	49.5	46.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	52.9	48.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	52.9	48.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	42.9	38.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	53.9	58.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single Family (Northeast	Residential	1	1	1

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Tractor	No	40	84		1585	0
Crane	No	16		80.6	1585	0
All Other Equipment > 5 HP	No	50	85		1585	0
All Other Equipment > 5 HP	No	50	85		1585	0
All Other Equipment > 5 HP	No	50	85		1585	0
Generator	No	50		80.6	1585	0
Tractor	No	40	84		1585	0
Tractor	No	40	84		1585	0
Welder / Torch	No	40		74	1585	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor	54	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	50.5	42.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	55	52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	55	52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	55	52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	50.6	47.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	54	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	54	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	44	40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	55	59.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/20/2022
Case Description: Paving

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single Family (East)	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Roller	No	20		80	975	0
Concrete Mixer Truck	No	40		78.8	975	0
Concrete Mixer Truck	No	40		78.8	975	0
Paver	No	50		77.2	975	0
All Other Equipment > 5 HP	No	50	85		975	0
All Other Equipment > 5 HP	No	50	85		975	0
Roller	No	20		80	975	0
Tractor	No	40	84		975	0

Equipment	Results Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Noise Limit Exceedance (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Roller	58.2	54.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	54.7	46.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	59.2	56.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	59.2	56.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	59.2	56.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	54.8	51.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	58.2	54.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	58.2	54.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	59.2	63.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single Family (North)	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Roller	No	20		80	1800	0
Concrete Mixer Truck	No	40		78.8	1800	0
Concrete Mixer Truck	No	40		78.8	1800	0
Paver	No	50		77.2	1800	0
All Other Equipment > 5 HP	No	50	85		1800	0
All Other Equipment > 5 HP	No	50	85		1800	0
Roller	No	20		80	1800	0
Tractor	No	40	84		1800	0

Equipment	Results Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Noise Limit Exceedance (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Roller	48.9	41.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	47.7	43.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	47.7	43.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	46.1	43.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	53.9	50.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	53.9	50.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	48.9	41.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	52.9	48.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	53.9	56.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single Family (Northeast	Residential	1	1	1

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Roller	No	20		80	1585	0
Concrete Mixer Truck	No	40		78.8	1585	0
Concrete Mixer Truck	No	40		78.8	1585	0
Paver	No	50		77.2	1585	0
All Other Equipment > 5 HP	No	50	85		1585	0
All Other Equipment > 5 HP	No	50	85		1585	0
Roller	No	20		80	1585	0
Tractor	No	40	84		1585	0

Results

Equipment	Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Noise Limit Exceedance (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Roller	54	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	50.5	42.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Concrete Mixer Truck	55	52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	55	52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	55	52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	50.6	47.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	54	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	54	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	55	59.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/20/2022
Case Description: Architectural Coating

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Single Family (East)	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	975	0

		Results													
		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)		51.9	47.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	51.9	47.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Single Family (North)	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	1800	0

		Results													
		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)		46.5	42.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	46.5	42.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Single Family (Northeast	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	1585	0

		Results													
		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)		47.6	43.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	47.6	43.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

APPENDIX I

TRAFFIC SCOPING AGREEMENT

Exhibit A

SCOPING AGREEMENT FOR TRAFFIC IMPACT ANALYSIS

This following form shall be used to acknowledge preliminary approval of the scope for the traffic impact analysis (TIA) of the following project. The TIA must follow the City of Rialto Traffic Impact Analysis – Report Guidelines and Requirements, adopted by the City Council on _____.

City of Rialto

Traffic Impact Analysis

Scoping Agreement

Case No. 2021-0064

Related Cases -

SP No. _____

EIR No. _____

GPA No. _____

ZC No. _____

Project Name: Thrifty Locust and Lowell Warehouse

Project Address: Intersection of Locust Avenue and Lowell Street

Project Description: ±101,230-square foot Warehouse on ±4.9-acre parcel

	Consultant	Developer
Name:	Kimley Horn - Pranesh Tarikere, PE	Thrifty Oil Co.
Address:	1100 Town and Country Road, Suite 700, Oran	13116 Imperial Highway, Santa Fe Sp
Telephone:	714-780-2543	310-418-6588
Fax:		

1. Trip Generation Source: ITE Trip Generation Manual, 11th Edition

Existing GP Land Use Business Park Proposed Land Use Industrial

Current Zoning: Industrial General Manufacturing Proposed Zoning: Industrial General Manufac

Total Daily Project Trips: Net 125 trips (220 PCE)

	Current Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	7	7	14	22	7	29
PM Trips	0	1	1	8	22	30

Internal Trip Allowance Yes No (_____ % Trip Discount)

Pass-By Trip Allowance Yes No (_____ % Trip Discount)

For appropriate land uses, a pass-by trip discount may be allowed not to exceed 25%. Discount trips shall be indicated on a report figure for intersections and access locations.

2. Trip Geographic Distribution: N ___ % S ___ % E ___ % W ___ %

(Detailed exhibits of trip distribution must be attached with Trucks as a separate exhibit)

3. Background Growth Traffic

Project Completion Year: _____ Annual Background Growth Rate: _____%

Other Phase Years _____

Other area projects to be considered: _____

(Contact Planning for Lists. Correlate projects to exhibit map and also indicate which projects have been included in study area forecasts for existing + background growth + project + cumulative)

Model/Forecast methodology: _____

4. Study Intersections: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies received.)

1. _____ 6. _____
2. _____ 7. _____
3. _____ 8. _____
4. _____ 9. _____
5. _____ 10. _____

5. Study Roadway Segments: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies received.)

1. _____ 6. _____
2. _____ 7. _____
3. _____ 8. _____
4. _____ 9. _____
5. _____ 10. _____

6. Other Jurisdictional Impacts

Is this project within any other Agency's Sphere of Influence or within one-mile of another jurisdictional boundary?

_____YES
_____NO

If so, name of Jurisdiction: _____

7. Site Plan (please attach 11" x 17" legible copy)

8. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (to be filled out by the City of Rialto Public Works Department) (NOTE: If the traffic study states that "a traffic signal is warranted" (or "a traffic signal appears to be warranted," or similar statement) at an existing un-signalized intersection under existing conditions, 8-hour approach traffic volume information must be submitted in addition to the peak hourly turning movement counts for that intersection.)

_____
_____
_____
_____

9. Existing Conditions

Traffic count data must be new or within one year. Provide traffic count dates if using other than new counts.

Date of counts: _____

NOTE Fees are due and must be submitted with, or prior to submittal of this form. The City will not process the Scoping Agreement prior to the receipt of the processing fee.

Fees Paid: _____ Date _____

Recommended:

Scoping Agreement Submittal date 3/2/22

Scoping Agreement Resubmittal date 5/11/22

5/11/22

Applicant/Engineer Date

Land Use Concurrence:

5-25-2022

Development Services Department Date

Approved by: Recommended Approval 5/24/22: Justin P. Schlafli

5/26/22

Public Works Department Date

NOTE:

The Applicant/Engineer acknowledges that the Scoping Agreement is intended to assist in the preparation of any required TIA. It is preliminary in nature and the City does not have sufficient data to determine the ultimate conditions that may be imposed for the project. It does not provide nor limit the requirements imposed on the Project but is intended only to provide initial input into the parameters for review of the traffic generated by the Project and the initial areas to be considered and studied. Subsequent changes to scope of required analysis to be included in the TIA may be required by the Transportation Commission, Planning Commission, and/or the City Council upon Public Works Director/City Engineer review and approval.

Kimley»Horn

MEMORANDUM

To: Mr. Justin Schlaefli, P.E., T.E.
City of Rialto
From: Pranesh Tarikere, P.E.
Kimley-Horn and Associates, Inc.
Date: May 11, 2022 (Updated)

Subject: Thrifty Rialto Warehouse – Traffic Scoping Agreement

---

Kimley-Horn has been hired to prepare this scoping letter to the City of Rialto for an approximately 101,230 square foot industrial warehouse (Project) proposed in the City of Rialto. The Project site is located northwest of the intersection of Locust Avenue and Lowell Street. The 4.9-acre site is bounded on the north and west by existing buildings, the east by Locust Avenue, and the south by Lowell Street. The currently undeveloped site is located within the Rialto Airport Specific Plan, with permitted uses of Industrial and Business Park uses. Regional access would be provided via Interstate 15, located to the west of the Project Site, and State Route 210, located to the south of the Project Site. Local access would be provided via Locust Avenue, east of the Project Site. The Project proposes two driveways, one on Locust Avenue, and one on Lowell Avenue. **Attachment A** contains the preliminary site plan. This scoping agreement memo describes the trip generation, trip distribution, and analysis methodology.

Trip Generation

The *Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition* is used to develop trip generation characteristics of the project. The Project is most comparable to Warehousing (Land Use Code 150), which is also in line with the *City of Rialto Traffic Impact Analysis Guidelines* for Vehicles Miles Traveled (VMT) and Level of Service (LOS) (October 2021) which states Warehousing (Land Use Code 150) shall be used for all warehousing projects. The truck rates, tuck mixes and Passenger Car Equivalents (PCEs) for warehousing follow the City's Guidelines. The estimated trip generation is shown in **Attachment B**. The proposed project is estimated to generate a total of 291 PCE per day with 29 PCE during the AM peak hour, and 30 PCE during the PM peak hour.

The project site is currently used as a contractor yard. Driveway counts were collected at the existing site on Wednesday, 12/15/2021 and Thursday 12/16/2021. The count data is included in Attachment C. The average of the two weekday counts was used to calculate trip generation from the existing use. The existing use generates 48 PCE per day with 8 PCE during the AM peak hour, and 1 PCE during the PM peak hour.

The net trip generation from the project is expected to be 220 PCE per day with 16 PCE during the AM peak hour, and 29 PCE during the PM peak hour.

Trip Distribution

The trip distribution is based on expected travel patterns to/from the site from areas in Rialto and other surrounding communities. Truck distributions use designated truck routes and are routed in the direction of intended travel to the nearest freeways while per the City of Rialto Guidelines. The distribution also reflects that the SR-210 Alder Avenue interchange provides the shortest travel times and most direct routing to the site for passenger vehicle and trucks traveling from the west.

The trip distribution for passenger vehicles and trucks is summarized below:

Passenger Vehicles

- 30% to/from the east along Riverside Avenue (east of Locust Avenue)
- 20% to/from the east along SR-210, using Ayala Drive interchange
- 5% to/from the north along Riverside Avenue (west of Locust Avenue)
- 30% to/from the west along SR-210, using Alder Avenue interchange
- 15% to/from the south along Locust Avenue

Trucks

- 20% to/from the north along I-15, using Sierra Avenue interchange
- 30% to/from the east along SR-210, using Ayala Drive interchange
- 20% to/from the south along Cedar Avenue
- 30% to/from the west using SR-210, using Alder Avenue interchange

Study Area

The City's Traffic Impact Analysis Guidelines, require a Traffic Study to be prepared for the intersections where one or more of the following criteria are met:

- The project will generate more than 50 peak hour trips
- Freeway interchanges within 2 miles from the site that is expected to receive more than 40% of the project's traffic
- Additional intersections of concern (specifically located within the vicinity of schools, shopping areas, or other locations of high trip generation and roadways that exceed V/C ratio as a result of project traffic).

Based on the trip generated described above, the project is expected to generate less than 50 PCE peak hour trips and as such will not contribute 50 or more PCE trips to any intersection. The SR-210 freeway interchange at Alder Avenue is located less than two miles of the site. However, it is not expected to receive more than 40% of the project's traffic based on the distribution detailed above. Due to the expected distribution and low peak hour trip generation, project trips are also not expected to significantly impact any roadways or intersections near high traffic generating shopping centers and/or

nearby schools. Furthermore, the City's guidelines indicate that any proposed use which can demonstrate, based on the most current Trip Generation manual published by the Institute of Transportation Engineers (ITE) or other approved trip generation data, that there will be less than 50 vehicle trips during peak hours and no other operational concerns exist may be exempt from level of service analysis. Therefore, no additional traffic operational analysis is required for the project.

Vehicle Miles traveled (VMT)

The project proposes to do an addendum to the certified Rialto Airport Specific Plan EIR. Level of Service was the applicable threshold when the City certified the Rialto Airport Specific Plan Program EIR in 1997. The mandate requiring lead agencies to use VMT as a threshold for evaluating traffic impacts was adopted in 2018 and effective in 2020. It does not constitute "new information" requiring additional environmental review nor does it affect the assessment of project environmental impacts or mitigation measures compared to those analyzed in the Rialto Airport Specific Plan Program EIR.

The land use designation for the project site in the Rialto Airport Specific Plan is General Manufacturing (I-GM). The I-GM uses are the most intensive industrial uses within the Specific Plan area. Industrial land uses may include warehousing, manufacturing, and multi-tenant spaces. Key requirements for these industries include large parcels, designated truck access routes, and appropriate utility connections. Warehouses are a permitted use in the I-GM. Based on these land use designations and the maximum FAR of 1, allowable development of the site in the Rialto Airport Specific Plan could be 208,217 square feet. As such, the proposed development of 101,230 square feet of warehouse would have fewer VMT than the VMT generated by the site based on land use designation in the Rialto Airport Specific Plan.

Site Adjacent Roadway Cross-Sections

The typical cross-sections for the site adjacent roadways of N Locust Avenue and W Lowell Street along project frontage is included in Attachment D.

Truck Turning Exhibit

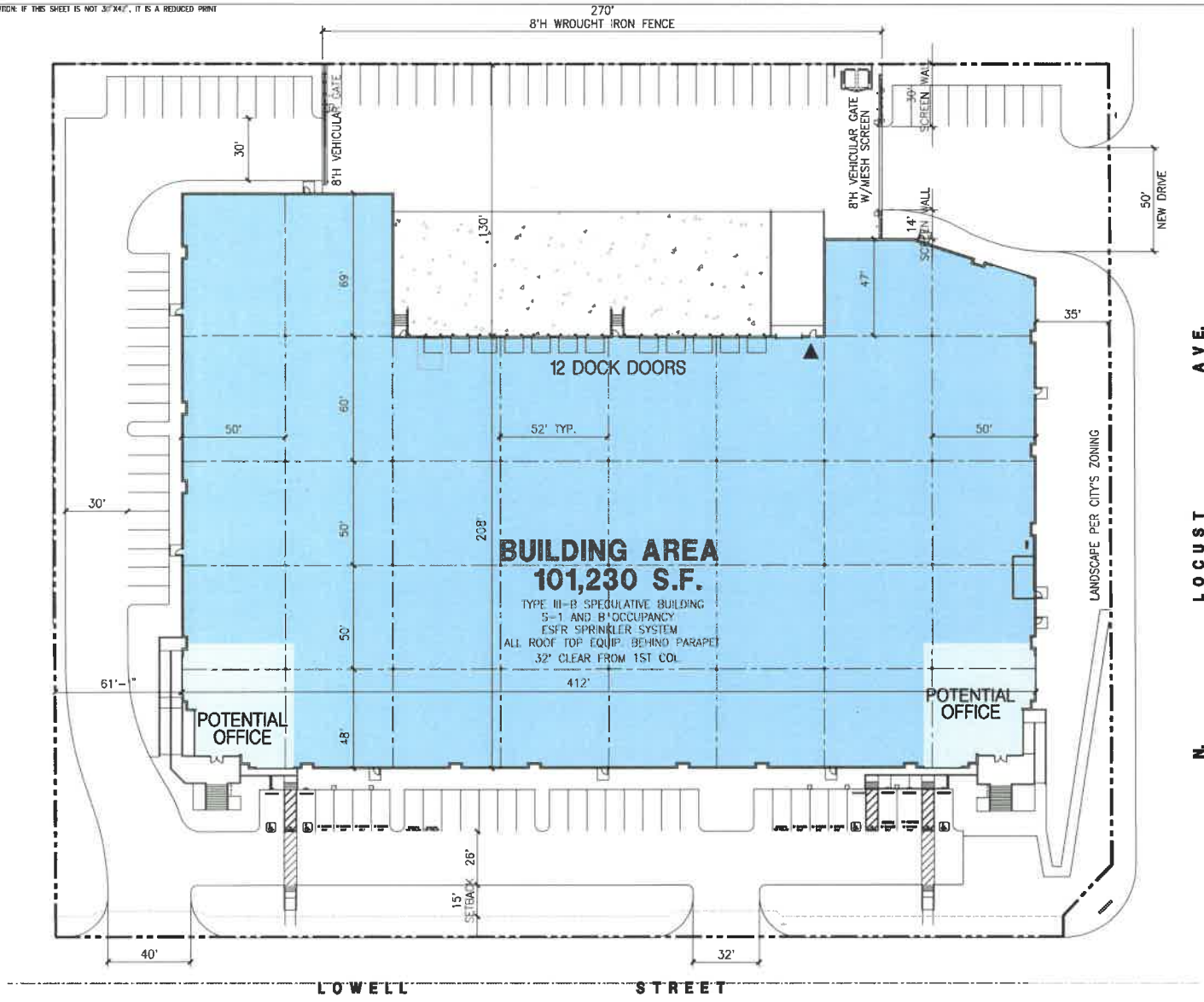
Truck turning exhibit showing truck turns for the truck driveway on Locust Avenue is included in Attachment E.

