July 2022 | Initial Study

THE MERCURY PROJECT

City of Pico Rivera

Prepared for:

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PLACEWORKS

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Abbreviations and Acronyms

AAQS	ambient air quality standards
AB	Assembly Bill
ACM	asbestos-containing materials
ADT	average daily traffic
amsl	above mean sea level
AQMP	air quality management plan
ASTM	American Society of Testing and Materials
AST	aboveground storage tank
BAU	business as usual
bgs	below ground surface
BMP	best management practices
CAA	Clean Air Act
CAFE	corporate average fuel economy
CalARP	California Accidental Release Prevention Program
CalEMA	California Emergency Management Agency
Cal/EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
Cal/OSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources, Recycling, and Recovery
Caltrans	California Department of Transportation
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDE	California Department of Education
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
cfs	cubic feet per second
CGP	Construction General Permit
CGS	California Geologic Survey
CMP	congestion management program
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level

Abbreviations and Acronyms

CO	carbon monoxide
CO_2e	carbon dioxide equivalent
Corps	US Army Corps of Engineers
CSO	combined sewer overflows
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DOC	California Department of Conservation
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
EIR	environmental impact report
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
GHG	greenhouse gases
gpd	gallons per day
GWP	global warming potential
HCM	Highway Capacity Manual
HQTA	high quality transit area
HVAC	heating, ventilating, and air conditioning system
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change
L_{dn}	day-night noise level
L_{eq}	equivalent continuous noise level
LACSD	Los Angeles County Sanitation District
LBP	lead-based paint
LCFS	low-carbon fuel standard
LID	low-impact development

Abbreviations and Acronyms

LOS	level of service
LST	localized significance thresholds
MBTA	Migratory Bird Treaty Act
M_W	moment magnitude
MCL	maximum contaminant level
MEP	maximum extent practicable
mgd	million gallons per day
MMT	million metric tons
MPO	metropolitan planning organization
MT	metric ton
MWD	Metropolitan Water District of Southern California
NAHC	Native American Heritage Commission
NO_X	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
O_3	ozone
OES	California Office of Emergency Services
OSHA	United States Occupational Safety and Health Administration
PM	particulate matter
POTW	publicly owned treatment works
ppm	parts per million
PPV	peak particle velocity
RCNM	Roadway Construction Noise Model
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
RHNA	Regional Housing Needs Assessment
RMP	risk management plan
RMS	root mean square
RPS	renewable portfolio standard
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison

Abbreviations and Acronyms

SIP	state implementation plan
SLM	sound level meter
SoCAB	South Coast Air Basin
SoCalGas	Southern California Gas
SO_X	sulfur oxides
SQMP	stormwater quality management plan
SRA	source receptor area [or state responsibility area]
SUSMP	standard urban stormwater mitigation plan
SWP	State Water Project
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TDM	transportation demand management
TNM	transportation noise model
tpd	tons per day
TRI	toxic release inventory
TTCP	traditional tribal cultural places
USDOT	United States Department of Transportation
USGS	United States Geological Survey
UST	underground storage tank
UWMP	urban water management plan
V/C	volume-to-capacity ratio
VdB	velocity decibels
VHFHSZ	very high fire hazard severity zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WQMP	water quality management plan
WRD	Water Replenishment District of Southern California
WSA	water supply assessment

1. Introduction

The project applicant, Mercury Bowl, LLC: Green Rivera, LLC, is seeking approval from the city of Pico Rivera for implementation of The Mercury Specific Plan (Specific Plan) that includes the development of a three to six-story mixed-use building with a 6.5-level parking structure in the core, including 1 level of subterranean parking, ground-floor retail and residential uses, and residential uses in floors two through six (proposed project) on a 2.85-acre site in Pico Rivera.

In compliance with the California Environmental Quality Act (CEQA), the city of Pico Rivera, as lead agency, is preparing the environmental documentation for the proposed project to determine if approval of the requested discretionary actions and subsequent development would have a significant impact on the environment. As defined by Section 15063 of the CEQA Guidelines, an initial study is prepared primarily to provide the lead agency with information to use as the basis for determining whether an environmental impact report, negative declaration (ND), or mitigated negative declaration (MND) would provide the necessary environmental documentation and clearance for the proposed project. This initial study has been prepared to support the adoption of an MND.

1.1 PROJECT LOCATION

The project site is located at 8825 Washington Boulevard (APN: 6370-027-018) in the central part of Pico Rivera, Los Angeles County, California (see Figure 1, *Regional Location*). The project site in the city of Pico Rivera is surrounded by the city of Downey to the south, city of Montebello to the west, and city of Santa Fe Springs to the southeast. Regional access to the project site is via Interstate 605 (I-605), the San Gabriel River Freeway, 1.2 miles to the east, and Interstate 5 (I-5)/ Santa Ana Freeway, 2.0 miles to the south (see Figure 2, *Local Vicinity*). Rosemead Boulevard also provides regional access and is located approximately 500 feet to the east. The project site is bounded by Washington Boulevard to the south and adjacent commercial uses to the north, east, and west. A single-family residential neighborhood borders the project site to the northwest (see Figure 3, *Aerial Photograph*).

1.2 ENVIRONMENTAL SETTING

1.2.1 Existing Land Use and Zoning

The 2.85 acres project site is currently vacant and fenced off with no public access. It was previously developed with a commercial building that operated as a nightclub until March 2015 and was subsequently demolished in 2020. The project site is paved and contains ornamental landscaping, including palm trees.

The proposed project would be adjacent to, and become part of the Pico Rivera Marketplace, a larger commercial site with a broad range of retail services including a fitness center, restaurants, and bank. The project site is currently zoned General Commercial (C-G) with a general plan land use designation of Mixed-

Use/Housing Element Site Opportunity Area 8 (the Rosemead Boulevard and Washington Boulevard Opportunity Area) (Pico Rivera 2014). The housing element identifies adequate sites within the city that would be able to accommodate the City's Regional Housing Needs Assessment (RHNA). The project site is within the housing element's Area 11 with a proposed zoning of Mixed-Use (Pico Rivera 2041b).

1.2.2 Surrounding Land Uses and Zoning

The project site is primarily surrounded by commercial and residential uses and is separated from the residential uses by a block wall (see Figure 3). The Pico Rivera Marketplace, which is currently owned by the project applicant, borders the site to the north and east; a single-family residential neighborhood borders to the northwest; and commercial uses border to the west and south across Washington Boulevard. The commercial properties immediately bordering the project site to the east and west are zoned General Commercial, and the commercial uses across Washington Boulevard are zoned Specific Plan (Pico Rivera 2021). The Pico Rivera Marketplace has a general plan land use designation of Commercial, and the commercial uses to the west of the project site along Washington Boulevard have a general plan land use designation of Mixed-Use/Housing Element Site Opportunity Area 8. Commercial uses to the south of the project site have a general plan land use designation of Specific Plan (Pico Rivera 2014). The single-family neighborhood to the northwest is zoned Single-Family Residential (S-F) with a general plan land use designation of Low Density Residential (Pico Rivera 2021, 2014).

1.2.3 Local and Regional Access

Regional access to the project site is provided by I-605 and I-5, approximately 1.2 miles to the east and 2 miles to the south, respectively. Rosemead Boulevard also provides regional access and is located approximately 500 feet to the east. Washington Boulevard provides direct access to the project site from the south. One driveway from Washington Boulevard leads directly to the project site, and two vehicle access points along the northeastern and eastern boundary of the project site provide access from the Pico Rivera Marketplace property. The curb cut for the existing westerly driveway on Washington Boulevard would remain; however, no vehicle access would be provided from this driveway.

The Montebello/Commerce Metrolink Station is approximately 2 miles northwest connecting downtown Los Angeles and Riverside counties, and the Commerce Metrolink Station is approximately 2.6 miles west connecting downtown Los Angeles and Orange counties. Local bus service is provided along Rosemead Boulevard and Paramount Boulevard (LA Metro bus lines 266 and 265, respectively). Montebello Bus Line, Route 50, also runs along Washington Boulevard in the vicinity of the project site. The closest Route 50 and bus stop line 266 to the project site are located on the intersection of Washington Boulevard and Rosemead Boulevard, approximately 460 feet to the east. The closest bus stop line 265 is located on the intersection of Washington Boulevard and Paramount Boulevard, approximately 0.4 miles to the west. None of these bus lines provide 15-minute headways during peak hours.

Regional bike paths are located along the San Gabriel River, approximately one mile east of the project site, and along the Rio Hondo Channel, approximately 0.8 mile west of the project site. Based on the City's

circulation element, Rosemead Boulevard and Washington Boulevard are identified as proposed Class II bike lane and proposed Class III bike route, respectively (Pico Rivera 2014c).

1. Introduction

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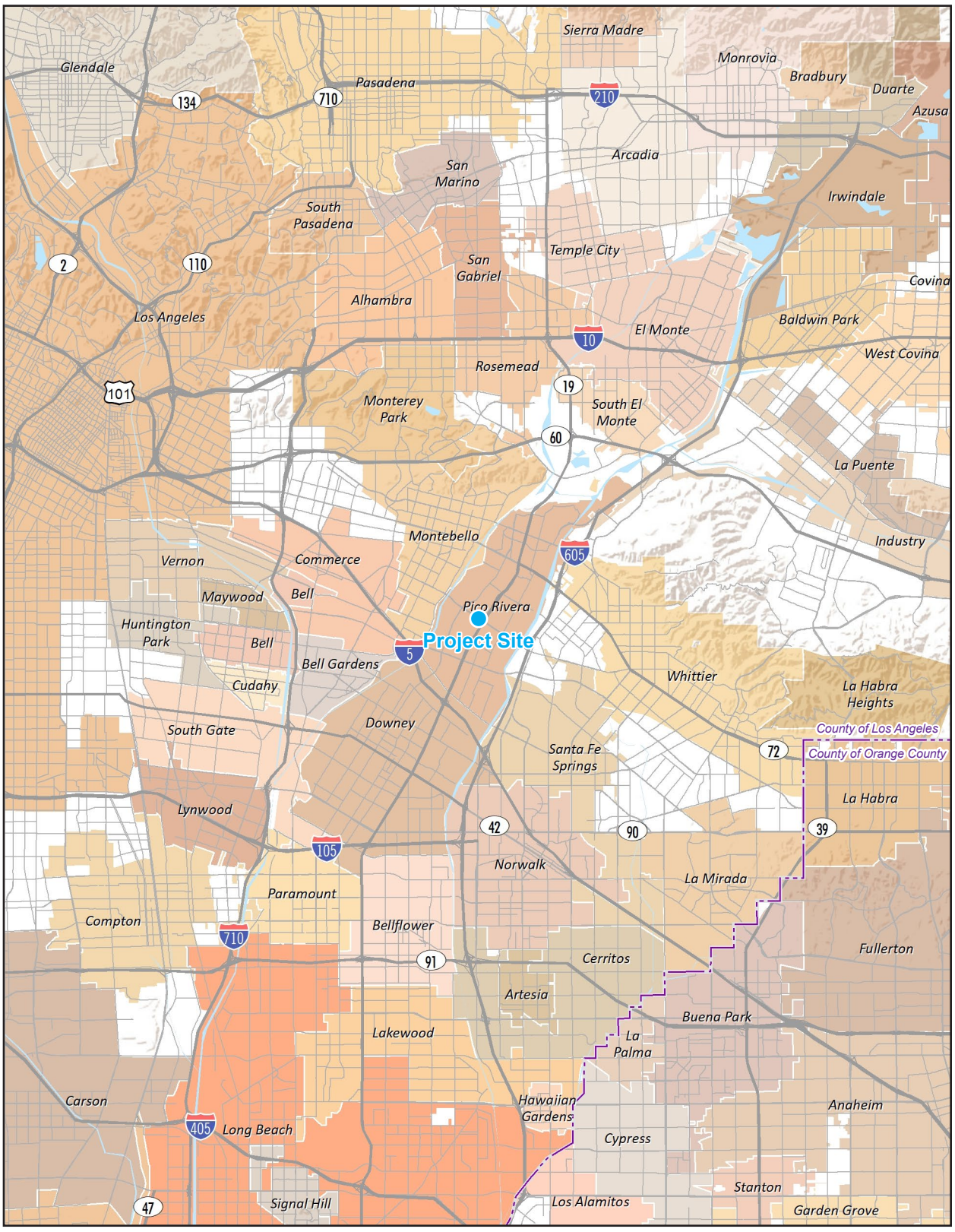
Figure 1 - Regional Location



Note: Unincorporated county areas are shown in white.

Source: ESRI, 2021

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Scale (Miles)

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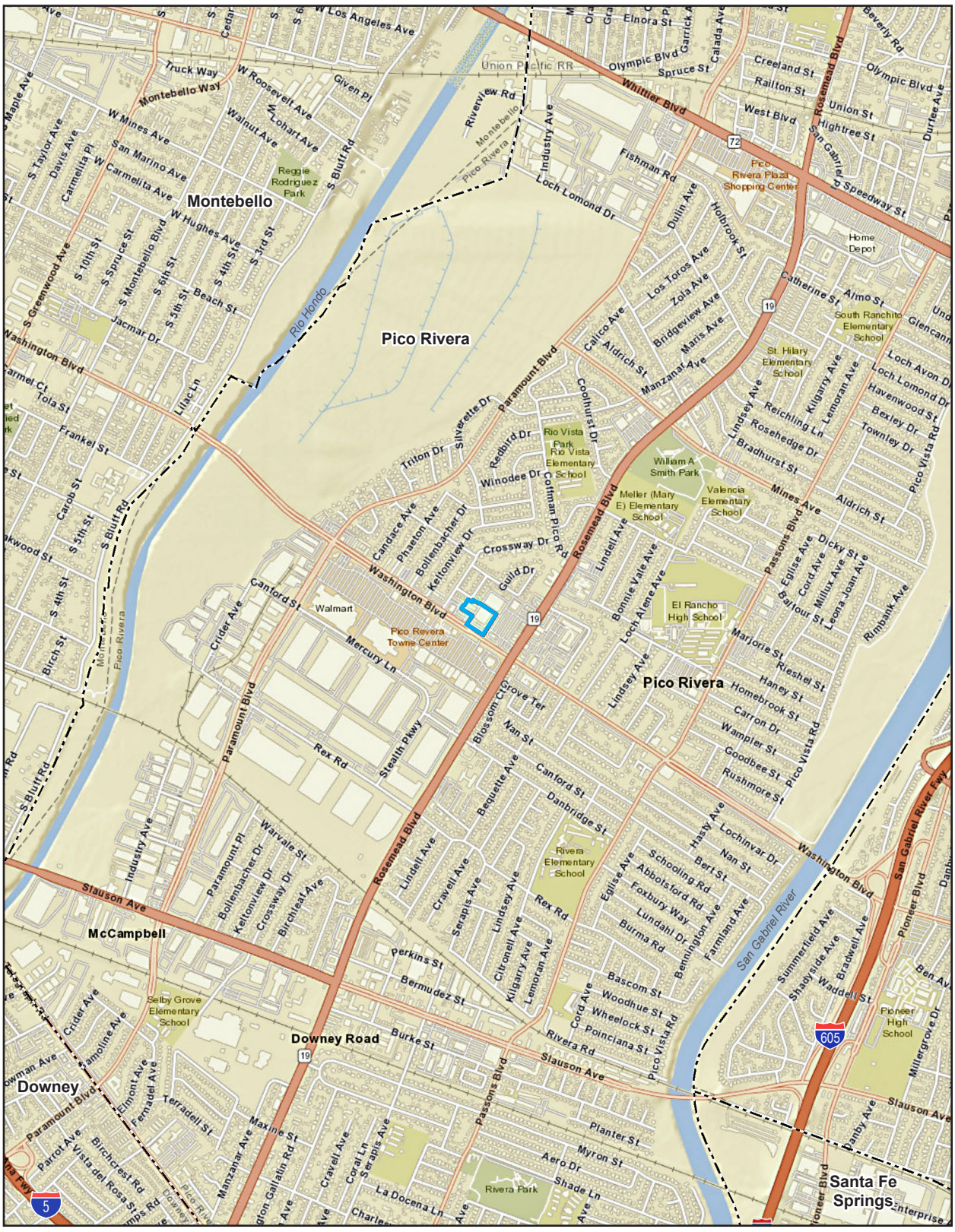
Figure 2 - Local Vicinity



1. Introduction

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Figure 3 - Aerial Photograph

Project Boundary

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Scale (Feet)

Source: Nearmap, 2021

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1.3 PROJECT DESCRIPTION

1.3.1 Proposed Land Uses

The proposed development as defined in the Specific Plan includes a three to six-story mixed-use building with subterranean parking, ground-floor retail and residential uses, and residential uses in floors two through six (see Figure 4, *Site Plan*).

The building would have a wrap-style design, i.e., the commercial space and apartments "wrap" around the internal parking structure (see Figure 5, *Site Plan*). As shown in Table 1, *Project Summary*, the proposed project would develop 255 dwelling units consisting of a mix of studios, one-bedrooms, two-bedrooms, and three-bedrooms; up to 5,730 square feet of retail; up to 1,750 square feet of ground-floor lobby/leasing space; up to 17,010 square feet of rooftop pool/community recreation; and up to 190,000 square feet of parking. The first floor of the proposed building is a mix of retail, residential, public seating areas, and a main lobby/leasing office. Floors two through six include residential units, parking, and related residential amenities such as a small flex amenity space for residents. Parking levels would extend from all floors interior to the building and one level of subterranean parking. The roof deck of the parking structure would include a pool and recreation facilities such as a gym and clubhouse for use by residents only. Detailed descriptions for each of these uses are provided below.

Table 1 Project Summary

Proposed Uses	Units/Square Feet	Floor(s)
Residential (Studio, one-bedrooms, two-bedrooms, and three-bedrooms)	255 units (13 affordable units)	Floors 1-6
Retail	5,730 square feet	Floor 1 (Ground Floor)
Lobby & Leasing Office	1,750 square feet	Floor 1 (Ground Floor)
Residential recreational Amenities	17,010 square feet	Rooftop Pool/Community Recreation
Parking	190,000 square feet	Floors 1-6 & Subterranean 1 Level

1.3.1.1 RESIDENTIAL

Residential uses consist of studio, junior studio, one, two and three-bedroom apartments for rent, ranging in size from studios with balconies equaling approximately 540 square feet, to three-bedroom apartments with balconies equaling approximately 1,500 square feet as shown in Table 2, *Summary of Residential Uses*. Thirteen units would be dedicated as affordable. Approximately 258,720 square feet of residential uses is proposed.

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Table 2 Summary of Residential Uses

Unit Type	Square Feet	Number of Units
Studio	540	35
Junior One-Bedroom	570	48
One-Bedroom	590-620	111
Two-Bedroom	940-1,040	57
Three-Bedroom	1,500	4
Total		**255**

Based on the project applicant's standard lease agreement, the project applicant will limit the number of tenants per unit to two persons per bedroom and one person per living room. Table 3, Residential Population, below summarizes maximum tenants allowed per dwelling unit type. As shown in Table 3, the proposed project would have a maximum residential tenant population of 812 persons.

Table 3 Residential Population

Unit Type	Maximum Occupancy	Number of Units	Population
Studio and Junior One-Bedroom	2	83	166
One-Bedroom	3	111	333
Two-Bedroom	5	57	285
Three-Bedroom	7	4	28
		Total	**812**

1.3.1.2 COMMERCIAL

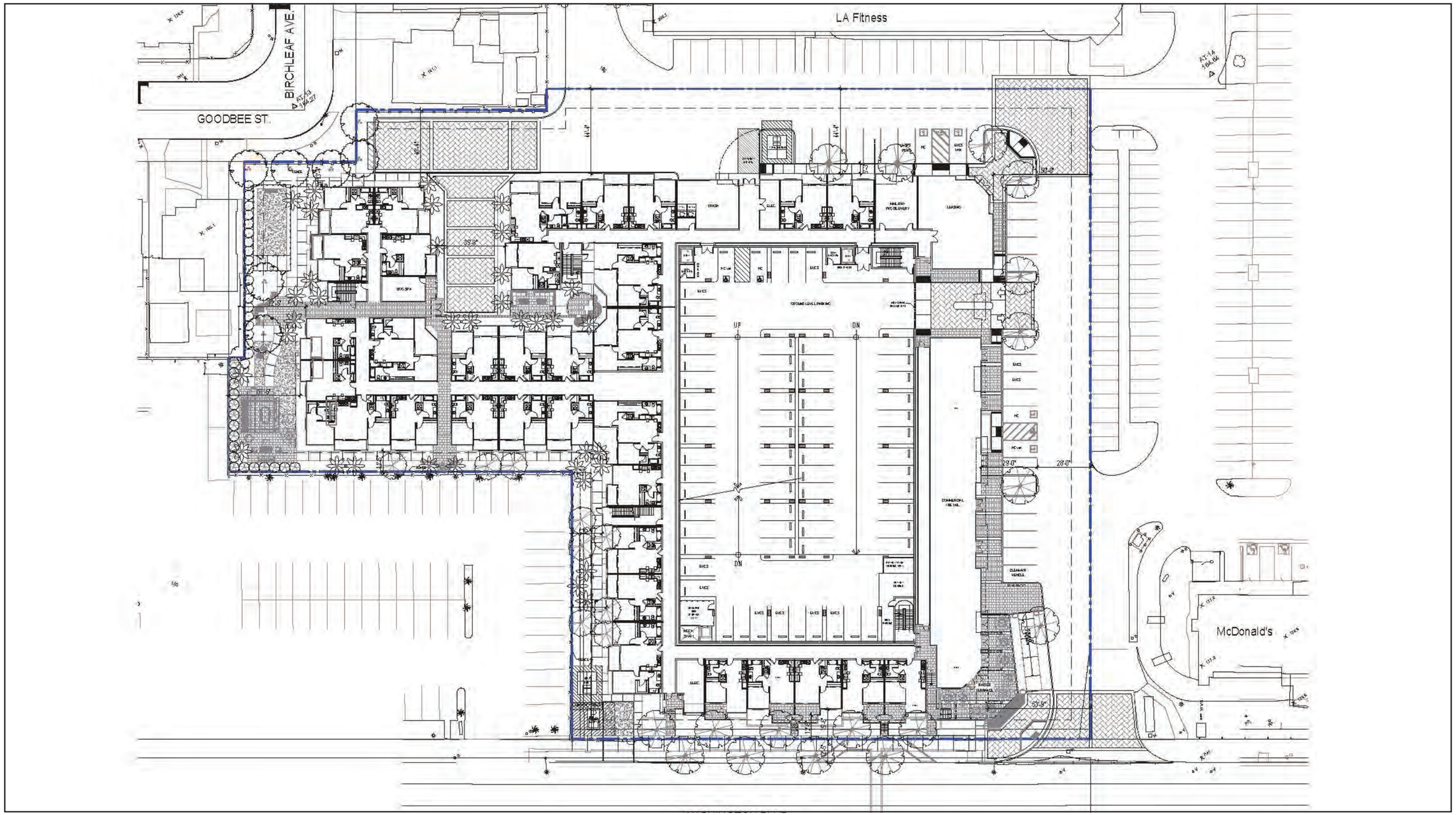
Retail Uses

Retail uses would be located at the ground floor and are focused on the easterly edge that faces the existing commercial retail and parking on Rosemead Boulevard. Local serving retail would consist of up to approximately 5,730 square feet of small business spaces to provide services to the local community. Small businesses may include services such as coffee shops, print shops, laundry, or tailoring services to serve the needs of the local community and future residents. The uses would operate during typical commercial hours that would vary by use, but could generally operate Monday through Sunday from 9 a.m. to 5 p.m.