Line of Sight Exhibit

Line of Sight exhibit showing the proposed clear areas at each of the proposed driveway locations is included in Attachment F. Clear areas shall be annotated in the landscape plans for the project.

Attachment A – Site Plan

CAUTION: IF THIS SHEET IS NOT 30"X42", IT IS A REDUCED PRINT



Aerial Map



Tabulation

SITE AREA	
In s.f.	213,265 s.f.
In acres	4.90 ac
BUILDING AREA	
Office	4,500 s.f.
Office 2nd floor	5,000 s.f.
Warehouse	91,730 s.f.
TOTAL	101,230 s.f.
COVERAGE	47.5%
AUTO PARKING REQUIRED	
Office: 1/250 s.f.	38 stalls
Whse: 1st 10k @ 1/1000 s.f.	10 stalls
whse: above 10k @ 1/2000 s.f.	41 stalls
TOTAL	89 stalls
AUTO PARKING PROVIDED	
Standard (9' x 20')	94 stalls
ZONING ORDINANCE FOR CITY	
Zoning Designation - Rialto Airport Specific Plan - I-GM (General Manufacturing)	
MAXIMUM BUILDING HEIGHT ALLOWED	
Height - 35'	
MAXIMUM FLOOR AREA RATIO	
FAR - 3:1	
LANDSCAPE REQUIREMENT	
Percentage - To Be Verify	
SETBACKS	

Building	Landscape
Locust Ave/Front - 25'	15'
Lowell St/Side - 15'	15'
Rear - 0'-15'	0

Legend

- POTENTIAL OFFICE
- WAREHOUSE
- ▼ DRIVE THRU DOOR

north

1" = 20'
0 20 40 60

HPA architecture

Conceptual Site Plan

Locust Ave and Lowell St.

Rialto, CA

Thrifty Oil

18831 Bardeen Ave. - Ste. #100
Irvine, CA 92612
(949) 863-1770
www.hparchs.com

February 21, 2022 Job No. 21180

Scheme 10

1797

Attachment B – Project Trip Generation

Land Use	Land Use as listed in ITE		Units[1]		Trip Rate[2]	Daily Trips	AM Peak-Hour					PM Peak-Hour				
							% of ADT[2]	In:Out Ratio[2]	In	Out	Total	% of ADT[2]	In:Out Ratio[2]	In	Out	Total
Driveway Trips [3]																
Proposed																
Warehouse Facility	Warehousing				1.71 / ksf	173										
Passenger Cars (60.0%)		60.0%			1.026 / ksf	104			8	2	10			3	8	11
2-Axle Trucks (0.8%)		0.8%	101.23	ksf	0.014 / ksf	1	10%	0.77 : 0.23	0	0	0	11%	0.28 : 0.72	0	0	0
3-Axle Trucks (11.2%)		11.2%			0.192 / ksf	19			1	1	2			1	1	2
4+-Axle Trucks (28.0%)		28.0%			0.479 / ksf	48			4	1	5			1	4	5
Proposed Total						**173**			**13**	**4**	**17**			**5**	**13**	**18**
Proposed PCE																
Warehouse Facility																
Passenger Cars		1				104			8	2	10			3	8	11
2-Axle Trucks (PCE=1.5)		1.5	101.23	ksf		2			0	0	0			0	0	0
3-Axle Trucks (PCE=2.0)		2				39			2	2	4			2	2	4
4+-Axle Trucks (PCE=3.0)		3				145			12	3	15			3	12	15
PCE Total (Proposed)						**291**			**22**	**7**	**29**			**8**	**22**	**30**
Existing (based on driveway counts)[4]																
Passenger Cars						30			2	1	3			0	1	1
2-Axle Trucks						6			1	2	3			0	0	0
3-Axle Trucks						4			0	0	0			0	0	0
4+-Axle Trucks						8			1	1	2			0	0	0
Existing Total						**48**			**4**	**4**	**8**			**0**	**1**	**1**
Existing PCE																
Passenger Cars		1				30			2	1	3			0	1	1
2-Axle Trucks (PCE=1.5)		1.5				9			2	3	5			0	0	0
3-Axle Trucks (PCE=2.0)		2				8			0	0	0			0	0	0
4+-Axle Trucks (PCE=3.0)		3				24			3	3	6			0	0	0
PCE Total (Existing)						**71**			**7**	**7**	**14**			**0**	**1**	**1**
NET TRIP GENERATION (Actual Vehicles) =						**125**			**9**	**0**	**9**			**5**	**12**	**17**
NET TRIP GENERATION (PCE) =						**220**			**16**	**0**	**16**			**8**	**21**	**29**

Note:
1. ksf = Thousand Square Feet
2. Trip rates references from ITE Trip Generation, 11th Edition.
3. Driveway trips are the total number of trips generated by a site.
4. Average of driveway counts collected at the existing site on Wednesday 12/15/2021 and Thursday 12/16/2021

Attachment C – Existing site Driveway Count Data (December 2021)

City:	Rialto
Location:	Locust Avenue Driveway
Date:	12/15/2021
Count Type:	Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	1	0	0	0	1
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	0	0
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	1	0	0	0	1
6:30	1	0	0	0	1
6:45	2	0	0	0	2
7:00	1	0	0	0	1
7:15	0	1	0	0	1
7:30	0	0	0	0	0
7:45	2	0	0	0	2
8:00	1	0	0	0	1
8:15	0	1	0	0	1
8:30	0	0	0	0	0
8:45	0	1	0	0	1
9:00	1	0	0	0	1
9:15	1	0	0	0	1
9:30	0	0	0	1	1
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	0	0
10:30	0	0	0	0	0
10:45	0	0	1	0	1
11:00	0	0	0	0	0
11:15	1	0	0	0	1
11:30	0	0	0	0	0
11:45	0	0	0	1	1

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	1	0	0	0	1
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	0	0
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	2	0	0	0	2
8:00	0	0	0	0	0
8:15	0	1	0	0	1
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	1	0	0	0	1
9:15	0	0	0	0	0
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	1	0	0	0	1
10:30	0	0	0	0	0
10:45	0	0	1	0	1
11:00	0	0	0	0	0
11:15	3	0	0	0	3
11:30	2	0	0	0	2
11:45	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City: Rialto
Location: Locust Avenue Driveway
Date: 12/15/2021
Count Type: Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	4	0	0	0	4
13:15	0	0	0	0	0
13:30	1	0	0	0	1
13:45	1	0	0	0	1
14:00	0	0	0	0	0
14:15	0	0	0	0	0
14:30	1	0	0	0	1
14:45	0	0	0	1	1
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	0	0	0	0	0
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
TOTAL	**19**	**3**	**1**	**3**	**26**

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	1	0	0	0	1
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	0	0	0	0
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	0	0	0	0	0
14:15	1	0	0	0	1
14:30	1	0	0	0	1
14:45	1	0	0	0	1
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	4	0	0	0	4
15:45	0	0	0	0	0
16:00	1	0	0	0	1
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
	19	**1**	**1**	**0**	**21**

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City: Rialto
Location: Lowell Street Driveway
Date: 12/15/2021
Count Type: Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	0	0
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	0	0	0	0
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	0	0	0	0	0
9:15	0	0	0	0	0
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	0	0
10:30	0	0	0	0	0
10:45	0	0	0	0	0
11:00	0	0	0	0	0
11:15	0	0	0	0	0
11:30	0	0	0	0	0
11:45	0	0	0	0	0

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	0	0
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	1	0	1	2
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	0	0	0	0	0
9:15	0	1	0	0	1
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	1	1
10:30	0	0	0	0	0
10:45	0	0	0	0	0
11:00	0	0	0	0	0
11:15	0	0	0	0	0
11:30	0	0	0	0	0
11:45	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City:	Rialto
Location:	Lowell Street Driveway
Date:	12/15/2021
Count Type:	Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	0	0	0	0
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	0	0	0	0	0
14:15	0	0	0	0	0
14:30	0	0	0	0	0
14:45	0	0	0	0	0
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	0	0	0	0	0
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**	**0**

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	0	0	0	0
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	0	0	0	0	0
14:15	0	0	0	0	0
14:30	0	0	0	0	0
14:45	0	0	0	0	0
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	0	0	0	1	1
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
	0	**2**	**0**	**3**	**5**

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City:	Rialto
Location:	DRIVEWAY TOTALS
Date:	12/12/2021
Count Type:	Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	1	0	0	0	1
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	0	0
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	1	0	0	0	1
6:30	1	0	0	0	1
6:45	2	0	0	0	2
7:00	1	0	0	0	1
7:15	0	1	0	0	1
7:30	0	0	0	0	0
7:45	2	0	0	0	2
8:00	1	0	0	0	1
8:15	0	1	0	0	1
8:30	0	0	0	0	0
8:45	0	1	0	0	1
9:00	1	0	0	0	1
9:15	1	0	0	0	1
9:30	0	0	0	1	1
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	0	0
10:30	0	0	0	0	0
10:45	0	0	1	0	1
11:00	0	0	0	0	0
11:15	1	0	0	0	1
11:30	0	0	0	0	0
11:45	0	0	0	1	1

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	1	0	0	0	1
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	0	0
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	2	0	0	0	2
8:00	0	0	0	0	0
8:15	0	2	0	1	3
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	1	0	0	0	1
9:15	0	1	0	0	1
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	1	0	0	1	2
10:30	0	0	0	0	0
10:45	0	0	1	0	1
11:00	0	0	0	0	0
11:15	3	0	0	0	3
11:30	2	0	0	0	2
11:45	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City: Rialto
Location: DRIVEWAY TOTALS
Date: 12/12/2021
Count Type: Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	4	0	0	0	4
13:15	0	0	0	0	0
13:30	1	0	0	0	1
13:45	1	0	0	0	1
14:00	0	0	0	0	0
14:15	0	0	0	0	0
14:30	1	0	0	0	1
14:45	0	0	0	1	1
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	0	0	0	0	0
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
TOTAL	**19**	**3**	**1**	**3**	**26**

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	1	0	0	0	1
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	0	0	0	0
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	0	0	0	0	0
14:15	1	0	0	0	1
14:30	1	0	0	0	1
14:45	1	0	0	0	1
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	4	0	0	1	5
15:45	0	0	0	0	0
16:00	1	0	0	0	1
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
	19	**3**	**1**	**3**	**26**

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City: Rialto
Location: Locust Avenue Driveway
Date: 12/16/2021
Count Type: Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	1	0	0	0	1
4:45	0	0	0	0	0
5:00	0	0	1	0	1
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	2	0	0	0	2
6:45	2	0	0	0	2
7:00	1	0	0	0	1
7:15	0	1	0	0	1
7:30	0	0	0	1	1
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	0	0	0	0
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	0	0	0	0	0
9:15	1	0	0	0	1
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	0	0
10:30	0	1	0	0	1
10:45	0	0	0	0	0
11:00	0	0	0	0	0
11:15	0	0	0	0	0
11:30	0	0	0	0	0
11:45	0	0	0	0	0

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	1	0	1
4:45	0	0	0	0	0
5:00	0	0	1	0	1
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	0	0	0	0
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	1	0	0	0	1
9:15	0	0	0	0	0
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	0	0
10:30	0	0	0	0	0
10:45	0	0	0	0	0
11:00	0	1	0	0	1
11:15	0	0	0	0	0
11:30	1	0	0	0	1
11:45	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City:	Rialto
Location:	Locust Avenue Driveway
Date:	12/16/2021
Count Type:	Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	1	0	1	0	2
12:15	0	0	0	1	1
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	1	0	0	1
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	0	0	0	0	0
14:15	1	0	0	0	1
14:30	0	0	0	1	1
14:45	0	0	0	0	0
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	0	0	0	0	0
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	1	0	0	1	2
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
TOTAL	**10**	**3**	**2**	**4**	**19**

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	0	0	0	0
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	1	0	0	0	1
14:15	0	0	0	0	0
14:30	0	0	0	0	0
14:45	1	0	0	0	1
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	4	0	0	0	4
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	1	0	0	0	1
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	1	1
20:15	1	0	0	0	1
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
	10	**1**	**2**	**1**	**14**

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City:	Rialto
Location:	Lowell Street Driveway
Date:	12/16/2021
Count Type:	Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	0	0
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	0	0	0	0
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	0	0	0	0	0
9:15	0	0	0	0	0
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	0	0
10:30	0	0	0	0	0
10:45	0	0	0	0	0
11:00	0	0	0	0	0
11:15	0	0	0	0	0
11:30	0	0	0	0	0
11:45	0	0	0	0	0

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	0	0	0
4:45	0	0	0	0	0
5:00	0	0	0	0	0
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	1	0	1	2
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	0	0	0	0	0
9:15	0	0	0	0	0
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	0	0
10:30	0	0	0	0	0
10:45	0	0	0	0	0
11:00	0	0	0	0	0
11:15	0	0	0	0	0
11:30	0	0	0	0	0
11:45	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City:	Rialto
Location:	Lowell Street Driveway
Date:	12/16/2021
Count Type:	Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	0	0	0
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	0	0	0	0
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	0	0	0	0	0
14:15	0	0	0	0	0
14:30	0	0	0	0	0
14:45	0	0	0	0	0
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	0	0	0	0	0
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**	**0**

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	0	1	1
12:30	0	0	0	1	1
12:45	0	0	0	0	0
13:00	0	1	0	0	1
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	0	0	0	0	0
14:15	0	0	0	0	0
14:30	0	0	0	0	0
14:45	0	0	0	0	0
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	0	0	0	0	0
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
	0	**2**	**0**	**3**	**5**