1.3.1.3 RECREATIONAL AMENITIES AND OPEN SPACE

As shown in Figure 5, *Open Space and Rooftop Recreation Concept*, the proposed project includes public and private recreational uses and open space. On the ground floor, the proposed project would include a total of 28,770 square feet of public and private open space in the form of passive plaza-type green spaces. Residents would be provided residential amenity space on the rooftop and in community rooms (17,010 square feet). Rooftop recreational uses would include a swimming pool, jacuzzi, poolside cabanas, clubhouse, gym, barbecue area, and garden/green areas. Additionally, private balconies or patio areas would be provided for each residential unit which would provide a total of approximately 20,693 square feet of private open space.

Figure 4 - Site Plan



Source: Danielian Associates, 2022

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Figure 5 - Open Space and Rooftop Recreation Concept

Open Space Concept

Rooftop Recreation Concept

- Property Boundary
- Building Footprint
- Common/Public Open Space
- Resident Ground Floor Open Areas
- Resident Rooftop Recreation Areas

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Scale (Feet)

Source: Danielian Associates, 2022

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1.3.2 Project Access and Parking

1.3.2.1 PROJECT SITE ACCESS

Vehicular access to the project site would be provided by one existing driveway from Washington Boulevard to the south and two vehicle access points (drive aisles) from Rosemead Boulevard to the east. The existing westerly project driveway on Washington Boulevard would be restricted to only emergency vehicle access. The other existing access points along Washington Boulevard and Rosemead Boulevard would remain. The existing driveway on Washington Boulevard is located on the north side of Washington Boulevard along the easterly property boundary directly west of the existing McDonalds restaurant. This driveway currently serves the existing McDonald's restaurant adjacent to the project site. The site driveway would provide access to the main internal roadway surrounding the proposed building and to the subterranean parking entrance for the proposed project. The driveway would continue to accommodate left-turn ingress and right-turn ingress and egress traffic movements (i.e., no left-turns out). No physical modifications are proposed at this driveway. The existing Rosemead Boulevard driveway is located on the west side of Rosemead Boulevard north of Washington Boulevard. This signalized driveway currently serves the existing Pico Rivera Marketplace and would also serve the proposed project. The driveway would continue to accommodate full access (i.e., left-turn and right-turn ingress and egress traffic movements).

Within the project site, vehicular circulation would be accommodated by a drive aisle which is adjacent to the east and north sides of the proposed building. The drive aisle would be no less than 28 feet wide in order to accommodate Fire Department access to the project site.

1.3.2.2 PROJECT PARKING

The Specific Plan would allow for a minimum of 420 total parking spaces, which is 149 parking spaces less than required by the Pico Rivera Municipal Code. The proposed project is planned to provide a total of 464 vehicular parking spaces on-site, including 437 spaces within the new parking garage and 27 on-site surface parking spaces. The new parking structure is planned to provide 390 residential spaces (i.e., 358 resident parking spaces and 32 spaces for residential guest parking) and 74 parking spaces for non-residential uses. Refer to Table 4, *Summary of Parking Spaces*.

As part of the parking spaces provided, a total of 19 Americans with Disability Act (ADA) accessible spaces would be provided on-site, of which 16 spaces are allocated for residential use and three (3) spaces are allocated for the commercial use. In addition, 47 electric vehicle charging station (EVCS) ready spaces would be provided on-site (i.e., 44 residential spaces and 3 commercial spaces). Bicycle parking and storage would also be provided for the project, with a minimum of 12 long-term bicycle spaces for residents and a minimum of four (4) short-term bicycle spaces. Short-term bicycle parking typically consists of bicycle racks. Long-term bicycle parking would be fully enclosed spaces and would typically consist of bicycle lockers, bicycle rooms, or bicycle cages.

Residents would be required to provide the make, model, and year of their vehicle(s) during lease execution and subsequently would be issued an access card or key for entry into the parking garage. All resident and employee parking policies would be outlined in the lease/rental agreement. "No Overnight Parking" signs would be posted within the existing shopping center to prohibit tenants from parking in the center overnight

1. Introduction

and would be enforced by security staff monitoring the center on a 24-hour basis. The signage would also include verbiage that notes that any violations of the parking restriction are subject to towing. hour basis. The signage would also include verbiage that notes that any violations of the parking restriction are subject to towing.

The project applicant (or successor owner/s) will identify a Community Liaison/Parking Ombudsman in order to keep nearby residential communities informed on various matters and provide an open line of communication. The Community Liaison/Parking Ombudsman will efficiently manage parking and enforce changes that the project management team will make to prevent local neighborhood parking intrusion. The Parking Ombudsman would be responsible for enforcing resident and employee parking rules and will address any complaints from the public regarding neighborhood parking intrusion. The telephone number of the Parking Ombudsman would be disseminated to the surrounding communities. For example, should a community member notice a resident or employee parking in the general neighborhood, they would be able to notify the Ombudsman of the intrusion, as well as request enforcement if it was determined that the motorist parking was attributable to the proposed project. All verifiable violations would be documented for monitoring and reporting purposes and warnings and fines/penalties would be issued. A resident or employee that has been determined by the parking ombudsman to have violated the lease agreement policy (i.e., no on-street parking within the neighborhood) would receive a verbal warning upon their first violation. An employee with a second violation will receive a formal written warning that includes a restatement of the policy along with a notification that the employee's supervisor/manager has been informed of the multiple violations. A resident with a second violation would receive a formal written warning that includes a restatement of the policy to be included in the resident's file. Should a subsequent employee violation occur, it would result in the preparation of a formal letter to the project applicant's Human Resources department to be included in the employee's file and the employee's supervisor/manager would again be notified in order to determine the appropriate penalty. Should a subsequent resident violation occur, it would result in the issuance of a lease termination/non-renewal letter for violation of the terms outlined in the lease/rental agreement.

Table 4 Summary of Parking Spaces

Unit Type	No. of Units/Sq, ft.	Spaces to be Required by Specific Plan	Spaces Required by Municipal Code	Spaces Provided
Studio	35 units	35	70	390
1 Bedroom	159 units	223	318	
2 Bedroom	57 units	92	114	
3 Bedroom	4 units	8	8	
Guest	255 unit[1]	32	32	
Leasing	1,750 s.f.	7	7	74
Retail	5,730 s.f.	22	23	
USPS	1	1	1	
Additional Secured Parking				
	Total Parking	**420**	**573**	**464**

Notes:
[1] The number of guest spaces are based on the total number of units for the proposed project.
Source: Pico Rivera Municipal Code Table 18.44.040

1.3.3 Pedestrian Improvements

Pedestrian paths on-site would connect to the sidewalk along Washington Boulevard on the southern side of the project site, run along the eastern side of the project site, and connect to an existing pedestrian path at the northeast side of the project site near the existing fitness building within the Pico Rivera Marketplace. Pedestrian access to the project site would be provided via the existing public sidewalks and pedestrian facilities along Washington Boulevard and Rosemead Boulevard. A handicap accessible ramp would be installed at the west corner driveway at Washington Boulevard. Pedestrian access within the project site would be accommodated by an ADA compliant walkway that would connect the building entrance and retail frontages to the public right-of-way. This walkway would provide exclusive pedestrian and bicycle access from the public sidewalks to the proposed project site, thus minimizing the extent of pedestrian and bicycle interaction with vehicles at the site and providing a comfortable, convenient, and safe environment for pedestrians and bicyclists to access the proposed project from the public rights-of-way. Pedestrian pathways would also be constructed surrounding the proposed building and would connect to the existing shopping center pedestrian facilities, as shown in Figure 6, *Pedestrian and Bicycle Access within the Project Site*.

1.3.4 Architectural Design

The building would have a wrap-style design (i.e., the commercial space and apartments "wrap" around the internal parking structure) (see Figure 5, *Site Plan*). The proposed project would use a variety of colors and materials to provide an articulated architectural design, including manufactured stone veneer, balcony railings, cement plaster in various finish colors, cementitious vertical siding, and metal railings (see Figure 7, *Articulation Concepts*). Setbacks would vary around the perimeter of the development and are shown in Figure 8, *Proposed Setbacks*. The proposed building height (at the top of the sixth floor) would be 70 feet. Additional rooftop elements, such as recreation facilities, would be allowed up to an additional 11 feet (excluding roof parapet or screens around of mechanical equipment). The building height would step down to three stories at the

northwest corner of the project site near the residential community. As shown in Figure 9, *Walls and Screening Concept,* block walls would be included where the project site boundary meets with residential uses to the northwest of the project site and where the project site meets with the existing bank parking lot to the west. Additional green wall screening and an evergreen privacy hedge would separate residential uses from the block walls.

1.3.4.1 LANDSCAPING

There are non-native mature palm trees and ornamental landscaping located onsite and these would be removed by the project development/developer. The proposed project would include the planting of ornamental trees around the southeast, southwest and northwest sides of the building, street trees along Washington Boulevard, and accent patio trees along the western portion of the building. Landscaping would surround the proposed building. The landscape features for the proposed project would/will include fencing with synthetic lawn dog runs, evergreen privacy hedges, raised planter walls, and water features (See Figure 10, *Landscape Concept)*. The proposed landscaping would soften transitions from ground plane to vertical plane and provide screening to the adjacent neighborhood as well as shading at the ground floor perimeter of the building.