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City: Rialto
Location: DRIVEWAY TOTALS
Date: 12/16/2021
Count Type: Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	1	0	0	0	1
4:45	0	0	0	0	0
5:00	0	0	1	0	1
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	2	0	0	0	2
6:45	2	0	0	0	2
7:00	1	0	0	0	1
7:15	0	1	0	0	1
7:30	0	0	0	1	1
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	0	0	0	0
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	0	0	0	0	0
9:15	1	0	0	0	1
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	0	0
10:30	0	1	0	0	1
10:45	0	0	0	0	0
11:00	0	0	0	0	0
11:15	0	0	0	0	0
11:30	0	0	0	0	0
11:45	0	0	0	0	0

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
0:00	0	0	0	0	0
0:15	0	0	0	0	0
0:30	0	0	0	0	0
0:45	0	0	0	0	0
1:00	0	0	0	0	0
1:15	0	0	0	0	0
1:30	0	0	0	0	0
1:45	0	0	0	0	0
2:00	0	0	0	0	0
2:15	0	0	0	0	0
2:30	0	0	0	0	0
2:45	0	0	0	0	0
3:00	0	0	0	0	0
3:15	0	0	0	0	0
3:30	0	0	0	0	0
3:45	0	0	0	0	0
4:00	0	0	0	0	0
4:15	0	0	0	0	0
4:30	0	0	1	0	1
4:45	0	0	0	0	0
5:00	0	0	1	0	1
5:15	0	0	0	0	0
5:30	0	0	0	0	0
5:45	0	0	0	0	0
6:00	0	0	0	0	0
6:15	0	0	0	0	0
6:30	0	0	0	0	0
6:45	0	0	0	0	0
7:00	0	0	0	0	0
7:15	0	0	0	0	0
7:30	0	0	0	0	0
7:45	0	0	0	0	0
8:00	0	0	0	0	0
8:15	0	1	0	1	2
8:30	0	0	0	0	0
8:45	0	0	0	0	0
9:00	1	0	0	0	1
9:15	0	0	0	0	0
9:30	0	0	0	0	0
9:45	0	0	0	0	0
10:00	0	0	0	0	0
10:15	0	0	0	0	0
10:30	0	0	0	0	0
10:45	0	0	0	0	0
11:00	0	1	0	0	1
11:15	0	0	0	0	0
11:30	1	0	0	0	1
11:45	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

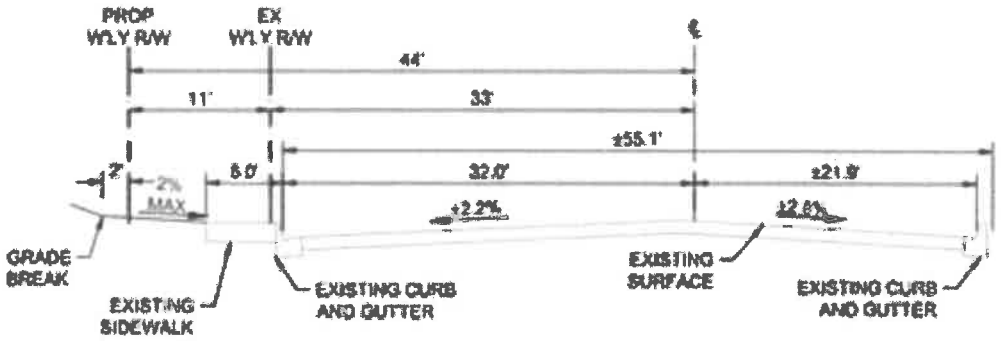
City: Rialto
Location: DRIVEWAY TOTALS
Date: 12/16/2021
Count Type: Driveway Classification Count

	Entering				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	1	0	1	0	2
12:15	0	0	0	1	1
12:30	0	0	0	0	0
12:45	0	0	0	0	0
13:00	0	1	0	0	1
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	0	0	0	0	0
14:15	1	0	0	0	1
14:30	0	0	0	1	1
14:45	0	0	0	0	0
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	0	0	0	0	0
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	1	0	0	1	2
18:45	0	0	0	0	0
19:00	0	0	0	0	0
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	0	0
20:15	0	0	0	0	0
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
TOTAL	**10**	**3**	**2**	**4**	**19**

	Exiting				
	Pass Veh	Large 2 Axle	3 Axle	4+ Axle	Total
12:00	0	0	0	0	0
12:15	0	0	0	1	1
12:30	0	0	0	1	1
12:45	0	0	0	0	0
13:00	0	1	0	0	1
13:15	0	0	0	0	0
13:30	0	0	0	0	0
13:45	0	0	0	0	0
14:00	1	0	0	0	1
14:15	0	0	0	0	0
14:30	0	0	0	0	0
14:45	1	0	0	0	1
15:00	0	0	0	0	0
15:15	0	0	0	0	0
15:30	4	0	0	0	4
15:45	0	0	0	0	0
16:00	0	0	0	0	0
16:15	0	0	0	0	0
16:30	0	0	0	0	0
16:45	0	0	0	0	0
17:00	0	0	0	0	0
17:15	0	0	0	0	0
17:30	0	0	0	0	0
17:45	0	0	0	0	0
18:00	0	0	0	0	0
18:15	0	0	0	0	0
18:30	0	0	0	0	0
18:45	0	0	0	0	0
19:00	1	0	0	0	1
19:15	0	0	0	0	0
19:30	0	0	0	0	0
19:45	0	0	0	0	0
20:00	0	0	0	1	1
20:15	1	0	0	0	1
20:30	0	0	0	0	0
20:45	0	0	0	0	0
21:00	0	0	0	0	0
21:15	0	0	0	0	0
21:30	0	0	0	0	0
21:45	0	0	0	0	0
22:00	0	0	0	0	0
22:15	0	0	0	0	0
22:30	0	0	0	0	0
22:45	0	0	0	0	0
23:00	0	0	0	0	0
23:15	0	0	0	0	0
23:30	0	0	0	0	0
23:45	0	0	0	0	0
	10	**3**	**2**	**4**	**19**

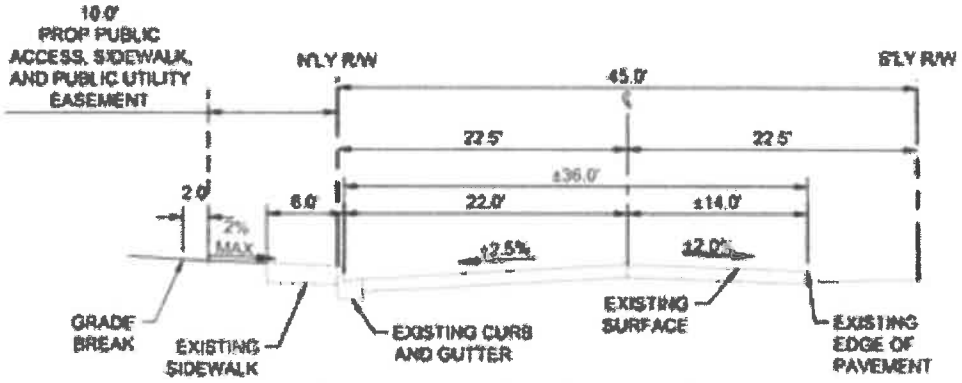
Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

Attachment D – Typical Roadway Cross-sections



TYPICAL SECTION - N LOCUST AVE

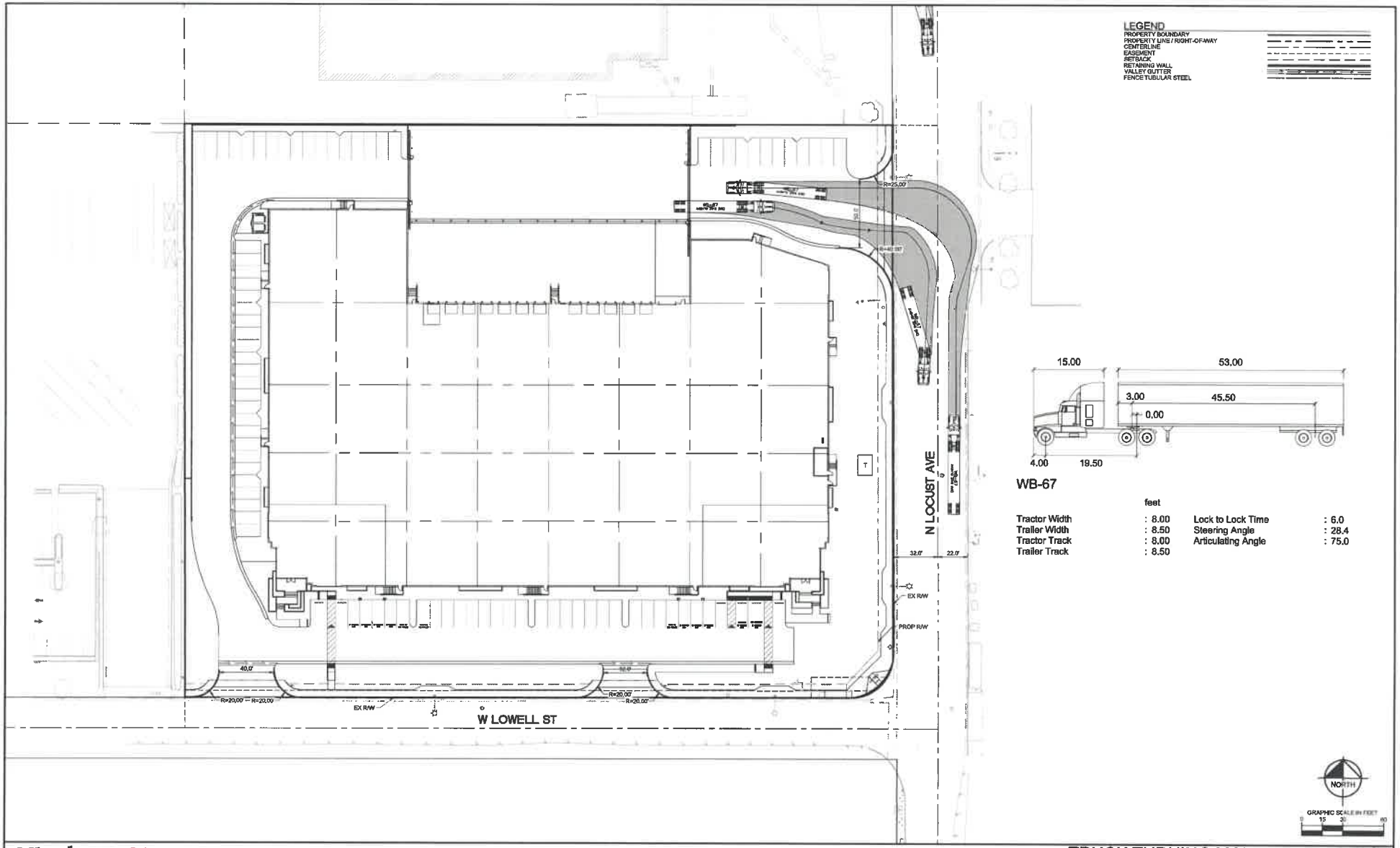
NTS



TYPICAL SECTION - W LOWELL ST

NTS

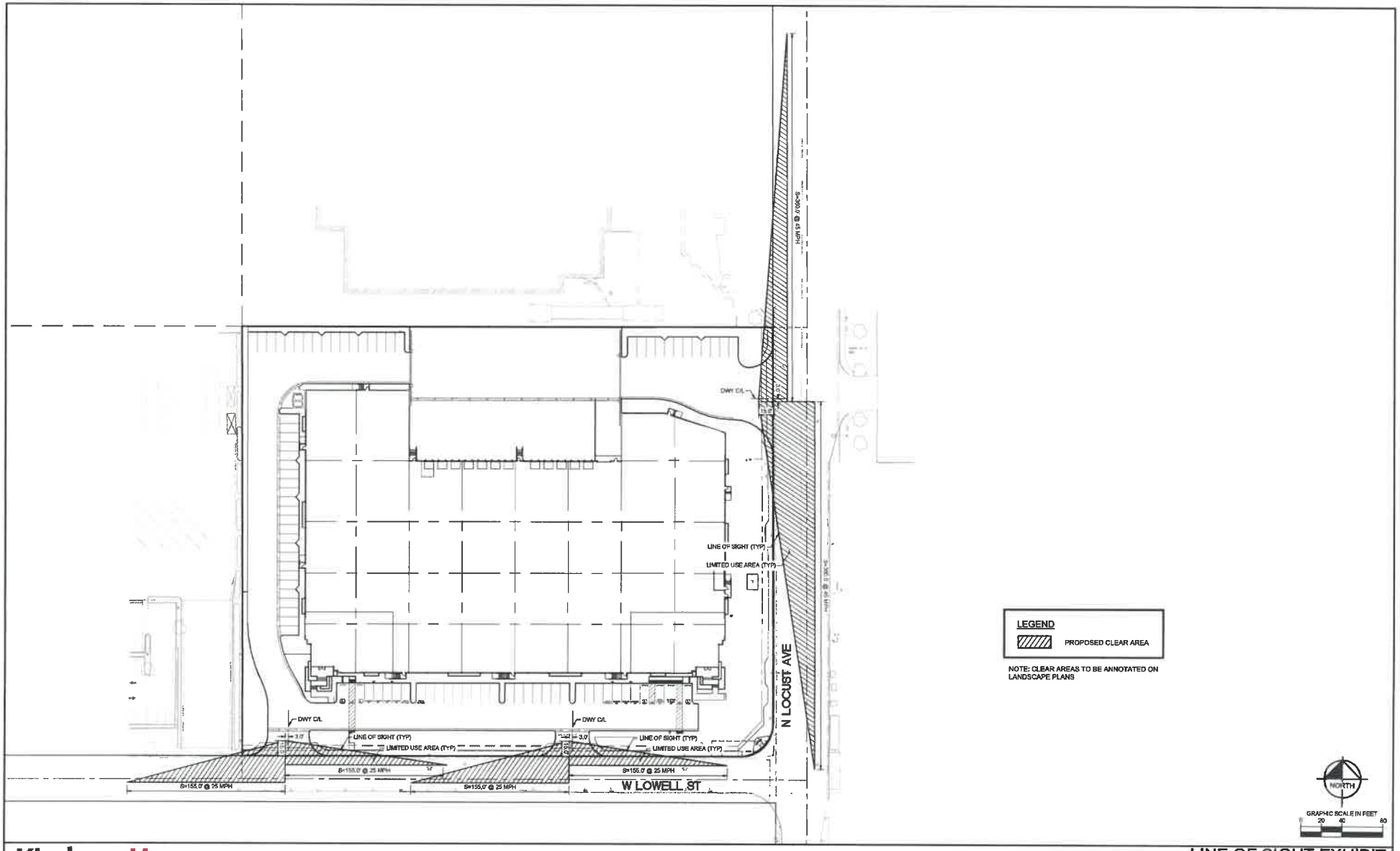
Attachment E – Truck Turn Exhibit



Kimley»Horn

TRUCK TURNING MOVEMENT EXHIBIT
THRIFTY LOCUST & LOWELL
RIALTO, CA

Attachment F – Line of Sight Exhibit



Kimley»Horn

401 B STREET, SUITE 600, SAN DIEGO, CA 92101
PHONE: 619-234-9411
WWW.KIMLEY-HORN.COM

LINE OF SIGHT EXHIBIT
THRIFTY LOCUST & LOWELL
RIALTO, CA

I:\land_ldev\095931005 - thrifty rialto warehouse\design\civil\details\line of sight exhibit.dwg 4/27/2022

RESOLUTION NO. 2022-XX

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF RIALTO, CALIFORNIA APPROVING AN ADDENDUM TO THE ENVIRONMENTAL IMPACT REPORT FOR THE RIALTO AIRPORT SPECIFIC PLAN (ENVIRONMENTAL ASSESSMENT REVIEW NO. 2021-0051) FOR A PROJECT CONSISTING OF THE REDEVELOPMENT AND REUSE OF AN EXISTING INDUSTRIAL SITE COMPRISED OF 5.02 GROSS ACRES (4.78 NET ACRES) OF LAND (APN: 0239-192-12) LOCATED AT THE NORTHWEST CORNER OF LOCUST AVENUE AND LOWELL STREET WITHIN THE GENERAL MANUFACTURING (I-GM) LAND USE DISTRICT OF THE RIALTO AIRPORT SPECIFIC PLAN WITH A 100,880 SQUARE FOOT INDUSTRIAL COMMERCE BUILDING AND ASSOCIATED PAVING, LANDSCAPING, FENCING, LIGHTING, AND DRAINAGE IMPROVEMENTS.

WHEREAS, the applicant, Best California Gas, Ltd., proposes to redevelop and reuse an existing industrial site comprised of 5.02 gross acres (4.78 net acres) of land (APN: 0239-192-12) located at the northwest corner of Locust Avenue and Lowell Street within the General Manufacturing (I-GM) land use district of the Rialto Airport Specific Plan ("Site") with a 100,880 square foot industrial commerce building and associated paving, landscaping, fencing, lighting, and drainage improvements ("Project"); and

WHEREAS, the Project within the I-GM land use district of the Rialto Airport Specific Plan requires the approval of a Conditional Development Permit, and the applicant has agreed to apply for Conditional Development Permit No. 2021-0040 ("CDP No. 2021-0040"), in accordance with Chapter 18.66 (Conditional Development Permits) of the Rialto Municipal Code and Chapter 18.112 (Indoor Storage Facilities) of the Rialto Municipal Code; and

WHEREAS, the Project within the I-GM land use district of the Rialto Airport Specific Plan requires the approval of a Precise Plan of Design, and the applicant has agreed to apply for Precise Plan of Design No. 2021-0055 ("PPD No. 2021-0055"), in accordance with Chapter 18.65 (Precise Plan of Design) of the Rialto Municipal Code; and

WHEREAS, pursuant to the provisions of California Environmental Quality Act (CEQA) Section 15164(a), Public Resources Code Sections 21000 et. seq. ("CEQA"), the State's CEQA Guidelines, California Code of Regulations, Title 14, Section 15000 et. seq., and Government Code Section 65962.5(f) (Hazardous Waste and Substances Statement), the City reviewed an Addendum to Environmental Impact Report for the Rialto Airport Specific Plan (Environmental Assessment Review No. 2021-0051) prepared by Kimley-Horn and Associates, Inc., Exhibit "A" hereto, and determined that the proposed Project will not result in any new significant impacts that were not analyzed in the Environmental Impact Report for the Rialto Airport Specific Plan ("EIR RASP"), nor would the proposed Project cause a substantial increase in the severity of any previously identified environmental impacts. The potential impacts associated with proposed Project would either be the same or less than those described in the EIR RASP. In addition, there are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the EIR RASP, nor has any new information regarding the potential for new or more severe significant environmental impacts been identified; and

WHEREAS, the City mailed public hearing notices for the proposed Project to all property owners within 1,000 feet of the project site, and published the public hearing notice in the San Bernardino Sun newspaper as required by State law; and

WHEREAS, on September 14, 2022, the Planning Commission of the City of Rialto conducted a duly noticed public hearing, as required by law, on the Addendum to the Environmental Impact Report for the Rialto Airport Specific Plan (Environmental Assessment Review No. 2021-0051), CDP No. 2021-0040, and PPD No. 2021-0055, took testimony, at which time it received input from staff, the city attorney, and the Applicant; heard public testimony; discussed the proposed Addendum to the Environmental Impact Report for the Rialto Airport Specific Plan (Environmental Assessment Review No. 2021-0051), CDP No. 2021-0040, and PPD No. 2021-0055; and closed the public hearing; and

WHEREAS, all legal prerequisites to the adoption of this Resolution have occurred.

NOW, THEREFORE, BE IT RESOLVED by the Planning Commission of the City of Rialto as follows:

SECTION 1: The Planning Commission hereby finds all of the above recitals to be true and correct.

SECTION 2: The City of Rialto is the Lead Agency for the Project, as determined by CEQA. Based on the Addendum to the Environmental Impact Report for the Rialto Airport Specific Plan (Environmental Assessment Review No. 2021-0051) and the accompanying technical studies, it has been determined that:

1. There are no substantial changes to the Project or the circumstances under which the Project will be carried out that will require major revisions to the previously certified EIR.

2. The Project will not result in new significant environmental effects or substantial increases in the severity of previously identified significant effects.

3. There is no new information substantial importance, which was known or could have been known with the exercise of reasonable diligence at the time the previous EIR was certified.

4. The Project will not have any significant effects that are not identified and discussed in the previously certified EIR, and there are no newly feasible, or considerably different, mitigation measures or alternatives which would substantially reduce one or more significant effects of the Project which the applicant declines to adopt.

SECTION 3: The Planning Commission hereby adopts the Addendum to the Environmental Impact Report for the Rialto Airport Specific Plan (Environmental Assessment Review No. 2021-0051), attached hereto as Exhibit "A", prepared in accordance with CEQA for the Project.

SECTION 4: The Chairman of the Planning Commission shall sign the passage and adoption of this resolution and thereupon the same shall take effect and be in force.

PASSED, APPROVED AND ADOPTED this 14th day of September, 2022.

_____

JERRY GUTIERREZ, CHAIR
CITY OF RIALTO PLANNING COMMISSION

STATE OF CALIFORNIA)
COUNTY OF SAN BERNARDINO) ss
CITY OF RIALTO)

I, Kimberly Dame, Administrative Analyst of the City of Rialto, do hereby certify that the foregoing Resolution No. ____ was duly passed and adopted at a regular meeting of the Planning Commission of the City of Rialto held on the ___th day of ____, 2022.

Upon motion of Planning Commissioner_____., seconded by Planning Commissioner ____, the foregoing Resolution No. ____was duly passed and adopted.

Vote on the motion:

AYES:

NOES:

ABSENT:

IN WITNESS WHEREOF, I have hereunto set my hand and the Official Seal of the City of Rialto this __th day of ___, 2022.

_____
KIMBERLY DAME, ADMINISTRATIVE ANALYST

Exhibit “A”

RESOLUTION NO. 2022-XX

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF RIALTO, CALIFORNIA APPROVING CONDITIONAL DEVELOPMENT PERMIT NO. 2021-0040 ALLOWING THE REDEVELOPMENT AND REUSE OF AN EXISTING INDUSTRIAL SITE COMPRISED OF 5.02 GROSS ACRES (4.78 NET ACRES) OF LAND (APN: 0239-192-12) LOCATED AT THE NORTHWEST CORNER OF LOCUST AVENUE AND LOWELL STREET WITHIN THE GENERAL MANUFACTURING (I-GM) LAND USE DISTRICT OF THE RIALTO AIRPORT SPECIFIC PLAN WITH A 100,880 SQUARE FOOT INDUSTRIAL COMMERCE BUILDING.

WHEREAS, the applicant, Best California Gas, Ltd., proposes to redevelop and reuse an existing industrial site comprised of 5.02 gross acres (4.78 net acres) of land (APNs: 0239-192-12) located at the northwest corner of Locust Avenue and Lowell Street within the General Manufacturing (I-GM) land use district of the Rialto Airport Specific Plan ("Site") with a 100,880 square foot industrial commerce building ("Project"); and

WHEREAS, the Project will consist of 4,500 square feet of office space on the ground floor, 4,500 square feet of office space on the second floor, and 91,880 square feet of warehouse space, twelve (12) dock-high loading doors, which will be located on the north side of the building, concrete screen walls, an abundant amount of landscaping, and full pedestrian and vehicle access; and

WHEREAS, Pursuant to Section 18.112.040A of the Rialto Municipal Code, the Project requires a Conditional Development Permit, and the applicant has agreed to apply for Conditional Development Permit No. 2021-0040 ("CDP No. 2021-0040"); and

WHEREAS, in conjunction with the Project, the applicant has applied for Precise Plan of Design No. 2021-0055 ("PPD No. 2021-0055") to facilitate the development of a 100,880 square foot industrial commerce building and associated paving, landscaping, fencing, lighting, and drainage improvements on the Site; and

WHEREAS, on September 14, 2022, the Planning Commission of the City of Rialto conducted a duly noticed public hearing, as required by law, on CDP 2021-0040 and PPD No. 2021-0055, took testimony, at which time it received input from staff, the city attorney, and the

applicant; heard public testimony; discussed the proposed CDP 2021-0040 and PPD No. 2021-0055; and closed the public hearing; and

WHEREAS, all legal prerequisites to the adoption of this Resolution have occurred.

NOW, THEREFORE, BE IT RESOLVED by the Planning Commission of the City of Rialto as follows:

SECTION 1. The Planning Commission hereby specifically finds that all of the facts set forth in the recitals above of this Resolution are true and correct and incorporated herein.

SECTION 2. Based on substantial evidence presented to the Planning Commission during the public hearing conducted with regard to CDP No. 2021-0040, including written staff reports, verbal testimony, site plans, other documents, and the conditions of approval stated herein, the Planning Commission hereby determines that CDP No. 2021-0040 satisfies the requirements of Section 18.66.020 of the Rialto Municipal Code pertaining to the findings which must be made precedent to granting a conditional development permit, which findings are as follows:

1. The proposed use is deemed essential or desirable to provide a service or facility which will contribute to the convenience or general well-being of the neighborhood or community; and

This finding is supported by the following facts:

The Site was developed in 2009 into a contractor's storage yard under Precise Plan of Design No. 2136. The Site was occupied by Aluma Systems Concrete Construction, LLC until early 2022 and is now unoccupied. The Project will redevelop the Site with the highest and best use, in accordance with the General Manufacturing (I-GM) land use district of the Rialto Airport Specific Plan. Additionally, the Project will provide employment opportunities within the City and reduce blight by implementing a use on a vacant site.

2. The proposed use will not be detrimental or injurious to health, safety, or general welfare of persons residing or working in the vicinity; and

This finding is supported by the following facts:

The development of an industrial commerce building on the Site is consistent with the General Manufacturing (I-GM) land use designation of the Rialto Airport Specific Plan, which conditionally permits the development and operation of industrial commerce buildings. To the north of the project site is an approximately 75,000 square foot industrial commerce building occupied by B & B Plastics, and to the east, across Locust Avenue, is an approximately 29,000 square foot industrial commerce building and 8.95 acres of

storage yard area occupied by Rig Runner Trucking. To the south, across Lowell Street, is approximately 19.03 acres of vacant land, and to the west are two (2) industrial commerce buildings totaling approximately 34,700 square feet in size and occupied by Pipeline Carriers and Thompson Pipe Group. The project is not expected to negatively impact any surrounding uses with the successful implementation of measures such as landscape buffering, the installation of solid screen walls, aesthetic building enhancements, and other traffic related measures.

3. The site for the proposed use is adequate in size, shape, topography, accessibility and other physical characteristics to accommodate the proposed use in a manner compatible with existing land uses; and

This finding is supported by the following facts:

The Site is 5.02 gross acres (4.78 net acres) in size and adjacent to two (2) public streets, which will be able to accommodate the proposed use. The Project will have two (2) point of access via Lowell Street and one (1) point of access via Locust Avenue. The westerly driveway on Lowell Street will provide right-in/left-out access for both trucks and passenger vehicles, the easterly driveway on Lowell Street will provide right-in/left-out access for passenger vehicles only, and the driveway on Locust Avenue will provide full access for trucks and passenger vehicles. In addition, the building will have 87 passenger vehicle parking spaces, which exceeds the amount required by Chapter 18.58 (Off-Street Parking) of the Rialto Municipal Code.

4. The site has adequate access to those utilities and other services required for the proposed use; and

This finding is supported by the following facts:

The Site will have adequate access to all utilities and services required through main water, electric, sewer, and other utility lines that will be hooked up to the Site.

5. The proposed use will be arranged, designed, constructed, and maintained so as it will not be injurious to property or improvements in the vicinity or otherwise be inharmonious with the General Plan and its objectives, the Rialto Airport Specific Plan, or any zoning ordinances, and

This finding is supported by the following facts:

As previously stated, the proposed use is consistent with the General Manufacturing (I-GM) land use designation of the Rialto Airport Specific Plan. The building will be oriented such that none of the dock doors will front or face the public right-of-way, the building will have 87 passenger vehicle parking spaces, and the building will have a floor area ratio (FAR) of 48.5 percent, all of which comply with the General Plan, the I-GM land use district of the Rialto Airport Specific Plan, Chapter 18.112 (Indoor Storage Facilities) of the Rialto Municipal Code, and the City's Design Guidelines. Landscaping will be abundantly

incorporated into the Site, as the landscape coverage for the project is 14.9 percent, which exceeds the minimum required amount of 10.0 percent.

6. Any potential adverse effects upon the surrounding properties will be minimized to every extent practical and any remaining adverse effects shall be outweighed by the benefits conferred upon the community or neighborhood as a whole.

This finding is supported by the following facts:

The Project's effects will be minimized through the implementation of the Conditions of Approval contained herein, and through the implementation of Conditions of Approval imposed by the Planning Commission on the Precise Plan of Design, such as extensive landscaping, solid screen walls, decorative paving, and enhanced architectural features. The development of a high-quality industrial development will provide additional employment opportunities for residents and visitors to the City. The Project is consistent with the General Manufacturing (I-GM) land use district of the Rialto Airport Specific Plan and the surrounding industrial uses. The project is not expected to negatively impact any surrounding uses with the successful implementation of measures such as landscape buffering, the installation of solid screen walls, aesthetic building enhancements, and other traffic related measures. Therefore, any potential adverse effects are outweighed by the benefits conferred upon the community and neighborhood as a whole.

SECTION 3. An Addendum to the Environmental Impact Report for the Rialto Airport Specific Plan (Environmental Assessment Review No. 2021-0051) has been prepared for the Project in accordance with the California Environmental Quality Act (CEQA), and it has been determined that the proposed Project will not result in any new significant impacts that were not analyzed in the Environmental Impact Report for the Rialto Airport Specific Plan ("EIR RASP"), nor would the proposed Project cause a substantial increase in the severity of any previously identified environmental impacts. The potential impacts associated with the proposed Project would either be the same or less than those described in the EIR RASP. In addition, there are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the EIR RASP, nor has any new information regarding the potential for new or more severe significant environmental impacts been identified. The Planning Commission hereby adopts the Addendum to the Environmental Impact

Report for the Rialto Airport Specific Plan (Environmental Assessment Review No. 2021-0051) for the Project.

SECTION 4. CDP No. 2021-0040 is granted to Best California Gas, Ltd., in accordance with the plans and application on file with the Planning Division, subject to the following conditions:

1. The approval is granted allowing the development and operation of a 100,880 square foot industrial commerce building on 5.02 gross acres (4.78 net acres) of land (APN: 0239-192-12) located at the northwest corner of Locust Avenue and Lowell Street, as shown on the plans attached as Exhibit A and as approved by the Planning Commission. If the Conditions of Approval specified herein are not satisfied or otherwise completed, the project shall be subject to revocation.

2. City inspectors shall have access to the site to reasonably inspect the site during normal working hours to assure compliance with these conditions and other codes.