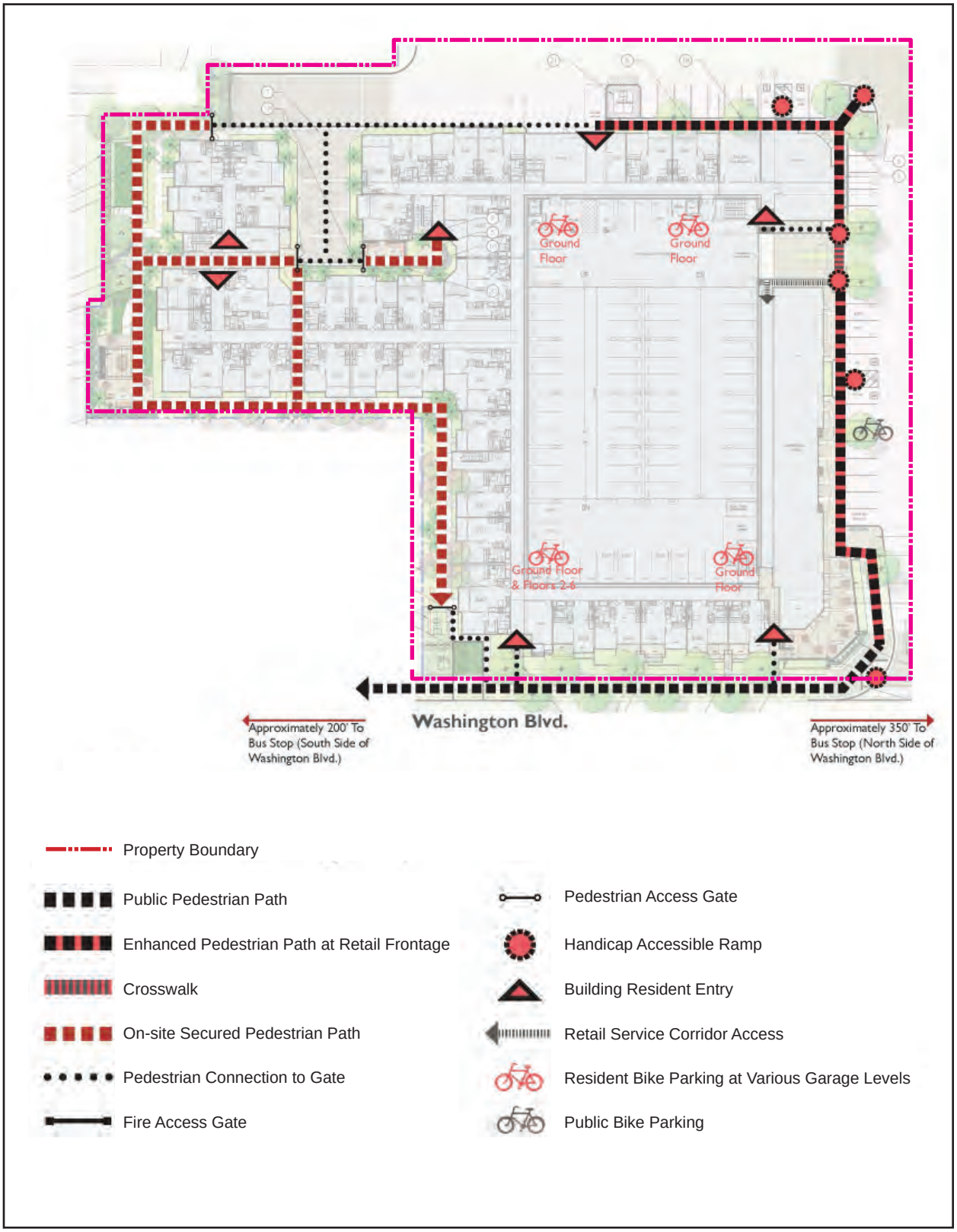
1.3.4.2 LIGHTING

The lighting for the proposed project would include safety and security lighting, primarily along walkways, outdoor parking areas, and steps for pedestrian safety at the ground level, and accent lighting on the building and landscaping. String lighting and LED accent lighting would be included on the rooftop recreation area.

1.3.4.3 SIGNAGE PROGRAM

The proposed project would include a signage program to provide regulation for the quantity, size, placement, and material of signs on the project site. Retail tenants would be allowed to use their own corporate fonts, colors and logos on signs. The signage program would be used to inform guests of the proposed project's many retail offerings and locations, as well as provide way finding. The guidelines of the program would be designed to complement the architectural elements of the building and coordinate the type, placement, and physical dimensions of all signage. Letter height and logo height shall not exceed 14 inches and each tenant is allowed a maximum of 20 square feet per location.

Figure 6 - Pedestrian and Bicycle Access within the Project Site



Source: Danielian Associates, 2022

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Figure 7 - Articulation Concepts

Source: Danielian Associates, 2022

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Figure 8 - Proposed Setbacks

Project Boundary

Building Footprint

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Scale (Feet)

Source: Danielian Associates, 2022

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Figure 9 - Walls and Screening Concept

Project Boundary
Walls
Screening
Pedestrian Fence & Gates
Building Footprint
Project Parking Garage

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Scale (Feet)

Source: Danielian Associates, 2022

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Figure 10 - Landscape Concept

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Scale (Feet)

Source: Danielian Associates, 2022

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1.3.5 Infrastructure Plan

Existing sewer, storm drain, and water lines would connect to the existing infrastructures along Washington Boulevard. All infrastructure improvements would comply with City and building code requirements.

1.3.5.1 POTABLE WATER

The Pico Water District provides water to the project site. The existing water system consists of an 8-inch steel water line along the north side of Washington Boulevard, and this water line currently provides the domestic water and fire water connections to the project site. A second existing 8-inch water line that connects to Washington Boulevard and extends throughout the existing retail center parking lot area provides fire water service for the project site. This fire water line is located in the parking lot drive aisle on the east and north sides of the project site and would continue to provide fire water service to the proposed project. During construction, portions of the existing water line and fire water line may be removed and replaced as required. The proposed project would connect to the 8-inch water line in Washington Boulevard. New water meters and backflow would be installed to meet project demand, and a new fire double detector check valve would be installed for the fire line. Two new fire hydrants would also be installed on-site.

1.3.5.2 SEWER

The existing sewer system consists of an 8-inch vitrified clay pipe (VCP) sewer line within Goodbee Street and extends west into and through the project site in a 15-foot-wide sewer easement. The existing sewer is in the northwest corner of the project site and continues along the northern boundary of the project site in the parking lot area that is shared with the adjacent property. The project site is served by a lateral that connects to the existing 8-inch sewer line. The proposed project would provide sewer connection to the existing 8-inch line in the northwest corner of the project site and/or the sewer line along the northern border of the project site. Portions of the sewer line may be removed and replaced during construction as needed.

1.3.5.3 STORMWATER

The project site is largely paved with impervious surfaces. The existing storm drain system in the project site area includes a parkway culvert storm drain system on the north side of Washington Boulevard, adjacent to the project site, that collects existing street drainage flows from Washington Boulevard as well as onsite runoff and surrounding properties runoff. The stormwater is collected via surface gutters that are directed to the low point in Washington Boulevard, where the water enters the parkway culvert system from both the west and east, flows south in a storm drain culvert beneath Washington Boulevard, and discharges into a 48-inch storm drain line south of Washington Boulevard that extends through the project site in a public storm drain easement.

The proposed project would construct a new storm drain system on the project site that would collect, treat, and convey stormwater to the existing storm drain system in Washington Boulevard to the south of the project site. The on-site stormwater system would collect all runoff from the site, convey the stormwater through existing underground storm drain systems to a proposed retention and/or water quality treatment system(s) for infiltration and/or water quality treatment before discharging back to the public system. The proposed water quality system may include infiltration and bio-filtration systems that would filter the water through

special soil media. Any off-site surface flows that enter the site would be bypassed through the proposed storm drain system or would sheet flow to existing cross gutters.

1.3.5.4 DRY UTILITIES

Southern California Edison (SCE) provides electricity to the project site, and Southern California Gas (SoCalGas) provides natural gas services to the project site. The proposed project would require an Edison primary feed to multiple transformers based on electrical load estimates. This new electrical service would be underground and connect from an existing feed point in Washington Boulevard. SoCalGas and all-new communication services would run in a joint trench where possible, and all services would be underground.

1.3.5.5 SOLID WASTE

Solid waste would be contracted by the project applicant or owner-operator with a private waste hauler that meets State standards for recycling. Residential access to trash and recycling chutes would be located on all floors and terminate at ground floor trash room. At ground level, there would be separate trash holding area for commercial tenants, that would be transferred to the main trash room and compacted for pick up. The trash room would be provided at the rear of the proposed project site (see Figure 4, *Site Plan*).

1.3.6 Project Construction

Proposed project construction would occur over approximately 23 months. Construction would include the following activities: grading and excavation, trenching for site utilities and irrigation, building construction, architectural coatings, driveway and walkway construction, landscaping, and street connection improvements.

1.3.7 Project Approvals

Implementation of the proposed project would require the following discretionary and ministerial project approvals from the city of Pico Rivera:

1.3.7.1 DISCRETIONARY APPROVALS REQUESTED

- **Specific Plan approval** - seeks adoption by ordinance to facilitate the implementation of the proposed uses and provide regulatory standards, zoning, and guidelines for the development.
- **Zone reclassification -** seeks to change the current zoning designation of General Commercial (GC) to Specific Plan (SP).
- **Zone code amendment -** seeks to add SP for this area to the Zoning Map
- **General Plan amendment -** seeks to change the current General Plan land use designations of Mixed-Use/Housing Element Site Opportunity Area 8 to Specific (SP)
- **Conditional use permit** to allow for the proposed project.

1.3.7.2 OTHER AGENCY ACTION REQUESTED

REGIONAL AGENCIES

- Los Angeles Regional Water Quality Control Board (NPDES permit; construction stormwater runoff permits, Storm Drain MS4 Permit)
- South Coast Air Quality Management District – Rule 201: Permit to construct
- Los Angeles County Fire Department (for emergency site access review)

LOCAL AGENCIES

- City of Pico Rivera Public Works/Engineering (for grading permit)

1. Introduction

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2. Environmental Checklist

2.1 PROJECT INFORMATION

1. **Project Title:** The Mercury Project Initial Study

2. **Lead Agency Name and Address:**
City of Pico Rivera
Community & Economic Development
6615 Passons Boulevard
Pico Rivera, CA 90660

3. **Contact Person and Phone Number:**
Julia Gonzalez, Deputy Director
562.942.2000
juliagonzalez@pico-rivera.org

4. **Project Location:**
The project site is located at 8825 Washington Boulevard (APN: 6370-027-018) in the central part of the city of Pico Rivera, Los Angeles County, California. Regional access to the project site is via Interstate 605 (I-605), the San Gabriel River Freeway, 1.23 miles to the east, and Interstate 5 (I-5)/the Santa Ana Freeway, 2.0 miles to the south. Rosemead Boulevard also provides regional access and is located approximately 500 feet to the east. The project site is bounded by Washington Boulevard to the south and adjacent commercial uses to the north, east, and west. A single-family residential neighborhood borders the project site to the northwest.

5. **Project Sponsor's Name and Address:**
Kamyar Shabani
Mercury Bowl, LLC: Green Rivera, LLC
1801 Century Park East, Suite 2100
Los Angeles, CA 90067-2323

6. **General Plan Designation:**
Mixed-Use/Housing Element Site Opportunity Area 8 (the Rosemead Boulevard and Washington Boulevard Opportunity Area).

7. **Zoning:** General Commercial (C-G).

8. **Description of Project:**
The proposed project involves development of a three to six-story mixed-use building with a 6.5-level parking structure in the core, 1 level of subterranean parking, ground-floor retail and residential uses, and residential uses in floors two through six on a 2.85-acre site. The building is a wrap-style with parking levels extending all floors interior to the building. The proposed project would develop 255 dwelling units

consisting of a mix of studios, junior studios, one-bedrooms, two-bedrooms, and three-bedrooms, with 13 units set aside as affordable housing units. Up to 5,730 square feet of retail space, up to 1,750 square feet of ground-floor lobby/leasing space, up to 17,010 square feet of rooftop pool/community recreation, and up to 190,000 square feet of parking are included as part of the proposed project. The first floor of the proposed building would include a mix of retail, residential, public seating areas, and a main lobby/leasing office. Floors two through six include residential units, parking, and related residential amenities. The roof deck of the parking structure would include a pool and recreation facilities such as a gym and clubhouse for use by residents and their guests only. Implementation of the proposed project would require a General Plan amendment, zone code amendment, zone reclassification, conditional use permit, and approval of a Specific Plan.

9. Surrounding Land Uses and Setting:

The project site is primarily surrounded by commercial and residential uses. The commercial properties immediately bordering the project site to the east and west are zoned General Commercial, and the commercial uses across Washington Boulevard are zoned Specific Plan. The Pico Rivera Marketplace has a general plan land use designation of Commercial, and the commercial uses to the west of the project site along Washington Boulevard have a general plan land use designation of Mixed-Use/Housing Element Site Opportunity Area 8. Commercial uses to the south of the project site have a general plan land use designation of Specific Plan. The single-family neighborhood to the northwest is zoned Single-Family Residential (S-F) with a general plan land use designation of Low Density Residential.