3. The applicant shall indemnify, protect, defend, and hold harmless, the City of Rialto, and/or any of its officials, officers, employees, agents, departments, agencies, and instrumentalities thereof (collectively, the "City Parties"), from any and all claims, demands, law suits, writs of mandamus, and other actions and proceedings (whether legal, equitable, declaratory, administrative or adjudicatory in nature), and alternative dispute resolutions procedures (including, but not limited to arbitrations, mediations, and other such procedures), (collectively "Actions"), brought against the City, and/or any of its officials, officers, employees, agents, departments, agencies, and instrumentalities thereof, that challenge, attack, or seek to modify, set aside, void, or annul, the any action of, or any permit or approval issued by, the City and/or any of its officials, officers, employees, agents, departments, agencies, and instrumentalities thereof (including actions approved by the voters of the City), for or concerning the Project (collectively, the "Entitlements"), whether such Actions are brought under the California Environmental Quality Act, the Planning and Zoning Law, the Subdivision Map Act, Code of Civil Procedure Chapter 1085 or 1094.5, the California Public Records Act, or any other state, federal, or local statute, law, ordinance, rule, regulation, or any decision of a court of competent jurisdiction. This condition to indemnify, protect, defend, and hold the City harmless shall include, but not be limited to (i) damages, fees and/or costs awarded against the City, if any, and (ii) cost of suit, attorneys' fees and other costs, liabilities and expenses incurred in connection with such proceeding whether incurred by applicant, Property owner, or the City and/or other parties initiating or bringing such proceeding (collectively, subparts (i) and (ii) are the "Damages"). Notwithstanding anything to the contrary contained herein, the Applicant shall not be liable to the City Parties under this indemnity to the extent the Damages incurred by any of the City Parties in such Action(s) are a result of the City Parties' fraud, intentional misconduct or gross negligence in connection with issuing the Entitlements. The applicant shall execute an agreement to indemnify, protect, defend, and hold the City harmless as stated herein within five (5) days of approval of CDP No. 2021-0040.

4. In accordance with the provisions of Government Code Section 66020(d)(1), the imposition of fees, dedications, reservations, or exactions for this Project, if any, are subject to protest by the applicant at the time of approval or conditional approval of the Project or within 90 days after the date of the imposition of the fees, dedications, reservations, or exactions imposed on the Project.

5. The Project shall be limited to a maximum of 105 actual passenger car trips and 68 actual truck trips daily, in accordance with Attachment B – Project Trip Generation of the Traffic Impact Analysis Scoping Agreement prepared for the Project by Kimley-Horn and Associates, Inc. and dated May 11, 2022, which is attached hereto as Exhibit B.

6. The applicant, landlord, operator(s) and/or tenant(s) shall ensure that all inbound truck traffic that requires temporary queuing or staging do so on-site. Inbound truck traffic shall not queue or stage on any public street at any time. Activities on-site shall not operate in such a manner that would impact traffic lanes, cause back up (queuing or staging) of vehicles into the public-right-of-way, or create any unsafe conditions. Fire and Police access and passage around trucks queuing or staging on-site shall be feasible at all times and activities shall not block parking areas, access or passage for disabled persons or emergency response vehicles.

7. The applicant, landlord, operator(s) and/or tenant(s) shall only park or store trucks and trailers within designated truck and trailer parking spaces within the truck court. No trucks or trailers shall be parked or stored within any public street or within any on-site drive-aisles or passenger vehicle parking areas at any time.

8. The landlord and/or tenant(s) shall not store any product, goods, materials, etc. outside of the building at any time, except for trucks, trailers, and vehicles associated with the operation(s) conducted within the building, without prior approval of a separate Conditional Development Permit in accordance with Chapter 18.104 (Outdoor Storage Uses) of the Rialto Municipal Code.

9. The privileges granted by the Planning Commission pursuant to approval of this Conditional Development Permit are valid for one (1) year from the effective date of approval. If the applicant fails to commence the project within one year of said effective date, this conditional development permit shall be null and void and any privileges granted hereunder shall terminate automatically. If the applicant or his or her successor in interest commence the project within one year of the effective date of approval, the privileges granted hereunder will continue inured to the property as long as the property is used for the purpose for which the conditional development permit was granted, and such use remains compatible with adjacent property uses.

10. Approval of CDP No. 2021-0040 will not become effective until the applicant has signed a statement acknowledging awareness and acceptance of the required conditions of approval contained herein.

11. In the event, that any operation on the Site is found to be objectionable or incompatible with the character of the City and its environs due to excessive noise, excessive traffic, loitering, criminal activity or other undesirable characteristics including, but not strictly limited to, uses which are or have become offensive to neighboring property or the goals and objectives of the General Manufacturing (I-GM) land use district of the Rialto Airport Specific Plan and/or the City's General Plan, the applicant shall address the issues within forty-eight (48) hours of being notified by the City.

12. If the applicant fails to comply with any of the conditions of approval placed upon CDP No. 2021-0040 or PPD No. 2021-0055, the Planning Commission may initiate proceedings to revoke the conditional development permit in accordance with the provisions of Sections 18.66.070 through 18.66.090, inclusive, of the Rialto Municipal Code. Conditional Development Permit No. 2021-0040 may be revoked, suspended or modified in accordance with Section 18.66.070 of the Zoning Ordinance at the discretion of the Planning Commission if:

    a) The use for which such approval was granted has ceased to exist, been subsequently modified, or has been suspended for six (6) months or more;

    b) Any of the express conditions or terms of such permit are violated;

    c) The use for which such approval was granted becomes or is found to be objectionable or incompatible with the character of the City and its environs due to excessive noise, excessive traffic, loitering, criminal activity or other undesirable characteristics including, but not strictly limited to uses which are or have become offensive to neighboring property or the goals and objectives of the General Manufacturing (I-GM) land use district of the Rialto Airport Specific Plan and/or the City's General Plan.

SECTION 5. The Chairman of the Planning Commission shall sign the passage and adoption of this resolution and thereupon the same shall take effect and be in force.

PASSED, APPROVED AND ADOPTED this 14th day of September, 2022.

_____
JERRY GUTIERREZ, CHAIR
CITY OF RIALTO PLANNING COMMISSION

STATE OF CALIFORNIA)
COUNTY OF SAN BERNARDINO) ss
CITY OF RIALTO)

I, Kimberly Dame, Administrative Analyst of the City of Rialto, do hereby certify that the foregoing Resolution No. ____ was duly passed and adopted at a regular meeting of the Planning Commission of the City of Rialto held on the ___th day of ____, 2022.

Upon motion of Planning Commissioner_____., seconded by Planning Commissioner ____, the foregoing Resolution No. ____was duly passed and adopted.

Vote on the motion:

AYES:

NOES:

ABSENT:

IN WITNESS WHEREOF, I have hereunto set my hand and the Official Seal of the City of Rialto this __th day of ___, 2022.

_____

KIMBERLY DAME, ADMINISTRATIVE ANALYST

Exhibit “A”

Project Plans

Exhibit “B”

Attachment B – Project Trip Generation
From the Traffic Impact Analysis Scoping Agreement prepared for the Project by Kimley-Horn and Associates, Inc. – Dated May 11, 2022

RESOLUTION NO. 2022-XX

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF RIALTO, CALIFORNIA APPROVING PRECISE PLAN OF DESIGN NO. 2021-0055 ALLOWING THE REDEVELOPMENT OF AN EXISTING INDUSTRIAL SITE COMPRISED OF 5.02 GROSS ACRES (4.78 NET ACRES) OF LAND (APN: 0239-192-12) LOCATED AT THE NORTHWEST CORNER OF LOCUST AVENUE AND LOWELL STREET WITHIN THE GENERAL MANUFACTURING (I-GM) LAND USE DISTRICT OF THE RIALTO AIRPORT SPECIFIC PLAN WITH A 100,880 SQUARE FOOT INDUSTRIAL COMMERCE BUILDING AND ASSOCIATED PAVING, LANDSCAPING, FENCING, LIGHTING, AND DRAINAGE IMPROVEMENTS.

WHEREAS, the applicant, Best California Gas, Ltd., proposes to redevelop an existing industrial site comprised of 5.02 gross acres (4.78 net acres) of land (APN: 0239-192-12) located at the northwest corner of Locust Avenue and Lowell Street within the General Manufacturing (I-GM) land use district of the Rialto Airport Specific Plan ("Site") with a 100,880 square foot industrial commerce building and associated paving, landscaping, fencing, lighting, and drainage improvements ("Project"); and

WHEREAS, the Project will consist of 4,500 square feet of office space on the ground floor, 4,500 square feet of office space on the second floor, and 91,880 square feet of warehouse space, twelve (12) dock-high loading doors, which will be located on the north side of the building, concrete screen walls, an abundant amount of landscaping, and full pedestrian and vehicle access; and

WHEREAS, Pursuant to Chapter 18.65 (Precise Plan of Design) of the Rialto Municipal Code, the Project requires a Precise Plan of Design, and the applicant has agreed to apply for Precise Plan of Design No. 2021-0055 ("PPD No. 2021-0055"); and

WHEREAS, in conjunction with the Project, the applicant has applied for Conditional Development Permit No. 2021-0040 ("CDP No. 2021-0040") to facilitate the development and operation of a 100,880 square foot industrial commerce building on the Site; and

WHEREAS, on September 14, 2022, the Planning Commission of the City of Rialto conducted a duly noticed public hearing, as required by law, on PPD No. 2021-0055 and CDP No.

2021-0040, took testimony, at which time it received input from staff, the city attorney, and the applicant; heard public testimony; discussed the proposed PPD No. 2021-0055 and CDP No. 2021-0040; and closed the public hearing; and

WHEREAS, all legal prerequisites to the adoption of this Resolution have occurred.

NOW, THEREFORE, BE IT RESOLVED by the Planning Commission of the City of Rialto as follows:

SECTION 1. The Planning Commission hereby specifically finds that all of the facts set forth in the recitals above of this Resolution are true and correct and incorporated herein.

SECTION 2. Based on substantial evidence presented to the Planning Commission during the public hearing conducted with regard to PPD No. 2021-0055, including written staff reports, verbal testimony, site plans, other documents, and the conditions of approval stated herein, the Planning Commission hereby determines that PPD No. 2021-0055 satisfies the requirements of Section 18.65.020E of the Rialto Municipal Code pertaining to the findings which must be made precedent to granting a Precise Plan of Design. The findings are as follows:

1. The proposed development is in compliance with all city ordinances and regulations, unless in accordance with an approved variance; and

This finding is supported by the following facts:

The Site has a General Plan land use designation of Business Park with a Specific Plan Overlay and a zoning designation of Rialto Airport Specific Plan. Within the Rialto Airport Specific Plan the Site has a land use designation of General Manufacturing (I-GM). Those designations allow for the development and operation of industrial commerce buildings, as proposed by the Project. The Project, as conditioned herein, will comply with all City ordinances and regulations, including those required by the I-GM land use district of the Rialto Airport Specific Plan and the City's Design Guidelines. Additionally, the Project meets all the required development standards of the I-GM land use district of the Rialto Airport Specific Plan and Chapter 18.112 (Indoor Storage Facilities) of the Rialto Municipal Code including, but not limited to, required building setbacks, parking, landscaping, building height, floor area ratio, etc.

2. The site is physically suitable for the proposed development, and the proposed development will be arranged, designed, constructed, and maintained so that it will not be unreasonably detrimental or injurious to property, improvements, or the health, safety or general welfare of the general public in the vicinity, or otherwise be inharmonious with the city's general plan and its objectives, zoning ordinances or any applicable specific plan and its objectives; and

This finding is supported by the following facts:

The Site is 5.02 gross acres (4.78 net acres) in size, bound by two (2) public streets (Locust Avenue to the east and Lowell Street to the south), and is within the General Manufacturing (I-GM) land use district of the Rialto Airport Specific Plan. To the north of the project site is an approximately 75,000 square foot industrial commerce building occupied by B & B Plastics, and to the east, across Locust Avenue, is an approximately 29,000 square foot industrial commerce building and 8.95 acres of storage yard area occupied by Rig Runner Trucking. To the south, across Lowell Street, is approximately 19.03 acres of vacant land, and to the west are two (2) industrial commerce buildings totaling approximately 34,700 square feet in size and occupied by Pipeline Carriers and Thompson Pipe Group. The Project is consistent with the I-GM land use district of the Rialto Airport Specific Plan and the surrounding industrial land uses. The project is not expected to negatively impact any surrounding uses with the successful implementation of measures such as landscape buffering, the installation of solid screen walls, aesthetic building enhancements, and other traffic related measures.

3. The proposed development will not unreasonably interfere with the use or enjoyment of neighboring property rights or endanger the peace, health, safety or welfare of the general public; and

This finding is supported by the following facts:

The Project's effects will be minimized through the implementation of the Conditions of Approval contained herein, such as extensive landscaping, concrete screen walls, and enhanced architectural features. To the north of the project site is an approximately 75,000 square foot industrial commerce building occupied by B & B Plastics, and to the east, across Locust Avenue, is an approximately 29,000 square foot industrial commerce building and 8.95 acres of storage yard area occupied by Rig Runner Trucking. To the south, across Lowell Street, is approximately 19.03 acres of vacant land, and to the west are two (2) industrial commerce buildings totaling approximately 34,700 square feet in size and occupied by Pipeline Carriers and Thompson Pipe Group. The Project is consistent with the I-GM land use district of the Rialto Airport Specific Plan and the surrounding industrial land uses. The project is not expected to negatively impact any surrounding uses with the successful implementation of measures such as landscape buffering, the installation of solid screen walls, aesthetic building enhancements, and other traffic related measures.

4. The proposed development will not substantially interfere with the orderly or planned development of the City of Rialto.

This finding is supported by the following facts:

The Project is consistent with the General Manufacturing (I-GM) land use designation of the Rialto Airport Specific Plan and is a logical addition to the existing industrial developments surrounding the Site. The design of the Project will ensure a continuation of the public

improvements and aesthetics present in the surrounding area. The City staff have reviewed the design of the Project to ensure compliance with all health, safety, and design requirements to ensure the Project will enhance the infrastructure and aesthetics of the local community.

SECTION 3. An Addendum to the Environmental Impact Report for the Rialto Airport Specific Plan (Environmental Assessment Review No. 2021-0051) has been prepared for the Project in accordance with the California Environmental Quality Act (CEQA), and it has been determined that the proposed Project will not result in any new significant impacts that were not analyzed in the Environmental Impact Report for the Rialto Airport Specific Plan ("EIR RASP"), nor would the proposed Project cause a substantial increase in the severity of any previously identified environmental impacts. The potential impacts associated with the proposed Project would either be the same or less than those described in the EIR RASP. In addition, there are no substantial changes to the circumstances under which the proposed Project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the EIR RASP, nor has any new information regarding the potential for new or more severe significant environmental impacts been identified. The Planning Commission hereby adopts the Addendum to the Environmental Impact Report for the Rialto Airport Specific Plan (Environmental Assessment Review No. 2021-0051) for the Project.

SECTION 4. PPD No. 2021-0055 is granted Best California Gas, Ltd., in accordance with the plans and application on file with the Planning Division, subject to the following Conditions of Approval:

1. The applicant is granted PPD No. 2021-0055 allowing the development of a 100,880 square foot industrial commerce building and associated paving, landscaping, fencing, lighting, and drainage improvements on 5.02 gross acres (4.78 net acres) of land (APN: 0239-192-12) located at the northwest corner of the Locust Avenue and Lowell Street within the General Manufacturing (I-GM) land use district of the Rialto Airport Specific Plan, subject to the Conditions of Approval contained herein.

2. The approval of PPD No. 2021-0055 is granted for a one (1) year period from the date of approval. Approval of PPD No. 2021-0055 will not become effective until the applicant has signed a Statement of Acceptance acknowledging awareness and acceptance of the required Conditions of Approval contained herein. Any request for

an extension shall be reviewed by the Community Development Director and shall be based on the progress that has taken place toward the development of the project.

3. The development associated with PPD No. 2021-0055 shall conform to the site plan, floor plan, exterior elevations, conceptual grading and drainage plan, and preliminary landscape plan attached hereto as Exhibit A, except as may be required to be modified based on the Conditions of Approval contained herein.

4. The development associated with PPD No. 2021-0055 shall comply with all Conditions of Approval contained within CDP No. 2021-0040.

5. The development associated with PPD No. 2021-0055 shall comply with all applicable sections of the Rialto Airport Specific Plan, the Rialto Municipal Code, and all other applicable State and local laws and ordinances.

6. City inspectors shall have access to the site to reasonably inspect the site during normal working hours to assure compliance with these conditions and other codes.

7. The applicant shall indemnify, protect, defend, and hold harmless, the City of Rialto, and/or any of its officials, officers, employees, agents, departments, agencies, and instrumentalities thereof (collectively, the "City Parties"), from any and all claims, demands, law suits, writs of mandamus, and other actions and proceedings (whether legal, equitable, declaratory, administrative or adjudicatory in nature), and alternative dispute resolutions procedures (including, but not limited to arbitrations, mediations, and other such procedures), (collectively "Actions"), brought against the City, and/or any of its officials, officers, employees, agents, departments, agencies, and instrumentalities thereof, that challenge, attack, or seek to modify, set aside, void, or annul, the any action of, or any permit or approval issued by, the City and/or any of its officials, officers, employees, agents, departments, agencies, and instrumentalities thereof (including actions approved by the voters of the City), for or concerning the Project (collectively, the "Entitlements"), whether such Actions are brought under the California Environmental Quality Act, the Planning and Zoning Law, the Subdivision Map Act, Code of Civil Procedure Chapter 1085 or 1094.5, the California Public Records Act, or any other state, federal, or local statute, law, ordinance, rule, regulation, or any decision of a court of competent jurisdiction. This condition to indemnify, protect, defend, and hold the City harmless shall include, but not be limited to (i) damages, fees and/or costs awarded against the City, if any, and (ii) cost of suit, attorneys' fees and other costs, liabilities and expenses incurred in connection with such proceeding whether incurred by applicant, Property owner, or the City and/or other parties initiating or bringing such proceeding (collectively, subparts (i) and (ii) are the "Damages"). Notwithstanding anything to the contrary contained herein, the Applicant shall not be liable to the City Parties under this indemnity to the extent the Damages incurred by any of the City Parties in such Action(s) are a result of the City Parties' fraud, intentional misconduct or gross negligence in connection with issuing the Entitlements. The applicant shall execute

an agreement to indemnify, protect, defend, and hold the City harmless as stated herein within five (5) days of approval of PPD No. 2021-0055.

8. In accordance with the provisions of Government Code Section 66020(d)(1), the imposition of fees, dedications, reservations, or exactions for this Project, if any, are subject to protest by the applicant at the time of approval or conditional approval of the Project or within 90 days after the date of the imposition of the fees, dedications, reservations, or exactions imposed on the Project.

9. The applicant shall install decorative pavement within each driveway connected to Locust Avenue and Lowell Street. The decorative pavement shall extend across the entire width of the driveway and shall have a minimum depth of fifteen (15) feet as measured from the property line along Locust Avenue and the interior edge of the proposed public utility easement along Lowell Street. Decorative pavement means decorative pavers and/or color concrete with patterns and color variety. The location of the decorative pavement shall be identified on the Precise Grading Plan prior to the issuance of a grading permit. Additionally, the location and type of decorative pavement shall be identified on the formal Landscape Plan submittal, and other on-site improvement plans, prior to the issuance of building permits.

10. In order to provide enhanced building design in accordance with Chapter 18.61 (Design Guidelines) of the Rialto Municipal Code, the applicant shall route all drainage downspouts through the interior of the building. The internal downspouts shall be identified within the formal building plan check submittal prior to the issuance of building permits.

11. In order to provide enhanced building design in accordance with Chapter 18.61 (Design Guidelines) of the Rialto Municipal Code, the applicant shall construct parapet returns, at least three (3) feet in depth from the most inward wall plane, at all height variations on all four (4) sides of the building. The parapet returns shall be demonstrated on the roof plans within the formal building plan check submittal prior to the issuance of building permits.

12. In order to provide enhanced building design in accordance with Chapter 18.61 (Design Guidelines) of the Rialto Municipal Code, the applicant shall provide internal roof access only for the building. The internal roof access shall be identified within the formal building plan check submittal prior to the issuance of building permits.

13. Any new walls, including any retaining walls, shall be comprised of decorative masonry block or decorative concrete. Decorative masonry block means tan-colored slumpstone block, tan-colored split-face block, or precision block with a stucco, plaster, or cultured stone finish. Decorative concrete means painted concrete with patterns, reveals, and/or trim lines. Pilasters shall be incorporated within all new walls visible from the public right-of-way. The pilasters shall be spaced a maximum of fifty (50) feet on-center and shall be placed at all corners and ends of the wall. All pilasters shall protrude a minimum of six (6) inches above and to the side of the wall. All decorative masonry walls and

pilasters, including retaining walls, shall include a decorative masonry cap. All walls and pilasters shall be identified on the site plan and Precise Grading Plan, and an elevation detail for the walls shall be included in the formal building plan check submittal prior to the issuance of building permits.

14. Any new fencing installed on site shall be comprised of tubular steel. All fencing shall be identified on the site plan, and an elevation detail for the fencing shall be included in the formal building plan check submittal prior to the issuance of building permits.

15. All light standards installed on site, shall have a maximum height of twenty-five (25) feet, as measured from the finished surface, including the base. Lighting shall be shielded and/or directed toward the site so as not to produce direct glare or "stray light" onto adjacent properties. All light standards shall be identified on the site plan and a note indicating the height restriction shall be included within the formal building plan check submittal prior to the issuance of building permits.

16. The applicant shall submit a formal Landscape Plan to the Planning Division prior to the issuance of building permits. The submittal shall include three (3) sets of planting and irrigation plans, a completed Landscape Plan Review application, and the applicable review fee.

17. The applicant shall plant one (1) tree every three (3) parking spaces. All parking lot trees shall be a minimum of fifteen (15) gallons in size, upon initial planting. Thereafter, the parking lot trees shall be permanently irrigated and maintained. All parking lot tree species shall consist of evergreen broadleaf trees. The trees shall be identified on the formal Landscape Plan submittal prior to the issuance of a landscape permit.

18. The applicant shall plant one (1) tree every thirty (30) feet on-center within the on-site landscape setbacks along Locust Avenue and Lowell Street. All trees within the landscape setback shall be a minimum of twenty-four (24) inch box in size, upon initial planting. Thereafter, the trees within the landscape setback shall be permanently irrigated and maintained by the property owner. At least fifty (50) percent of the trees within the setback shall consist of evergreen broadleaf trees, while the remaining percentage may consist of broadleaf deciduous trees and/or palm trees. The trees shall be identified on the formal Landscape Plan submittal prior to the issuance of a landscape permit.

19. The applicant shall plant one (1) tree every thirty (30) feet on-center within the public right-of-way parkway along Locust Avenue. All trees within the public right-of-way parkway shall be a minimum of twenty-four (24) inch box in size, upon initial planting. Thereafter, the trees within the public right-of-way parking shall be permanently irrigated and maintained, as required by the Public Works Department. The street tree species along Locust Avenue shall be the Robinia Idahoensis “Idaho Locust” and/or the Robinia Idahoensis “Idaho Locust”. The street trees shall be identified on the formal Landscape Plan submittal prior to the issuance of a landscape permit.

20. The applicant shall plant one (1) tree every thirty (30) feet on-center within the public right-of-way parkway along Lowell Street. All trees within the public right-of-way parkway shall be a minimum of twenty-four (24) inch box in size, upon initial planting. Thereafter, the trees within the public right-of-way parking shall be permanently irrigated and maintained, as required by the Public Works Department. The street tree species along Lowell Street shall be the Pistachia Chinensis "Chinese Pistache" and/or the Geijera Parviflora "Australian Willow". The street trees shall be identified on the formal Landscape Plan submittal prior to the issuance of a landscape permit.

21. The applicant shall plant shrubs that surround all ground mounted equipment and utility boxes, including transformers, fire-department connections, backflow devices, etc. for the purpose of providing screening of said equipment and utility boxes. All equipment and utility box screen shrubs shall be a minimum of five (5) gallons in size upon initial planting, and the shrubs shall be spaced no more than three (3) feet on-center. Thereafter, the equipment and utility box screen shrubs shall be permanently irrigated and maintained into a continuous box-shape with a height of no less than three and one-half (3.5) feet above the finished grade. The shrubs shall be identified on the formal Landscape Plan submittal prior to the issuance of a landscape permit.

22. The applicant shall plant trees, shrubs, and groundcover throughout all land on-site and off-site (adjacent to the project site) that is not covered by structures, walkways, parking areas, and driveways, as approved by the Planning Division. Trees shall be planted a minimum of thirty (30) feet on-center, and all shrubs and groundcover shall be planted an average of three (3) feet on-center or less, or as approved by the Planning Division. All trees shall be minimum of fifteen (15) gallons in size upon initial planting, unless otherwise specified herein. At least fifty (50) percent of the trees shall consist of evergreen broadleaf trees, while the remaining percentage may consist of broadleaf deciduous trees and/or palm trees. All shrubs shall be a minimum of one (1) gallon in size, unless otherwise specified herein. All planter areas shall receive a minimum two (2) inch thick layer of brown bark, organic mulch, and/or decorative rock upon initial planting. Pea gravel and decomposed granite are not acceptable materials to use within planter areas. All planter areas on-site shall be permanently irrigated and maintained. The planting and irrigation shall be identified on the formal Landscape Plan submittal prior to the issuance of a landscape permit.

23. All planting and irrigation shall be installed on-site in accordance with the approved landscape plans and permit prior to the issuance of a Certificate of Occupancy. The installation of the planting and irrigation shall be certified in writing by the landscape architect responsible for preparing the landscape plans prior to the issuance of a Certificate of Occupancy.

24. Any tubular steel fencing and/or sliding gates shall be painted black prior to the issuance of a Certificate of Occupancy, unless specified otherwise herein.

25. All non-glass doors shall be painted to match the color of the adjacent wall prior to the issuance of a Certificate of Occupancy.

26. The applicant shall comply with all conditions of approval for PPD No. 2021-0055 to the satisfaction of the City Engineer, prior to the issuance of a Certificate of Occupancy.

27. The applicant shall pay all applicable development impact fees in accordance with the current City of Rialto fee ordinance, prior to the issuance of any building permit related to the Project.

28. The applicant shall apply and complete the Special District Annexation for the public street lighting and the public landscape and irrigation, including applicable easement areas, parkway areas, and raised medians along the property frontage, as determined by the City Engineer, prior to the issuance of the Grading/On-site Construction Permit.

29. A City of Rialto Off-site Construction Permit is required for any improvements within the public right-of-way. In an effort to expedite and facilitate improvements in the public right-of-way, the applicant is responsible for submitting a multi-phase master plan traffic control plan which includes all phases of construction in the public right-of-way i.e. sewer, water, overhead, underground, etc. prior to the issuance of Off-Site Construction Permit/Encroachment Permit. Note, in an effort to simplify the permitting process, a single master Off-Site Construction Permit shall replace individual Encroachment Permits to be pulled by the applicant's contractor.

30. The applicant shall apply for annexation of the underlying property into City of Rialto Landscape and Lighting Maintenance District No. 2 ("LLMD 2"). An application fee of $5,000 shall be paid at the time of application. Annexation into LLMD 2 is a condition of acceptance of any new median, landscape easement, and/or parkway landscaping in the public right-of-way, or any new public street lighting improvements conditioned on the project and to be maintained by the City of Rialto post construction. The developer must apply and complete the LLMD2 annexation process prior to issuance of a Certificate of Occupancy. As an alternative to the City maintaining parkway landscaping adjacent to the commercial property via the City's Landscape and Lighting Maintenance District No. 2 ("LLMD 2"), the developer may enter into an agreement with the City to assume responsibility for maintenance of all public parkway landscaping. The agreement will stipulate that the property's annexation into LLMD 2 will occur, but with assessments deferred and set to $0 during such time as the public parkway landscaping is adequately maintained to the City's satisfaction. The developer's failure to adequately maintain all public parkway landscaping will require the City to assume such responsibility, and to commence levying of assessments against the property via LLMD 2 to recover the City's costs.

31. The applicant shall submit off-site landscaping and irrigation system improvement plans for review and approval at the time of first (1st) public improvement plan submittal to the Public Works Department. The parkway irrigation system shall be separately metered from the on-site private irrigation to be maintained for a period of one (1) year and annexed into a Special District. The off-site landscape and irrigation plans must show separate electrical and water meters to be annexed into the Landscape and

Lighting Maintenance District No. 2 via a City Council Public Hearing. The landscape and irrigation plans shall be approved concurrently with the street improvement plans, including the median portion, prior to issuance of a building permit. The landscaping architect must contact the City of Rialto Landscape Contract Specialist at (909) 820-2602 to ensure all landscape and irrigation guidelines are met prior to plan approval. Electrical and water irrigation meter pedestals must not be designed to be installed at or near street intersections or within a raised median to avoid burdensome traffic control set-up during ongoing maintenance.

32. If the property is accepted in the LLMD, the applicant shall guarantee all new parkway landscaping irrigation for a period of one (1) year from the date of the City Engineer acceptance. Any landscaping that fails during the one-year landscape maintenance period shall be replaced with similar plant material to the satisfaction of the City Engineer and shall be subject to a subsequent one-year landscape maintenance period. The applicant must contact the City of Rialto Landscape Contract Specialist at (909) 820-2602 to confirm a full twelve (12) months' time of non-interrupted ongoing maintenance.

33. The applicant shall install City Engineer approved deep root barriers, in accordance with the Public Works Landscape and Irrigation Guidelines, for all trees installed within ten (10) feet of the public sidewalk and/or curb.

34. All new streetlights shall be installed on an independently metered, City-owned underground electrical system. Using power from an existing LMMD 2 pedestal is encouraged over installing a new pedestal. The developer shall be responsible for applying with Southern California Edison (SCE) for all appropriate service points and electrical meters early in the design process to avoid delays in other key milestones. New meter pedestals shall be installed, and electrical service paid by the developer. The City shall not pay the charges for electrical service until the landscape and irrigation is accepted after the one-year maintenance period and the underlying property is annexed into LLMD 2.

35. If and where deficiencies in the existing system occur, the applicant shall construct a new underground electrical system for public street lighting improvements along the project frontages of Locust Avenue and Lowell Street, as determined necessary by the City Engineer. New marbelite streetlight poles with LED light fixtures shall be installed in accordance with City of Rialto Standard Drawings, as determined necessary by the City Engineer.

36. The applicant is responsible for requesting any addresses needed for any building(s), electrical pedestal(s), and/or irrigation meter pedestal(s). The main building address shall be included on Precise Grading Plans and Building Plan set along with the PPD number. The electrical meter pedestal addresses (single or dual) shall be included in the public improvement plans.

37. The applicant shall submit street improvement plans by a registered California civil engineer to the Public Works Engineering Division for review. The plans shall be approved by the City Engineer prior to the issuance of building permits.

38. The applicant shall submit streetlight improvement plans by a registered California civil engineer to the Public Works Engineering Division for review. The plans shall be approved by the City Engineer prior to the issuance of building permits.