10. Other Public Agencies Whose Approval Is Required (e.g., permits, financing approval, or participating agreement):

- Los Angeles Regional Water Quality Control Board (NPDES permit; construction stormwater runoff permits, Storm Drain MS4 Permit)
- South Coast Air Quality Management District – Rule 201: Permit to construct
- Los Angeles County Fire Department (for emergency site access review)
- City of Pico Rivera Public Works/Engineering (for grading permit)

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.94 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

The city of Pico Rivera invited California Native American tribes that are traditionally and culturally affiliated with the project area to consult on the proposed project via email and certified mail. Seven tribes were contacted consistent with Assembly Bill (AB) 52 and Senate Bill (SB) 18. The letters were sent to six tribes on May 14, 2021, and the letter was sent to Soboba Band of Luiseno Indians on June 17, 2021. The City received one request to consult from the Gabrieleño Band of Mission Indians – Kizh Nation. The tribe was subsequently contacted by City staff within 30 days of the request. The City held a consultation call with the Gabrieleño Band of Mission – Kizh Nation on March 15, 2022. The City also received a response from the Soboba Band of Luiseno Indians, which recommended that the City contact the Gabrieleño/Tongva San Gabriel Band of Mission Indians. The Gabrieleño/Tongva San Gabrieleño Band of Mission Indians was on the list provided by Native American Heritage Commission (NAHC) and received a tribal consultation letter. No response was received from this tribe. The City followed up with all tribes on NAHC list and did not receive additional responses as of June 9, 2022.

2. Environmental Checklist

2.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture / Forestry Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☐ Geology/Soils	☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials
☐ Hydrology/Water Quality	☐ Land Use / Planning	☐ Mineral Resources
☒ Noise	☐ Population / Housing	☐ Public Services
☐ Recreation	☐ Transportation	☒ Tribal Cultural Resources
☐ Utilities / Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance

2.3 DETERMINATION (TO BE COMPLETED BY THE LEAD AGENCY)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	*Date*

2.4 EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) **Earlier Analyses Used.** Identify and state where they are available for review.

   b) I**mpacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) **Mitigation Measures.** For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

2. Environmental Checklist

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	
II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
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?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) 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?				X
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) 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?		X		
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	
IV. BIOLOGICAL RESOURCES. Would the project:				
a) 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?				X
b) 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?				X
c) 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?				X
d) 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?		X		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		X		
c) Disturb any human remains, including those interred outside of dedicated cemeteries?		X		

2. Environmental Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. ENERGY. Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X
VII. GEOLOGY AND SOILS. Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
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.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) 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?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	
VIII. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	
IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project 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, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				X
X. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) 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;			X	
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			X	
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; or			X	
iv) impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				X
XI. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X	

2. Environmental Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?				X
b) 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?				X
XIII. NOISE. Would the project result in:				
a) Generation of 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?		X		
b) Generation of excessive groundborne vibration or groundborne noise levels?		X		
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?				X
XIV. POPULATION AND HOUSING. Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X
XV. PUBLIC SERVICES. Would the project:				
a) 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 any of the public services:				
Fire protection?			X	
Police protection?			X	
Schools?			X	
Parks?			X	
Other public facilities?			X	
XVI. RECREATION.				
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?			X	

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	
XVII. TRANSPORTATION. Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?			X	
XVIII. TRIBAL CULTURAL RESOURCES.				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or				X
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X		
XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the waste water 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?			X	

2. Environmental Checklist

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) 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?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	
XX. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
b) 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?				X
c) 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?				X
d) 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?				X
XXI. MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X	
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

3. Environmental Analysis

Section 2.4 provided a checklist of environmental impacts. This section provides an evaluation of the impact categories and questions contained in the checklist and identifies mitigation measures, if applicable.

3.1 AESTHETICS

Except as provided in California Public Resources Code Section 21099, would the project:

a) Have a substantial adverse effect on a scenic vista?

No Impact. A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape feature (e.g., a mountain range, lake, or coastline) or of a significant historic or architectural feature (e.g., views of a historic structure). The project site is in the central part of the city of Pico Rivera, surrounded by the Pico Rivera Marketplace to the north and east; a single-family residential neighborhood to the northwest; and commercial uses to the west and south across Washington Boulevard.

The project site and surrounding area lack significant topography and are developed with urban land uses. It had been previously developed with a commercial building that operated as a nightclub and was subsequently demolished. The project site is currently developed with just hard surfaces and landscaping. The proposed project would have a maximum building height of 70 feet above grade at the top of the sixth floor. The building height would be stepped down to three stories at the northwest corner of the project site, near the residential community. There are no protected or designated scenic vistas or views in the project vicinity, and the proposed project would not obscure any scenic vistas. Therefore, no impact would occur.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. According to the California Department of Transportation (Caltrans), State Route (SR) 57 between SR-90 and SR-60, which is located approximately 13 miles east of the project site, is considered an eligible state scenic highway from Post Mile (PM) 19.9 to R4.5 (Caltrans 2021). SR-91, approximately 16 miles east of the project site, is the closest officially designated state scenic highway to the project site (ibid). Since the proposed project is not located within these scenic highways, implementation of the proposed project would not damage scenic resources located within or near any state scenic highway. Therefore, no impact would occur.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

3. Environmental Analysis

Less Than Significant Impact. The project site is in an urbanized area (as defined by California Public Resources Code [PRC] Section 21071(a)(2))[1] and in the central portion of the city of Pico Rivera. The project site is currently zoned General Commercial (C-G) with a general plan land use designation of Mixed-Use/Housing Element Site Opportunity Area 8 (the Rosemead Boulevard and Washington Boulevard Opportunity Area) (Pico Rivera 2014). The project site is primarily surrounded by commercial and residential uses, including the Pico Rivera Marketplace, which has a general plan land use designation of Commercial, and commercial uses to the west of the project site along Washington Boulevard, which have a general plan land use designation of Mixed-Use/Housing Element Site Opportunity Area 8. Commercial uses to the south of the project site have a general plan land use designation of Specific Plan (Pico Rivera 2014), and the single-family neighborhood to the northwest is zoned Single-Family Residential (S-F) with a general plan land use designation of Low-Density Residential (Pico Rivera 2021, 2014).

The proposed project would require a change to the current zoning designation of General Commercial (GC) to Specific Plan (SP), as well as a zone code amendment to add SP for this area to the Zoning Map. Additionally, the proposed project would change the current general plan land use designations of Mixed-Use/Housing Element Site Opportunity Area 8 to SP. The proposed project would also incorporate landscape and lighting guidelines that would support the aesthetics of the development. The project site is vacant and disturbed with largely impervious surfaces and fenced from public access; the proposed project would allow for a well-designed and aesthetically pleasing mixed-use building and landscaped areas that would activate the project site and contribute to the surrounding uses.

Further, the proposed project would be consistent with relevant goals and policies included in the Land Use Element of the City's General Plan, such as Policy 3.8-4, which promotes high-quality mixed-use development that is compatible with surrounding uses and enhances adjacent streetscapes, and Policy 3.8-7, which requires screening, setback, or buffering from projects adjacent to residential neighborhoods (Pico Rivera 2014). Implementation of the proposed project would result in a mixed-use building that would integrate with the surrounding community and would not change the scenic quality of the currently urbanized area. The proposed project would be taller than current buildings in the area but would provide building setbacks, privacy block wall and hedges along residential neighborhood. Specifically, the proposed project would step down to three stories on the northwest corner near the residential community.

Therefore, the proposed project would not conflict with applicable zoning and other regulations governing scenic quality. Impacts to the scenic quality would be less than significant.

d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Less Than Significant Impact. The two major causes of light pollution in any urban setting are spill light and glare. Spill light is caused by misdirected light that illuminates areas outside the area intended to be lit. The adjacent commercial areas to the proposed project generate nighttime light from security and parking lot lights,

[1] PRC Section 21071(a)(2) defines urbanized area as an incorporated city has a population of less than 100,000 persons if the population of that city and not more than two contiguous incorporated cities combined equals at least 100,000 persons. The population of Pico Rivera (60,088 persons) along with the city of Downey (114,355 persons), which borders the city to the south, have a combined population of 174,443 persons (U.S. Census 2020). Thus, Pico Rivera meets the definition of an urbanized area.

building lights (interior and exterior), streetlights, and vehicle lights. Additionally, light sources in the residential neighborhood to the northwest include street lights, lighting emanating from windows, outdoor residential lighting, and vehicles traveling on surface streets. Glare can occur when a bright object or light source reflects off of a reflective/light-colored surface. Existing sources of glare include light-colored building materials, parked vehicles on surface parking lots and traveling on public rights-of-way.

The proposed project is in an urbanized area and would include light sources that are typical of an urbanized area, and it would not introduce any high-intensity lighting such as is used for athletic fields or nighttime sports activity. The proposed project would have nighttime lights for the safety and security (such as such as lighting along walkways, and in the surface parking lot), as well as tree accent lighting and light emitting diode (LED) step lights. Buildout of the proposed project would be consistent with the SP, which has a primary goal of preventing light spill to the residential neighborhood (zero foot-candles). Landscaping and a wall along the northwest corner of the project site, adjacent to the residential neighborhood, would prevent light spilling onto the residential neighborhood (see Figures 9, *Wall and Screening Concept*, and 10, *Landscape Concept)*. The proposed project would not therefore significantly increase nighttime lighting from what currently exists at the site.

The project site is in an urbanized area and would have surfaces that are typical of an urbanized area. The proposed project's architectural design would include non-reflective surfaces, such as manufactured stone veneer, cement plaster, and cementitious vertical siding, which would reduce the amount of glare from the proposed development. Landscaping throughout the project site would further reduce glare.

The proposed project would not introduce lighting nor reflective surfaces at substantially greater intensities than existing lights and buildings near the site. The proposed project would not result in a new source of substantial light or glare and would not impact daytime nor nighttime views. Therefore, light and glare impacts would be less than significant.

3.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation (DOC) as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection (CAL FIRE) regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

3. Environmental Analysis

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?

No Impact. The project site is located within a commercial area and is surrounded by commercial and residential areas in the city of Pico Rivera. The project site and surrounding area are void of agricultural uses. DOC's Farmland Mapping and Monitoring Program (FMMP) maps California's agricultural resources and determines the suitability of land throughout the state for agriculture purposes. The DOC produces these maps on a statewide level and by county. The DOC's FMMP map for Los Angeles County identifies the project site as "Urban and Built-Up Land" (DOC 2021).

The project site is currently zoned General Commercial (C-G) with a general plan land use designation of Mixed-Use/Housing Element Site Opportunity Area 8 (the Rosemead Boulevard and Washington Boulevard Opportunity Area) (Pico Rivera 2014). It is not zoned or used for agriculture. Therefore, development on the project site would not convert prime farmland, unique farmland, or farmland of statewide importance to a non-agricultural use and no impact would occur.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The project site was previously developed with a commercial building that operated as a nightclub until March 2015 and was subsequently demolished in 2020. The project site is currently vacant, paved, and contains ornamental landscaping, including palm trees. The project site is currently zoned General Commercial (C-G) with a general plan land use designation of Mixed-Use/Housing Element Site Opportunity Area 8 (the Rosemead Boulevard and Washington Boulevard Opportunity Area) (Pico Rivera 2014). Therefore, the proposed project would not conflict with an existing zone for agricultural use or conflict with a Williamson Act contract. No impact would occur.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. The City of Pico Rivera is an urban developed city and there are no forest lands or timberland in the city limits. The project site is currently zoned General Commercial (C-G) and is not zoned for, nor used as forest land or timberland (Pico Rivera 2014). The proposed project would not conflict with existing zoning or cause the rezoning of forest land or timberland. Therefore, no impact would occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The project site is located within commercial and residential area in the city of Pico Rivera. The project site is currently vacant, does not contain forest land, and development of the proposed project would not result in the loss of forest land or the conversion of forest land to non-forest use. No impact would occur.

e) 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?