39. The applicant shall submit sewer improvement plans for public sewer main(s) by a registered California civil engineer to the Public Works Engineering Division for review. The plans shall be approved by the City Engineer prior to the issuance of building permits.

40. The applicant shall submit traffic striping and signage improvement plans prepared by a registered California civil engineer or registered California traffic Engineer to the Public Works Engineering Division for review. The plans shall be approved by the City Engineer prior to the issuance of building permits.

41. The applicant shall submit copies of approved water improvement plans prepared by a registered California civil engineer to the Public Works Engineering Division for record purposes. The plans shall be approved by Rialto Water Services, the water purveyor, prior to the issuance of building permits.

42. The applicant shall submit a Precise Grading/Paving Plan prepared by a California registered civil engineer to the Public Works Engineering Division for review and approval. The Grading Plan shall be approved by the City Engineer prior to the issuance of building permits.

43. The applicant shall submit a Geotechnical/Soils Report, prepared by a California registered Geotechnical Engineer, for and incorporated as an integral part of the grading plan for the proposed development. A copy of the Geotechnical/Soils Report shall be submitted to the Public Works Engineering Division with the first submittal of the Precise Grading Plan.

44. The applicant shall submit a wet-signed and stamped Earthwork Cut and Fill Certification Letter prepared by a Civil Engineer registered in the State of California to the Public Works Engineering Division for review.

45. The applicant shall provide pad elevation certification for all building pads, in conformance with the approved Precise Grading Plan, to the Engineering Division prior to construction of any building foundation.

46. The public street improvements outlined in these Conditions of Approval are intended to convey to the developer an accurate scope of required improvements, however, the City Engineer reserves the right to require reasonable additional improvements as may

be determined in the course of the review and approval of street improvement plans required by these conditions.

47. The applicant shall construct asphalt concrete paving for streets in two separate lifts. The final lift of asphalt concrete pavement shall be postponed until such time that on-site construction activities are complete. Unless the City Engineer provide prior authorization, paving of streets in one lift prior to completion of on-site construction is not allowed. If City Engineer authorized, completion of asphalt concrete paving for streets prior to completion of on-site construction activities, requires additional paving requirements prior to acceptance of the street improvements, including, but not limited to: removal and replacement of damaged asphalt concrete pavement, overlay, slurry seal, or other repairs.

48. The applicant shall repair all street cuts for utilities in accordance with City Standard SC-231 within 72 hours of completion of the utility work; and any interim trench repairs shall consist of compacted backfill to the bottom of the pavement structural section followed by placement of standard base course material in accordance with the Standard Specifications for Public Work Construction ("Greenbook"). The base course material shall be placed the full height of the structural section to be flush with the existing pavement surface and provide a smooth pavement surface until permanent cap paving occurs using an acceptable surface course material.

49. In accordance with City Ordinance No. 1589, adopted to preserve newly paved streets, any and all street and/or trench cuts in newly paved streets will be subject to moratorium street repair standards as reference in Section 11.04.145 of the Rialto Municipal Code. Contact the Engineering Division for a list of streets subject to the moratorium.

50. The applicant shall backfill and/or repair all utility trenches or other excavations within existing asphalt concrete pavement of off-site streets resulting from the proposed development, in accordance with City of Rialto Standard Drawings. The applicant shall be responsible for removing, grinding, paving and/or overlaying existing asphalt concrete pavement of off-site streets including pavement repairs in addition to pavement repairs made by utility companies for utilities installed for the benefit of the proposed development (i.e. Fontana Water Company, Southern California Edison, Southern California Gas Company, Time Warner, Verizon, etc.). Multiple excavations, trenches, and other street cuts within existing asphalt concrete pavement of off-site streets resulting from the proposed development may require complete grinding and asphalt concrete overlay of the affected off-site streets, at the discretion of the City Engineer. The pavement condition of the existing off-site streets shall be returned to a condition equal to or better than what existed prior to construction of the proposed development.

51. In accordance with Chapter 15.32 of the City of Rialto Municipal Code, all existing and new electrical distribution lines of sixteen thousand volts or less and overhead service drop conductors, and all telephone, television cable service, and similar service wires or lines, which are on-site, abutting, and/or transecting, shall be installed underground prior to the issuance of a Certificate of Occupancy. The existing overhead utilities along the

east property line (adjacent to Locust Avenue) are subject to this requirement. Utility undergrounding shall extend to the nearest off-site power pole; no new power poles shall be installed unless otherwise approved by the City Engineer. A letter from the owners of the affected utilities shall be submitted to the City Engineer prior to approval of the Grading Plan, informing the City that they have been notified of the City's utility undergrounding requirement and their intent to commence design of utility undergrounding plans. When available, the utility undergrounding plan shall be submitted to the City Engineer identifying all above ground facilities in the area of the project to be undergrounded.

52. The applicant shall replace all damaged, destroyed, or modified pavement legends, traffic control devices, signing, striping, and streetlights, associated with the proposed development shall be replaced as required by the City Engineer prior to issuance of a Certificate of Occupancy.

53. The applicant shall reconstruct any broken, chipped, or unsatisfactory sidewalks or curbs along the entire project frontage, in accordance with the General Plan and the City of Rialto Standard Drawings, as required by the City Engineer, prior to the issuance of a Certificate of Occupancy.

54. The applicant shall provide construction signage, lighting and barricading shall be provided during all phases of construction as required by City Standards or as directed by the City Engineer. As a minimum, all construction signing, lighting and barricading shall be in accordance with Part 6 "Temporary Traffic Control" of the 2014 California Manual on Uniform Traffic Control Devices, or subsequent editions in force at the time of construction.

55. Upon approval of any improvement plan by the City Engineer, the applicant shall provide the improvement plan to the City in digital format, consisting of a DWG (AutoCAD drawing file), DXF (AutoCAD ASCII drawing exchange file), and PDF (Adobe Acrobat) formats. Variation of the type and format of the digital data to be submitted to the City may be authorized, upon prior approval by the City Engineer.

56. The applicant shall construct 4-inch conduit within the parkway area along the entire project frontages of Locust Avenue and Lowell Street for future use, prior to the issuance of a Certificate of Occupancy.

57. The applicant shall dedicate additional right-of-way along the entire frontage of Locust Avenue, as necessary, to provide the ultimate half-width of 44 feet, as required by the City Engineer.

58. The applicant shall dedicate additional right-of-way along the entire frontage of Lowell Street, as necessary, to provide the ultimate half-width of 22.5 feet, as required by the City Engineer.

59. The applicant shall dedicate a 10-foot-wide public utility easement along the entire project frontage of Lowell Street, as required by the City Engineer.

60. The applicant shall dedicate additional right-of-way as may be required to provide a property line corner cutback at the northwest corner of the intersection of Locust Avenue and Lowell Street, in accordance with City Standard SC-235, as required by the City Engineer.

61. The applicant shall construct an 8-inch curb and gutter along the entire frontage of Locust Avenue 32 feet west of centerline in accordance with City of Rialto Standard Drawings and the General Plan or applicable Specific Plan, prior to the issuance of a Certificate of Occupancy. Alternatively, the applicant shall preserve, and repair as determined necessary by the City Engineer, the existing curb and gutter along the entire frontage of Locust Avenue should the City Engineer determine them to be in the ultimate location.

62. The applicant shall construct an 8-inch curb and gutter along the entire frontage of Lowell Street 22 feet north of centerline in accordance with City of Rialto Standard Drawings and the General Plan or applicable Specific Plan, prior to the issuance of a Certificate of Occupancy. Alternatively, the applicant shall preserve, and repair as determined necessary by the City Engineer, the existing curb and gutter along the entire frontage of Lowell Street should the City Engineer determine them to be in the ultimate location.

63. The applicant shall construct one (1) new forty (40) foot wide commercial driveway approach on the west end of the Lowell Street frontage, as shown on the plans attached as Exhibit A, in accordance with City of Rialto Standard Drawings, or as otherwise approved by the City Engineer. The driveway approach shall be constructed so the top of "X" is at least 5 feet from the property line, or as otherwise approved by the City Engineer. Nothing shall be constructed or planted in the corner cut-off area which does exceed or will exceed 30 inches in height in order to maintain an appropriate corner sight distance, as required by the City Engineer.

64. The applicant shall construct one (1) new thirty-two (32) foot wide commercial driveway approach on the east end of the Lowell Street frontage, as shown on the plans attached as Exhibit A, in accordance with City of Rialto Standard Drawings, or as otherwise approved by the City Engineer. The driveway approach shall be constructed so the top of "X" is at least 5 feet from the property line, or as otherwise approved by the City Engineer. Nothing shall be constructed or planted in the corner cut-off area which does exceed or will exceed 30 inches in height in order to maintain an appropriate corner sight distance, as required by the City Engineer.

65. The applicant shall construct one (1) new fifty (50) foot wide commercial driveway approach on the north end of the Locust Avenue frontage, as shown on the plans attached as Exhibit A, in accordance with City of Rialto Standard Drawings, or as otherwise approved by the City Engineer. The driveway approach shall be constructed

so the top of "X" is at least 5 feet from the property line, or as otherwise approved by the City Engineer. Nothing shall be constructed or planted in the corner cut-off area which does exceed or will exceed 30 inches in height in order to maintain an appropriate corner sight distance, as required by the City Engineer. If necessary, additional right of way shall be dedicated on-site to construct a path of travel meeting ADA guidelines for the public sidewalk.

66. The applicant shall construct a curb ramp that meets current California State Accessibility standards at the northwest corner of the intersection of Locust Avenue and Lowell Street, in accordance with the City of Rialto Standard Drawings, prior to the issuance of a Certificate of Occupancy.

67. The applicant shall construct curb ramps that meet current California State Accessibility standards at both the northeast and northwest corners of the intersections of Lowell Street and the proposed driveways connected to Lowell Street, in accordance with the City of Rialto Standard Drawings, prior to the issuance of a Certificate of Occupancy. The developer shall ensure that an appropriate path of travel, meeting ADA guidelines, is provided across the driveways, and shall adjust the location of the access ramps, if necessary, to meet ADA guidelines, subject to the approval of the City Engineer. If necessary, additional pedestrian and sidewalk easements shall be provided on-site to construct a path of travel meeting ADA guidelines.

68. The applicant shall construct curb ramps that meet current California State Accessibility standards at both the northwest and southwest corners of the intersection of Locust Avenue and the proposed driveway connected to Locust Avenue, in accordance with the City of Rialto Standard Drawings, prior to the issuance of a Certificate of Occupancy. The developer shall ensure that an appropriate path of travel, meeting ADA guidelines, is provided across the driveway, and shall adjust the location of the access ramps, if necessary, to meet ADA guidelines, subject to the approval of the City Engineer. If necessary, additional pedestrian and sidewalk easements shall be provided on-site to construct a path of travel meeting ADA guidelines.

69. The applicant shall construct a 5-foot-wide Americans with Disabilities Act (ADA) and California Building Code (CBC) compliant sidewalk adjacent to the curb along the entire project frontage of Locust Avenue, in accordance with City of Rialto Standard Drawings, prior to the issuance of a Certificate of Occupancy. Alternatively, the applicant shall preserve, and repair as determined necessary by the City Engineer, the existing sidewalk along the entire frontage of Locust Avenue should the City Engineer determine it to be in the ultimate location and compliant with the ADA and CBC.

70. The applicant shall construct a 5-foot-wide Americans with Disabilities Act (ADA) compliant sidewalk adjacent to the curb along the entire project frontage of Lowell Street, in accordance with City of Rialto Standard Drawings, prior to the issuance of a Certificate of Occupancy. Alternatively, the applicant shall preserve, and repair as determined necessary by the City Engineer, the existing sidewalk along the entire

frontage of Locust Avenue should the City Engineer determine it to be in the ultimate location and compliant with the ADA and CBC.

71. The applicant shall install "No Stopping Anytime" R26A(S)(CA) signage along the entire project frontages of Locust Avenue and Lowell Street, as required by the City Engineer, prior to the issuance of a Certificate of Occupancy.

72. The applicant shall be responsible for coordinating with Omnitrans regarding the location of existing, proposed, and future bus stops along the property frontage of all public streets. The developer shall design street and sidewalk improvements in accordance with the latest Omnitrans bus stop guidelines and in compliance with current accessibility standards pursuant to the Americans with Disabilities Act (ADA) requirements. The developer shall design all bus stops to accommodate the Omnitrans Premium Shelters. Prior to Certificate of Occupancy, the developer shall submit to Public Works verification from Omnitrans acknowledging concurrence with the existing, proposed, and future bus stop improvements in conformance with the Premium Shelter design guidelines. Additionally, bus turnouts are required to accommodate proposed bus stops in accordance with the City Standards and as approved by the City Engineer.

73. The applicant shall remove existing pavement and construct new pavement with a minimum pavement section of 5 inches asphalt concrete pavement over 6 inches crushed aggregate base with a minimum subgrade of 24 inches at 95% relative compaction, or equal, along the entire half-width street frontages of Locust Avenue and Lowell Street in accordance with City of Rialto Standard Drawings. The pavement section shall be determined using a Traffic Index ("TI") of 10. The pavement section shall be designed by a California registered Geotechnical Engineer using "R" values from the project site and submitted to the City Engineer for approval. Alternatively, depending on the existing street condition and as approved by the City Engineer, a street overlay, slurry seal, or other repair can be performed to preserve existing pavement improvements.

74. The minimum pavement section for all on-site pavements shall be 2½ inches asphalt concrete pavement over 4 inches crushed aggregate base with a minimum subgrade of 24 inches at 95% relative compaction, or equal. If an alternative pavement section is proposed, the proposed pavement section shall be designed by a California registered Geotechnical Engineer using "R" values from the project site and submitted to the City Engineer for approval.

75. The applicant shall connect the project to the City of Rialto sewer system and apply for a sewer connection account with Rialto Water Services.

76. The applicant is advised that domestic water service is provided by West Valley Water District. The developer shall be responsible for coordinating with West Valley Water District and complying with all requirements for establishing domestic water service to the property.

77. The applicant shall install a new domestic water line lateral connection to the main water line within Locust Avenue, pursuant to West Valley Water District requirements. A water line plan shall be approved by West Valley Water District prior to the issuance of building permits.

78. The applicant shall provide certification from Rialto Water Services that demonstrates that all wastewater service accounts for the project are documented, prior to the issuance of a Certificate of Occupancy or final inspection approval from the Public Works Engineering Division.

79. Any sewer mains constructed by the applicant, as necessary, are to become part of the public sewer system and shall be pressure tested and digitally video recorded by the City's wastewater system operator (Veolia) prior to acceptance of the sewer system for maintenance by the City. The developer shall be responsible for all costs associated with testing and inspection services. Any defects of the sewer main shall be removed, replaced, or repaired to the satisfaction of the City Engineer prior to acceptance.

80. The applicant shall submit a Water Quality Management Plan identifying site specific Best Management Practices ("BMPs") in accordance with the Model Water Quality Management Plan ("WQMP") approved for use for the Santa Ana River Watershed. The site specific WQMP shall be submitted to the City Engineer for review and approval with the Precise Grading Plan. A WQMP Maintenance Agreement shall be required, obligating the property owner(s) to appropriate operation and maintenance obligations of on-site BMPs constructed pursuant to the approved WQMP. The WQMP and Maintenance Agreement shall be approved prior to issuance of a building permit, unless otherwise allowed by the City Engineer. The development of the Site is subject to the requirements of the National Pollution Discharge Elimination System (NPDES) Permit for the City of Rialto, issued by the Santa Ana Regional Water Quality Control Board, Board Order No. R8-2010-0036. Pursuant to the NPDES Permit, the Applicant shall ensure development of the site incorporates post-construction Best Management Practices ("BMPs") in accordance with the Model Water Quality Management Plan ("WQMP") approved for use for the Santa Ana River Watershed. The Applicant is advised that applicable Site Design BMPs will be required to be incorporated into the final site design, pursuant to a site specific WQMP submitted to the City Engineer for review and approval.

81. The applicant shall prepare a Notice of Intent (NOI) to comply with the California General Construction Stormwater Permit (Water Quality Order 2009-0009-DWQ as modified September 2, 2009) is required via the California Regional Water Quality Control Board online SMARTS system. A copy of the executed letter issuing a Waste Discharge Identification (WDID) number shall be provided to the City Engineer prior to issuance of a grading or building permit. The applicant's contractor shall prepare and maintain a Storm Water Pollution Prevention Plan ("SWPPP") as required by the General Construction Permit. All appropriate measures to prevent erosion and water pollution during construction shall be implemented as required by the SWPPP.

82. Prior to issuance of a certificate of occupancy or final City approvals, the applicant shall demonstrate that all structural BMP's have been constructed and installed in conformance with approved plans and specifications, and as identified in the approved WQMP.

83. All stormwater runoff passing through the site shall be accepted and conveyed across the property in a manner acceptable to the City Engineer. For all stormwater runoff falling on the site, on-site retention or other facilities approved by the City Engineer shall be required to contain the increased stormwater runoff generated by the development of the property. Provide a hydrology study, prepared by a Civil Engineer, to determine the volume of increased stormwater runoff due to development of the site, and to determine required stormwater runoff mitigation measures for the proposed development. Final retention basin sizing and other stormwater runoff mitigation measures shall be determined upon review and approval of the hydrology study by the City Engineer and may require redesign or changes to site configuration or layout consistent with the findings of the final hydrology study. The volume of increased stormwater runoff to retain on-site shall be determined by comparing the existing "pre-developed" condition and proposed "developed" condition, using the 100-year frequency storm. Infiltration of stormwater in the developed condition analysis shall be considered negligible. All on-site and off-site designs must comply with Federal (NPDES), State, Regional, and City stormwater regulations.

84. Direct release of on-site nuisance water or stormwater runoff shall not be permitted to the adjacent public streets. Provisions for the interception of nuisance water from entering adjacent public streets from the project site shall be provided through the use of a minor storm drain system that collects and conveys nuisance water to landscape or parkway areas, and in only a stormwater runoff condition, pass runoff directly to the streets through parkway or under sidewalk drains. All on-site and off-site designs must comply with NPDES stormwater regulations.

85. The original improvement plans prepared for the proposed development and approved by the City Engineer (if required) shall be documented with record drawing "as-built" information and returned to the Engineering Division prior to issuance of a final certificate of occupancy. Any modifications or changes to approved improvement plans shall be submitted to the City Engineer for approval prior to construction.

86. The applicant shall adhere to the City Council approved franchise agreements and disposal requirements during all construction activities, in accordance with Section 8.08 (Refuse Collection of the City of Rialto Municipal Code).

87. Prior to commencing with any grading, the applicant shall implement the required erosion and dust control measures shall be in place. In addition, the following shall be included if not already identified:

    a. 6 foot high tan colored perimeter screened fencing

b. Contractor information signage including contact information along the street frontages of Locust Avenue and Lowell Street.

c. Post dust control signage with the following verbiage: "Project Name, WDID No., IF YOU SEE DUST COMING FROM THIS PROJECT CALL: NAME (XXX) XXX-XXX, If you do not receive a response, please call the AQMD at 1-800-CUT-SMOG/1-800-228-7664"

88. The applicant shall remove any graffiti within 24 hours, before, during, and post construction.

89. The applicant shall submit full architectural and structural plans with all mechanical, electrical, and plumbing plans, structural calculations, truss calculations and layout, rough grading plans approved by Public Works Engineering, Water Quality Management Plan, Erosion Control Plan, Stormwater Pollution Prevention Plan, and Title 24 Energy Calculations to the Building Division for plan check and review, prior to the issuance of building permits.

90. The applicant shall provide a Scope of Work on the title page of the architectural plan set. The Scope of Work shall call out all work to be permitted (ex. Main structure, perimeter walls, trash enclosure, etc.).

91. The applicant shall design the structures in accordance with the 2019 California Building Code, 2019 California Mechanical Code, 2019 California Plumbing Code, and the 2019 California Electrical Code, 2019 Residential Code and the 2019 California Green Buildings Standards adopted by the State of California.

92. The applicant shall design the structures to withstand ultimate wind speed of 130 miles per hour, exposure C and seismic zone D.

93. The applicant shall obtain an Electrical Permit from the Building Division for any temporary electrical power required during construction. No temporary electrical power will be granted to a project unless one of the following items is in place and approved by the Building Division: (A) Installation of a construction trailer, or, (B) Security fencing around the area where the electrical power will be located.

94. The applicant shall install any required temporary construction trailer on private property. No trailers are allowed to be located within the public right-of-way. The trailer shall be removed prior to the issuance of a Certificate of Occupancy.

95. The applicant shall design and construct accessible paths of travel from the building's accessible entrances to the public right-of-way, accessible parking, and the trash enclosure. Paths of travel shall incorporate (but not limited to) exterior stairs, landings, walks and sidewalks, pedestrian ramps, curb ramps, warning curbs, detectable warning, signage, gates, lifts and walking surface materials, as necessary. The accessible route(s)

of travel shall be the most practical direct route between accessible building entrances, site facilities, accessible parking, public sidewalks, and the accessible entrance(s) to the site, California Building Code, (CBC) Chapter 11, Sec, 11A and 11B.

96. Prior to issuance of a Building Permit all of the following must be in place on the Site: a portable toilet with hand wash station, all BMP's, fencing and signage on each adjacent street saying "If there is any dust or debris coming from this site please contact (superintendent number here) or the AQMD if the problem is not being resolved" or something similar to this.

97. The applicant shall provide temporary toilet facilities for the construction workers. The toilet facilities shall always be maintained in a sanitary condition. The construction toilet facilities of the non-sewer type shall conform to ANSI ZA.3.

98. The applicant shall underground all on site utilities to the new proposed structures, prior to the issuance of a Certificate of Occupancy, unless prior approval has been obtained by the utility company or the City.

99. Prior to issuance of Building Permits, site grading final and pad certifications shall be submitted to the Building Division and Engineering Division, which include elevation, orientation, and compaction. The certifications are required to be signed by the engineer of record.

100. The applicant shall provide proof of payment to the Rialto Unified School District for all required school fees, prior to the issuance of a building permit.

101. Site facilities such as parking open or covered, recreation facilities, and trash dumpster areas, and common use areas shall be accessible per the California Building Code, Chapter 11.

102. The applicant shall place a copy of the Conditions of Approval herein on within the building plan check submittal set and include the PPD number on the right bottom corner cover page in 20 point bold, prior to the issuance of a building permit.

103. The applicant shall ensure that a minimum of 65% of all construction and demo debris shall be recycled using an approved City of Rialto recycling facility during construction. Copies of receipts for recycling shall be provided to the City Inspector and a copy shall be placed in the office of the construction site.

104. Prior to issuance of Building Permits, on site water service shall be installed and approved by the responsible agency. On site fire hydrants shall be approved by the Fire Department. No flammable materials will be allowed on the site until the fire hydrants are established and approved.

105. The applicant shall comply with all applicable requirements of the California Fire Code and Chapter 15.28 (Fire Code) of the Rialto Municipal Code.

106. The applicant shall illuminate all walkways, passageways, and locations where pedestrians are likely to travel with a minimum of 1.5-foot candles (at surface level) of light during the hours of darkness. Lighting shall be designed/constructed in such a manner as to automatically turn on at dusk and turn off at dawn.

107. The applicant shall illuminate all alleyways, driveways, and uncovered parking areas with a minimum of 1.5-foot candles (at surface level) of light during the hours of darkness. Lighting shall be designed/constructed in such a manner as to automatically turn on at dusk and turn off at dawn.

108. The applicant shall illuminate all loading dock areas, truck well areas, and delivery areas with a minimum of 2.0 foot-candles (at surface level) of light during the hours of darkness. Lighting shall be designed/constructed in such a manner as to automatically turn on at dusk and turn off at dawn.

109. The applicant shall design/construct all lighting fixtures and luminaries, including supports, poles and brackets, in such a manner as to resist vandalism and/or destruction by hand.

110. The applicant shall provide an illuminated channel letter address prominently placed on the building to be visible to the front of the location and if applicable, visible from the main street to which they are located (e.g. commercial building facing the interior of the property would require two address signs if located adjacent to a roadway), prior to the issuance of a Certificate of Occupancy.

111. At the discretion of the Rialto Police Department, the applicant shall install exterior security cameras at the location that cover the entire Site, prior to the issuance of a Certificate of Occupancy. The security cameras shall be accessible to the Rialto Police Department via FusionONE web application.

112. The applicant shall install Knox boxes immediately adjacent to the main entrance of the building and at least one (1) rear entrance on the building to facilitate the entry of safety personnel. The Knox boxes shall be installed in such a manner as to be alarmed, resist vandalism, removal, or destruction by hand, and be fully recessed into the building. The Knox boxes shall be equipped with the appropriate keys, for each required location, prior to the first day of business. The Knox-Box placement shall be shown on the formal building plan review submittal prior to the issuance of a building permit.

113. The applicant shall prominently display the address on the building rooftop to be visible to aerial law enforcement or fire aircraft. Specifications to be followed for alphanumeric characters are as follows: Three (3) foot tall and six (6) inches thick alphanumeric characters. The alphanumeric characters shall be constructed in such a way that they are in stark contrast to the background to which they are attached (e.g. white numbers and letters on a black background), and resistant weathering that would cause a degradation of the contrast.

114. The applicant shall provide an audible alarm within the building, prior to the issuance of a Certificate of Occupancy. The building shall be alarmed in such a way as to emit a continuous audible notification until reset by responsible personnel (e.g. alarmed exit device / crash bar).

115. The applicant or General Contractor shall identify each contractor and subcontractor hired to work at the job site on a Contractor Sublist form and return it to the Business License Division with a Business License application and the Business License tax fee based on the Contractors tax rate for each contractor.

116. Prior to issuance of a Certificate of Occupancy, the Lessor of the property shall pay a business license tax based on the Rental Income Property tax rate.

SECTION 5. The Chairman of the Planning Commission shall sign the passage and adoption of this resolution and thereupon the same shall take effect and be in force.

PASSED, APPROVED AND ADOPTED this 14th day of September, 2022.

_____
JERRY GUTIERREZ, CHAIR
CITY OF RIALTO PLANNING COMMISSION

STATE OF CALIFORNIA)
COUNTY OF SAN BERNARDINO) ss
CITY OF RIALTO)

I, Kimberly Dame, Administrative Analyst of the City of Rialto, do hereby certify that the foregoing Resolution No. ____ was duly passed and adopted at a regular meeting of the Planning Commission of the City of Rialto held on the ___th day of ____, 2022.

Upon motion of Planning Commissioner_____., seconded by Planning Commissioner ____, the foregoing Resolution No. ____was duly passed and adopted.

Vote on the motion:

AYES:

NOES:

ABSENT:

IN WITNESS WHEREOF, I have hereunto set my hand and the Official Seal of the City of Rialto this __th day of ___, 2022.

_____

KIMBERLY DAME, ADMINISTRATIVE ANALYST

Exhibit “A”

Project Plans

File #: PC-22-844, **Version:** 1, **Agenda #:**

For the Planning Commission Meeting of September 14, 2022

TO: Honorable Chairman and Planning Commissioners

APPROVAL: Paul Gonzales, Community Development Manager

FROM: Siri Champion, Senior Planner

Request that the Planning Commission receive a presentation in regard to the Foothill Central Specific Plan and provide comments.

BACKGROUND:

In November of 1983, the Central Area Specific Plan was adopted by the City Council and in August of 2010, the Foothill Boulevard Specific Plan was also adopted by the City Council. There have been no prominent updates to either specific plan since each plan was originally adopted. Recognizing the need for an update, on January 26, 2021, City Council authorized submittal of an application to the Southern California Association of Governments to update the Central Area Specific Plan and the Foothill Boulevard Specific Plan.

On April 27, 2022, the Planning Division made a presentation to the City of Rialto Economic Development Committee (EDC). At the meeting, the EDC requested additional information and directed staff to return to the EDC to receive guidance and input on the vision for the new Specific Plan. On June 29, 2022, the EDC provided comments and directed staff to develop a vision for EDC's review and approval.

The vision for the Foothill Central Specific Plan is as follows:

"For the next 30 years, Downtown Rialto will continue to be the heart of the City, defined by its hometown character and functioning as an important job center and transportation hub. The historic Route 66, Foothill Boulevard, will continue to serve as a gateway corridor through the City and to the downtown core. The Foothill Central Specific Plan area will continue to evolve as a lively mixed-use destination that integrates housing for all income levels and ages with shopping, restaurants, entertainment, and civic and arts uses while preserving existing landmarks.

The Specific Plan will be a tool to implement high-quality development standards along Foothill Boulevard and within Downtown Rialto that complement and enrich a public realm that is safe, green, and beautiful, incorporating landscaping, lighting and public art. Streets and sidewalks will be designed for all ages, abilities and modes including pedestrians, bicyclists, transit, and cars."

ANALYSIS/DISCUSSION:

The intent of the Foothill Central Specific Plan is to build on the vision, goals, and objectives

established in the existing plans and to update them based on input from the City Council, Planning Commission, property owners, business owners, community members, and other stakeholders.

Through this effort the City seeks to update:

- Land use districts, permitted uses, and associated development standards,
- Strategies and supportive policies for new residential development,
- Plans for a multi-modal mobility network and streetscape,
- Plans for infrastructure improvements, and
- An implementation strategy.

The purpose of the agenda item is to introduce the project, share background information about the project area, and gather input from the Planning Commission regarding the following key questions:

- What changes do you envision for the project area?
- What types of businesses would you like to see?
- What landmarks or similar features would you like to preserve?
- What do you perceive are challenges and opportunities?

GENERAL PLAN CONSISTENCY:

The General Plan establishes four opportunity areas including Downtown Rialto and Foothill Boulevard. Updates to the Central Area Specific Plan and Foothill Boulevard Specific Plan implement the General Plan. Furthermore, an update to the specific plans is consistent with the following goals of the Land Use Element:

Goal 2-1: Revitalize and enhance the Foothill Boulevard Corridor into a place that supports economic development and creates a sense of place and identity through the use of appropriate streetscape design inspired by the Rialto Bridge.

Goal 2-2: Develop the Riverside Avenue Corridor to become an economically viable local service area.

Goal 2-5: Develop Downtown Rialto as a lively, pedestrian-friendly district typical of a small-town downtown, with a vibrant mix of residential, commercial, civic uses, and transit-oriented development.

ENVIRONMENTAL IMPACT:

An Initial Study/Mitigated Negative Declaration will be prepared for the project pursuant to the California Environmental Quality Act.

LEGAL REVIEW

The City Attorney has reviewed and supports this staff report.

FINANCIAL IMPACT

Staff time for the Senior Planner to manage the project is budgeted and available in General Fund Account No. 010-500-4260-1001. The consultant, WSP, is funded by SCAG's Sustainable

Communities Program.

RECOMMENDATION:

Staff recommends that the Planning Commission receive a presentation for the Foothill Central Specific Plan and provide comments.