No Impact. The proposed project includes the development of commercial and residential uses in an urban area. Though the project site is currently vacant, it is located in an area completely developed for commercial and residential uses, and there are no farmland and forest land in and around the project site. The FMMP characterizes the project site as "Urban and Built-Up Land." The development of the proposed project would not result in the conversion of farmland to non-agricultural uses nor the conversion of forest land to non-forest uses. No impact would occur.

3.3 AIR QUALITY

The Air Quality section addresses the impacts of the proposed project on ambient air quality and the exposure of people, especially sensitive individuals, to unhealthful pollutant concentrations. A background discussion on the air quality regulatory setting, meteorological conditions, existing ambient air quality in the vicinity of the project site, and air quality modeling can be found in Appendix A.

The primary air pollutants of concern for which ambient air quality standards (AAQS) have been established are ozone (O3), carbon monoxide (CO), coarse inhalable particulate matter (PM10), fine inhalable particulate matter (PM2.5), sulfur dioxide (SO2), nitrogen dioxide (NO2), and lead (Pb). Areas are classified under the federal and California Clean Air Act as either in "attainment" or "nonattainment" for each criteria pollutant based on whether the AAQS have been achieved. The South Coast Air Basin (SoCAB), which is managed by the South Coast Air Quality Management District (South Coast AQMD), is designated nonattainment for O3, and PM2.5 under the California and National AAQS, nonattainment for PM10 under the California AAQS, and nonattainment for lead (Los Angeles County only) under the National AAQS (CARB 2021).

Furthermore, the South Coast AQMD has identified regional thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors, including VOC, CO, NOx, sulfur oxide (SOx), PM10, and PM2.5. Development projects below the regional significance thresholds are not expected to generate sufficient criteria pollutant emissions to violate any air quality standard or contribute substantially to an existing or projected air quality violation. Where available, the significance criteria established by the South Coast AQMD may be relied upon to make the following determinations.

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The South Coast AQMD adopted the 2016 Air Quality Management Plan (AQMP) on March 3, 2017. Regional growth projections are used by South Coast AQMD to forecast future emission levels in the SoCAB. For southern California, these regional growth projections are provided by the Southern California Association of Governments (SCAG) and are partially based on land use designations included in city/county general plans. Typically, only large, regionally significant projects have the potential to affect regional growth projections. In addition, the consistency analysis is generally only required in connection

with the adoption of general plans, specific plans, and significant projects. As the proposed project is not a regionally significant project, a consistency analysis is not required.

Changes in population, housing, or employment growth projections have the potential to affect SCAG's demographic projections and therefore the assumptions in South Coast AQMD's AQMP. The project would result in 255 residential units. As discussed in Section 3.14, *Population and Housing*, the proposed project's population growth would be within SCAG's forecast growth projections for the city. Additionally, as demonstrated below in Section 3.3(b), the regional emissions of the proposed project would be less than the South Coast AQMD emissions thresholds under the construction (with mitigation measures) and the operational phases. Therefore, it would not be considered by South Coast AQMD to be a substantial source of air pollutant emissions that would have the potential to affect the attainment designations in the SoCAB. Therefore, the proposed project would not affect the regional emissions inventory or conflict with strategies in the AQMP. Impacts would be less than significant.

b) 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?

Less Than Significant Impact with Mitigation Incorporated. The following describes project-related impacts from regional short-term construction activities and regional long-term operation of the proposed project. As discussed above, the SoCAB, which is managed by the South Coast AQMD, is designated nonattainment for O_3, and PM2.5 under the California and National AAQS, nonattainment for PM10 under the California AAQS, and nonattainment for lead (Los Angeles County only) under the National AAQS (CARB 2021).

Regional Short-Term Construction Impacts

Construction activities would result in the generation of air pollutants. These emissions would primarily be 1) exhaust from off-road diesel-powered construction equipment; 2) dust generated by construction activities; 3) exhaust from on-road vehicles; and 4) off-gassing of volatile organic compounds (VOCs) from paints and asphalt.

Construction activities for the mixed-use proposed project development are anticipated to disturb 2.85 acres on the project site. The project site currently consists of paved surfaces (no structures) and contains ornamental landscaping. The project would involve asphalt demolition and debris haul, site preparation, rough and fine grading and grading soil haul, utilities trenching, paving, building construction, and architectural coating. Construction is anticipated to occur over 23 months. Construction emissions were estimated using the California Emissions Estimator Model (CalEEMod), Version 2020.4, and are based on the preliminary construction duration and equipment mix provided by the project applicant. Construction emissions modeling are shown in Table 5, *Maximum Daily Regional Construction Emissions*, and shows maximum daily emissions for NOx, CO, SO2, PM10, and PM2.5 from construction-related activities would be less than their respective South Coast AQMD regional significance threshold values. However, construction-related VOC emissions generated from paints used in architectural coating of the new structures on the project site would exceed the South Coast AQMD regional significance threshold for VOC. Impacts therefore have the potential to be significant without the implementation of mitigation measures. However, as shown in Table 6, *Maximum Daily Regional Construction*

Emissions with Mitigation Incorporated, implementation of Mitigation Measures AQ-1 would reduce construction-related emissions to below the significance thresholds by requiring use of 0 VOC-content paints for building interior coating. Therefore, air quality impacts from project-related construction activities would be less than significant with incorporation of mitigation.

Table 5 Maximum Daily Regional Construction Emissions

Construction Phase	Pollutants (lb/day)[1, 2]					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Year 2022						
Asphalt Demolition	2	17	15	<1	1	1
Asphalt Demolition and Debris Haul	2	23	16	<1	5	2
Site Preparation	2	17	10	<1	1	1
Rough Grading	3	30	21	<1	5	3
Rough Grading and Soil Haul	3	44	24	<1	6	3
Utilities Trenching	1	8	7	<1	1	<1
Utilities Trenching, Fine Grading and Soil Haul, and Building Construction 2022	4	51	32	<1	5	2
Utilities Trenching and Building Construction 2022	3	23	23	<1	2	1
Building Construction 2022	2	15	17	<1	1	1
Year 2023						
Building Construction 2023	2	14	16	<1	1	1
Building Construction 2023 and Paving	3	23	29	<1	2	1
Building Construction 2023 and Architectural Coating	**144**	15	19	<1	1	1
Maximum Daily Construction Emissions						
Maximum Daily Emissions	**144**	51	32	<1	6	3
South Coast AQMD Regional Construction Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Significant?	**Yes**	No	No	No	No	No

Source: CalEEMod Version 2020.4.

[1] Based on the preliminary information provided by the project applicant. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast AQMD of construction equipment.

[2] Includes implementation of fugitive dust control measures required by South Coast AQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186–compliant sweepers.

Mitigation Measures

Construction

AQ-1 The construction contractor(s) shall only use interior paints with a VOC (volatile organic compound) content of 0 grams per liter (g/L) to reduce VOC emissions. All building and site plans shall note use of paints with a VOC content of 0 g/L. Prior to construction, the construction contractor(s) shall ensure that all construction plans submitted to the City's Building Division clearly show the requirement for use on interior paint with a VOC content of 0 g/L for the specified buildings, herein.

Table 6 Maximum Daily Regional Construction Emissions with Mitigation Incorporated

Construction Phase	Pollutants (lb/day)[1, 2,3]					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Year 2022						
Asphalt Demolition	2	17	15	<1	1	1
Asphalt Demolition and Debris Haul	2	23	16	<1	5	2
Site Preparation	2	17	10	<1	1	1
Rough Grading	3	30	21	<1	5	3
Rough Grading and Soil Haul	3	44	24	<1	6	3
Utilities Trenching	1	8	7	<1	1	<1
Utilities Trenching, Fine Grading and Soil Haul, and Building Construction 2022	4	51	32	<1	5	2
Utilities Trenching and Building Construction 2022	3	23	24	<1	2	1
Building Construction 2022	2	15	17	<1	1	1
Year 2023						
Building Construction 2023	2	14	16	<1	1	1
Building Construction 2023 and Paving	3	23	29	<1	2	1
Building Construction 2023 and Architectural Coating	**40**	15	20	<1	2	1
Maximum Daily Construction Emissions						
Maximum Daily Emissions	**40**	51	32	<1	6	3
South Coast AQMD Regional Construction Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Significant?	**No**	No	No	No	No	No

Source: CalEEMod Version 2020.4.

[1] Based on the preliminary information provided by the project applicant. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast AQMD of construction equipment.

[2] Includes implementation of fugitive dust control measures required by South Coast AQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186–compliant sweepers.

[3] Includes implementation of Mitigation Measure AQ-1, which would require use of paints with 0 VOC content for building interior coating activities.

Long-Term Operation-Related Air Quality Impact

Typical long-term air pollutant emissions are generated by area sources (e.g., landscape fuel use, aerosols, architectural coatings, and asphalt pavement), energy use (natural gas), and mobile sources (i.e., on-road vehicles). The proposed project would result in the development of 255 residential units and 5,730 square feet of retail space on the project site. The proposed buildings would, at minimum, be designed and built to meet the 2019 Building Energy Efficiency Standards (Title 24, Part 6, of the California Code of Regulations [CCR]) and the 2019 California Green Building Standards Code (CALGreen) (Title 24, Part 11, of the CCR). As shown in Table 7, *Maximum Daily Regional Operation Emissions*, it is anticipated that operation of the proposed project would result in overall minimal emissions and would not exceed the South Coast AQMD regional operation-phase significance thresholds. Impacts to the regional air quality associated with operation of the project would be less than significant.

Table 7 Maximum Daily Regional Operation Emissions

Source	Maximum Daily Emissions (lbs/Day)					
	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Max Daily Emissions						
Area[1]	7	<1	21	<1	<1	<1
Energy	<1	1	1	<1	<1	<1
Mobile	5	4	54	<1	12	3
Total	**13**	**6**	**76**	**<1**	**12**	**3**
South Coast AQMD Regional Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	No	No	No	No	No	No

Source: CalEEMod Version 2020.4.
Notes: lbs: Pounds. Highest winter or summer emissions are reported.
[1] Operational model does not consider annual interior or exterior painting of the parking structure but does consider annual striping of the parking stalls.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. The proposed project could expose sensitive receptors to elevated pollutant concentrations if it causes or significantly contributes to elevated pollutant concentration levels. Unlike regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects.

Construction LSTs

Localized significance thresholds (LSTs) are based on the California AAQS, which are the most stringent AAQS that provide a margin of safety in the protection of public health and welfare. They are designated to protect sensitive receptors most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and people engaged in strenuous work or exercise. The screening-level construction LSTs are based on the size of a project site, distance to the nearest sensitive receptor, and Source Receptor Area (SRA). The nearest offsite sensitive receptors are the residences along Goodbee Street and Birchleaf Avenue to the northwest of the project site which is located within SRA 5 – Southeast LA County.

Air pollutant emissions generated by construction activities would cause temporary increases in air pollutant concentrations. Table 8, *Localized Construction Emissions*, shows that the maximum daily construction emissions (pounds per day) for NOx, CO, PM10, and PM2.5 construction emissions would be less than their respective South Coast AQMD screening-level LSTs. Therefore, air quality impacts from project-related construction activities would be less than significant.

3. Environmental Analysis

Table 8 Localized Construction Emissions

Construction Activity	Pollutants(lbs/day)[1]			
	NO_X	CO	PM_{10}[2]	$PM_{2.5}$[2]
South Coast AQMD ≤1.00 Acre LST	80	571	4.00	3.00
Utilities Trenching	8	6	0.32	0.30
Utilities Trenching and Building Construction 2022	22	20	1.02	0.97
Building Construction 2022	15	14	0.70	0.67
Building Construction 2023	14	14	0.61	0.59
Building Construction 2023 and Paving	22	26	1.05	0.99
Building Construction 2024 and Architectural Coating	15	16	0.68	0.66
Exceeds LST?	No	No	No	No
South Coast AQMD 1.38 Acre LST	93	680	5.12	3.37
Utilities Trenching, Fine Grading and Soil Haul, and Building Construction 2022	26	23	1.21	1.11
Exceeds LST?	No	No	No	No
South Coast AQMD 1.94-Acre LSTs	112	843	6.81	3.94
Site Preparation	16	10	1.28	0.63
Exceeds LST?	No	No	No	No
South Coast AQMD 2.00 Acre LST	114	861	7.00	4.00
Asphalt Demolition	17	14	0.84	0.78
Asphalt Demolition and Debris Haul	23	15	4.82	1.49
Exceeds LST?	No	No	No	No
South Coast AQMD 2.85-Acre LSTs	130	1,036	8.98	4.85
Rough Grading	29	20	4.71	2.64
Rough Grading and Soil Haul	29	20	4.74	2.64
Exceeds LST?	No	No	No	No

Source: CalEEMod Version 2020.4. South Coast AQMD 2008 and 2011.
Notes: In accordance with South Coast AQMD methodology, only onsite stationary sources and mobile equipment are included in the analysis. Screening level LSTs are based on an 82 ft receptor in SRA 5.
[1] Where specific information for project-related construction activities or processes was not available modeling was based on CalEEMod defaults. These defaults are based on construction surveys conducted by the South Coast AQMD.
[2] Includes fugitive dust control measures required by South Coast AQMD under Rule 403, such as watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186–compliant sweepers.

Construction Health Risk

Emissions from construction equipment primarily consist of diesel particulate matter (DPM). In 2015, the Office of Environmental Health Hazards Assessment (OEHHA) adopted guidance for preparation of health risk assessments, which included the development of a cancer risk factor and non-cancer chronic reference exposure level for DPM over a 30-year time frame (OEHHA 2015). Currently, South Coast AQMD does not require the evaluation of long-term excess cancer risk or chronic health impacts for a short-term construction project. The proposed project's construction period is anticipated to be completed in approximately 23 months, which would limit the exposure of adjacent sensitive receptors to construction emissions. Project construction would comply with required health and safety standards and construction best practices. Furthermore,

construction activities would not generate onsite exhaust emissions that would exceed the screening-level construction LSTs, as shown in Table 8, above. Thus, construction emissions would not pose a health risk to onsite and offsite receptors, and project-related construction health impacts would be less than significant.

Operation LSTs

Operation of the proposed project would not generate substantial emissions from onsite stationary sources. Land uses that have the potential to generate substantial stationary sources of emissions include industrial land uses, such as chemical processing and warehousing operations where truck idling would occur onsite and would require a permit from South Coast AQMD. The proposed project does not fall within these categories of uses. While operation of the proposed project would use standard onsite mechanical equipment such as heating, ventilation, and air conditioning, air pollutant emissions would be nominal. Localized air quality impacts related to operation-related emissions would be less than significant.

Carbon Monoxide (CO) Hotspots

Vehicle congestion has the potential to create pockets of CO, known as hotspots. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles are backed-up and idle for longer periods and are subject to reduced speeds. These pockets could exceed the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9.0 ppm for CO. Since CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations.

The SoCAB has been designated attainment under both the National and California AAQS for CO. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—in order to generate a significant CO impact (BAAQMD 2017). The project-related 139 PM peak hour vehicle trips would be minimal compared to the AAQS screening levels. The project would not substantially increase CO hotspots at intersections and impacts would be less than significant.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact. The proposed project would not result in objectionable odors. The threshold for odor is if a project creates an odor nuisance pursuant to South Coast AQMD Rule 402, Nuisance, which states:

> A person shall not 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. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. The proposed project involves construction of a mixed-use residential and retail development and would not result in objectionable odors land uses. Emissions from construction equipment, such as diesel exhaust and volatile organic compounds from architectural coatings and paving activities may generate odors. However, these odors would be low in concentration, temporary, and would not affect a substantial number of people. Odor impacts would be less than significant.

3.4 BIOLOGICAL RESOURCES

Would the project:

a) 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?

No Impact. Special-status species include those listed as endangered or threatened under the federal Endangered Species Act or California Endangered Species Act, species otherwise given certain designations by the California Department of Fish and Wildlife, and plant species listed as rare by the California Native Plant Society. The project site is in a highly urbanized area of the city of Pico Rivera and surrounded by various commercial and residential uses. The project site is currently vacant, fenced off with no public access, largely developed with impervious surfaces, and does not contain any natural habitat that could contain any sensitive species or other sensitive natural community. There are non-native mature palm trees located on-site, which would be removed by the project. However, these trees are unlikely to support candidate, sensitive, or special-status species (see also Section 3.4(d) regarding migratory species). Considering the prior development on-site, the surrounding urbanized context, and current site conditions, the project site does not have capacity to support any candidate, sensitive, or special-status species. Therefore, no impacts related to special-status species would occur.

b) 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?

No Impact. The project site is a vacant paved lot that was formerly developed with commercial uses. The project site does not contain any riparian habitat or other sensitive natural community, and no watercourse runs through or adjacent to the project site. No riparian habitat exists on-site (USFWS 2021a). Therefore, no impacts to riparian or other sensitive natural communities would occur.

c) 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?

No Impact. As discussed in Section 3.4(a) previously, the project site is a vacant lot with no above-grade structures. No watercourse runs through or adjacent to the project site. No wetland habitat exists on site (USFWS 2021a). Therefore, no impact would occur.

d) 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?

Less Than Significant With Mitigation Incorporated. The project site is in an urbanized area of the city of Pico Rivera. The project site is in an area that is completely developed with commercial and residential uses. No critical habitat exists on the project site nor surrounding the project site (USFWS 2021b).

The project site contains several ornamental non-native palm trees that could be used for nesting by common bird species. The proposed project would remove these ornamental trees which could have a potential impact to nesting birds. However, nesting birds are protected by the Migratory Bird Treaty Act (MBTA) which governs the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests (US Code, Title 16, Sections 703–712). The MBTA prohibits the take, possession, import, export, transport, sale, purchase, barter, or offering of these activities, except under a valid permit or as permitted in the implementing regulations. The United States Fish and Wildlife Service administers permits to take migratory birds in accordance with the MBTA.

Compliance with the existing California Department of Fish and Wildlife regulations and implementation of mitigation measure BIO-1 below would ensure that impacts remain less than significant to nesting and migratory birds.

Mitigation Measures

BIO-1 **Preconstruction Avian Survey.** If project construction-related activities take place during the nesting season (February through August), preconstruction surveys for nesting birds and raptors (birds of prey) within the existing trees onsite, which would be removed during construction, shall be conducted by a qualified biologist 14 days prior to the commencement of the tree removal or site grading activities. If any bird listed under the Migratory Bird Treaty Act is found to be nesting within the project site or within the area of construction-related activities, an adequate protective buffer zone shall be established by a qualified biologist to protect the nesting site. This buffer shall be a minimum of 75 feet from the project activities for passerine birds and a minimum of 200 feet for raptors. The distance shall be determined by a qualified biologist based on the site conditions (topography, if the nest is in a line of sight of the construction, and the sensitivity of the birds nesting). Additional protective measures shall include establishment of clearly delineated exclusion zones (i.e., demarcated by identifiable fencing, such as orange construction fencing or equivalent) around each nest

location as determined by a qualified biologist, taking into account the species of birds nesting, their tolerance for disturbance, and proximity to existing development. The nest site(s) shall be monitored by a qualified biologist periodically to see if the birds are stressed by the construction activities and if the protective buffer needs to be increased. Once the young have fledged and are flying well enough to avoid project construction zones (typically by August), the project can proceed without further regard to the nest site(s).

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. There are no local biological-related policies or ordinances, such as a tree preservation policy or ordinance that is applicable to the project. The project site contains ornamental palm trees that would be removed and replaced with City-approved landscaping. The proposed project would not conflict with local polices or ordinances; therefore, no impact would occur.

f) Conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or state Habitat Conservation Plan?

No Impact. The project site is within an urban and developed area. The project site is not within the area of an adopted Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or state Habitat Conservation Plan (CDFW 2022). The proposed project would not affect the Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or state Habitat Conservation Plan and therefore no impact would occur.

3.5 CULTURAL RESOURCES

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

No Impact. CEQA Guidelines Section 15064.5 defines historic resources as resources listed, or determined to be eligible for listing, by the State Historical Resources Commission, a local register of historical resources, or the lead agency. Generally, a resource is considered "historically significant" if it meets one of the following criteria:

i) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

ii) Is associated with the lives of persons important in our past;

iii) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values;

iv) Has yielded, or may be likely to yield, information important in prehistory or history.

The project site is a currently vacant commercial property and not located within a national or historic district in the city of Pico Rivera. The California Register of Historical Resources nor the National Register of Historic Places lists do not include the project site (OHP 2022; NPS 2022). The Phase I Environmental Site Assessment (see Appendix C) shows that the site was formerly agriculturally developed from as early as 1928; undeveloped between 1953 to 1956; and developed with a commercial building in 1957 until 2019. No buildings currently exist onsite. Therefore, no impact to historic resources would occur.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Less Than Significant Impact with Mitigation Incorporated. The Phase I Environmental Site Assessment shows that the site has been previously disturbed by construction of the previous commercial facility in 1957 (Partner 2019, see Appendix C). The Geotechnical Investigation determined that artificial fill material underlies the project site since the project site was previously graded for the existing conditions (Salem 2020, see Appendix B). The Geotechnical Study found that deeper native soils extend to the termination of the maximum boring depth of 51.5 feet below grade, but verification of the extent of fill and native soils would be determined during site grading for the proposed project. Additionally, the project site is within a highly developed area with many past disturbances and grading. However, new ground-disturbing activities could have the potential to uncover previously unknown archaeological resources, and therefore, could result in a potentially significant impact. Implementation of Mitigation Measure CUL-1 would ensure that if resources are discovered during ground disturbing activities, that resources would be recovered in accordance with state and federal requirements. In the event that archaeological resources are discovered, a halt-work condition would be implemented, and a qualified archaeologist would be retained to assess such findings. Implementation of Mitigation Measure CUL-1 would reduce impacts to archaeological resources to a less than significant level.

Mitigation Measures

CUL-1 Prior to issuance of grading permits, a qualified archaeological monitor shall be identified to be on call during ground-disturbing activities. If archeological resources are discovered during excavation and/or construction activities, construction shall stop within 25 feet of the find, and the qualified archaeologist shall be consulted to determine whether the resource requires further study. The archaeologist shall make recommendations to the applicant to protect the discovered resources. Archaeological resources recovered shall be provided to the South Central Coast Information Center (SCCIC) and Los Angeles Natural History Museum, or any other local museum or repository willing and able to accept and house the resource to preserve for future scientific study.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Less Than Significant Impact with Mitigation Incorporated. There are no known human remains or cemeteries on the project site or adjoining properties. As described previously, the project site has been developed with a commercial building since 1957. The project site had been previously disturbed with the construction of the commercial building and the surrounding land uses are fully developed; the likelihood that human remains would be discovered during site clearing and grading activities is low. Nonetheless, due to

ground-disturbing activities, there could be a potential for discovering unknown human remains which could result in a potentially significant impact.

In the unlikely event that the project applicant discovers human remains during ground-disturbing activities, California Health and Safety Code Section 7050.5 requires that disturbance of the site shall remain halted. The County Coroner shall investigate the circumstances, manner, and cause of any death and recommend the treatment and disposition of the human remains to the person responsible for the excavation or to his or her authorized representative, in the manner provided in Section 5097.98 of the California Public Resources Code. The coroner is required to determine within two working days of notification of the discovery of the human remains. If the coroner determines that the remains are not subject to his or her authority or has reason to believe the human remains to be those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC) so that NAHC can contact the "most likely descendant." The most likely descendant shall receive access to the discovery and will provide recommendations or preferences for treatment of the remains within 48 hours of accessing the discovery site. Disposition of human remains and any associated grave goods, if encountered, shall be treated in accordance with procedures and requirements set forth in Sections 5097.94 and 5097.98 of the Public Resources Code; Section 7050.5 of the California Health and Safety Code; and CEQA Guidelines Section 15064.5. In addition, the proposed project would implement mitigation measures TCR-2 and TCR-3, which are included in Section 3.18, *Tribal Cultural Resources*, below.

Compliance with existing law and mitigation measures TCR-2 and TCR-3 regarding the discovery of human remains would reduce potential impacts to human remains to a less than significant level.

3.6 ENERGY

Would the project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than Significant Impact. Construction of the proposed project would create temporary increased demands for electricity and vehicle fuels compared to existing conditions and would result in short-term transportation-related energy use.

Electrical Energy

Electricity use during construction of the proposed project would vary during different phases of construction. The majority of construction equipment during grading would be gas- or diesel-powered, and electricity would not be used to power most of the construction equipment. Later construction phases could result in the use of electric-powered equipment for interior construction and architectural coatings. However, it is anticipated that the majority of electric-powered construction equipment would be hand tools (e.g., power drills, table saws) and lighting, which would result in minimal electricity usage during construction activities. Therefore, project-related construction activities would not result in wasteful or unnecessary electricity demands, and impacts would be less than significant.

Natural Gas Energy

It is not anticipated that construction equipment used for the proposed project would be powered by natural gas, and no natural gas demand is anticipated during construction. Therefore, no impact would occur with respect to natural gas usage.

Transportation Energy

Transportation energy use depends on the type and number of trips, vehicle miles traveled, fuel efficiency of vehicles, and travel mode. Transportation energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel and/or gasoline. It is anticipated that the majority of off-road construction equipment, such as those used during demolition and grading, would be gas or diesel powered. Energy consumption during construction (2022 through 2023) was calculated using the CalEEMod (Version 2020.4) computer model and data from the EMFAC2017 (v. 1.0.3) and OFFROAD2017 (v. 1.0.1) databases. The results are shown in Table 9, *Construction-Related Fuel Usage*.

Table 9 Construction-Related Fuel Usage

	Gas		Diesel		Electricity	
Project Component	VMT	Gallons	VMT	Gallons	VMT	kWh
Construction Worker Commute	2,179,660	76,952	15,382	351	33,766	11,060
Construction Vendor Trips	16,457	3,240	185,993	22,594	0	0
Construction Truck Haul Trips	66	16	76,619	11,622	0	0
Construction Off-Road Equipment	N/A	18,757	N/A	49,537	N/A	0
Total	**2,196,183**	**98,966**	**277,995**	**84,105**	**33,766**	**11,060**

Source: CalEEMod Version 2020.4; EMFAC2017 v. 1.0.3; Under OFFROAD2017 v. 1.0.1.
Notes: VMT=vehicle miles traveled; kWh=kilowatt hour

The use of energy resources by vehicles and equipment would fluctuate according to the phase of construction and would be temporary (approximately 23 months). In addition, all construction equipment would cease operating upon completion of project construction. Thus, impacts related to transportation energy use during construction would be temporary and would not require expanded energy supplies or the construction of new infrastructure. Furthermore, to limit wasteful and unnecessary energy consumption, the construction contractors are anticipated to minimize nonessential idling of construction equipment during construction, in accordance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9. Construction trips would also not result in unnecessary use of energy since the project site is centrally located and is served by numerous regional freeway systems (e.g., I-605 and I-5) that provide the most direct routes from various areas of the region. Electrical energy would be available for use during construction from existing power lines and connections, precluding the use of less efficient generators. Thus, transportation energy use during construction of the project would not be considered inefficient, wasteful, or unnecessary. Impacts would be less than significant.

Long-Term Impacts During Operation

Operation of the proposed project would generate new demand for electricity, natural gas, and transportation energy on the project site. Operational use of energy would include heating, cooling, and ventilation of buildings; water heating; operation of electrical systems, use of on-site equipment and appliances; and indoor, outdoor, and perimeter lighting.

Electrical Energy

Operation of the proposed residential development and retail uses would consume electricity for various purposes, including but not limited to, heating, cooling, and ventilation of buildings, water heating, operation of electrical systems, lighting, and use of on-site equipment and appliances. Electrical service to the proposed project would be provided by Pico Rivera Innovative Municipal Energy (PRIME) through connections to existing off-site electrical lines and new on-site infrastructure. As shown in Table 10, *Electricity Consumption*, implementation of the proposed project would result in 2,176,599 kilowatt hours of electricity use per year.

Table 10 Electricity Consumption

Land Use	Electricity (kWh/year)
Proposed Project Conditions	
Apartments Mid Rise	981,584
Enclosed Parking with Elevator	1,033,600
High Turnover (Sit Down Restaurant)	123,969
Other Asphalt Surfaces	0
Other Non-Asphalt Surfaces	0
Recreational Swimming Pool	0
Regional Shopping Center	37,446
Total	2,176,599

Source: CalEEMod Version 2020.4
Note: kWh = kilowatt hour(s)

While the proposed project would result in a higher electricity demand than existing conditions, it would be consistent with the requirements of the Building Energy Efficiency Standards. Additionally, the proposed project would also be required to comply with CALGreen. Therefore, operation of the proposed project would not result in wasteful or unnecessary electricity demands and would not result in a significant impact related to electricity.

Natural Gas Energy

The potential natural gas consumption for the project site is shown in Table 11, *Natural Gas Consumption*. As shown in the table, implementation of the proposed project would generate an average natural gas demand of 4,052,705 kilo British thermal units per year, primarily due to natural gas use by the mixed-use development. While the proposed project would result in a higher natural gas demand than existing conditions, it would be consistent with the requirements of the Building Energy Efficiency Standards, including requirements for natural gas consumption, which would ensure that the proposed project would not result in wasteful or

unnecessary natural gas demands. Therefore, operation of the proposed project would result in less than significant impacts with respect to natural gas usage.

Table 11 Natural Gas Consumption

Land Use	Natural Gas (kBTU/year)
Proposed Project Conditions	
Apartments Mid Rise	3,388,140
Enclosed Parking with Elevator	0
High Turnover (Sit Down Restaurant)	659,895
Other Asphalt Surfaces	0
Other Non-Asphalt Surfaces	0
Recreational Swimming Pool	0
Regional Shopping Center	4,670
Total	4,052,705

Source: CalEEMod Version 2020.4
Note: kBTU = kilo British thermal units
[1] Residential natural gas consumption also includes 56,160 kBTU from operation of 3 barbecues grills. See Appendix A for calculations.

Transportation Energy

The proposed project would consume transportation energy during operations from the use of motor vehicles from the proposed residential and commercial uses onsite. The efficiency of these motor vehicles is unknown, such as the average miles per gallon. Estimates of transportation energy use are based on the overall vehicle miles traveled (VMT) and associated transportation energy use (see Table 12, *Project Annual Operation-Related Fuel Usage*). The project-related VMT would primarily come from the residents of the proposed development as well as visitors to the proposed retail establishment. The VMT for the proposed project is estimated to be 5,680,513 miles annually. However, because the proposed project involves development of new residential housing opportunities, it would provide more opportunities for potential new residents to reside in an urbanized area with nearby amenities and public transit options. These features of the proposed project have the potential to contribute to minimizing VMT and transportation-related fuel usage. Thus, it is expected that operation-related fuel usage associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than similar development projects. Therefore, impacts would be less than significant with respect to operation-related fuel usage.

Table 12 Project Annual Operation-Related Fuel Usage

	Gasoline		Diesel		CNG		Electricity	
	Annual VMT	Annual Gallons	Annual VMT	Annual Gallons	Annual VMT	Annual Gallons	Annual VMT	Annual kWh
Proposed Project	5,451,955	193,685	120,266	7,308	1,085	330	107,211	34,971

Source: CalEEMod Version 2020.4.; EMFAC2017 v. 1.0.3.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. The State's electricity grid is transitioning to renewable energy by 2045 under California's Renewable Energy Program. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. Electricity production from renewable sources is generally considered carbon neutral. Executive Order S-14-08, signed in November 2008, expanded the state's renewable portfolios standard (RPS) to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Senate Bill (SB) 350 (de Leon) was signed into law September 2015 and establishes tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

On September 10, 2018, Governor Brown signed SB 100, which supersedes the SB 350 requirements. Under SB 100, the RPS for publicly owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. Additionally, SB 100 established a new RPS requirement of 50 percent by 2026. The bill also established a State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under SB 100 the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

The Statewide RPS goal is not directly applicable to individual development projects, but to utilities and energy providers such as PRIME, which is the utility that would provide all of electricity needs for the proposed project. Compliance of PRIME in meeting the RPS goals would ensure the State meets its objective in transitioning to renewable energy. The proposed project also would comply with the latest 2019 Building Energy Efficiency Standards and CALGreen. Therefore, implementation of the proposed project would not conflict or obstruct plans for renewable energy and energy efficiency, and no impact would occur.

3.7 GEOLOGY AND SOILS

This section is based in part on the *Geotechnical Engineering Investigation, Proposed Mixed-Use Building, 8825 Washington Boulevard, City of Pico Rivera, California* (Geotechnical Investigation), July 31, 2020, prepared by Salem Engineering Group, Inc. (included as Appendix B).

Would the project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

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.

No Impact. The project site is not in a currently established Alquist-Priolo Earthquake Fault Zone for fault rupture hazard (Salem 2020). The Whittier Fault (southern extension) and the Puente Hills Fault are the nearest faults to the project site, and are located approximately 1.8 and 2 miles, respectively, from the project site (Salem 2020; Partner 2019). No active faults with the potential for surface fault rupture are known to pass directly beneath the site (Salem 2020). Since no known active faults exist onsite, surface rupture onsite would not occur. As such, no impact would occur.

ii) Strong seismic ground shaking?

Less Than Significant Impact. As stated previously, the project site is not located within an established Alquist-Priolo Earthquake Fault Zone. However, like all areas in southern California, movement associated with the active faults could cause strong ground motion at the project site. The degree of ground shaking and earthquake-induced damage is dependent on multiple factors, such as distances to causative faults, earthquake magnitudes, and expected ground accelerations. The closest active fault is Puente Hills Fault that is approximately 2 miles north (Salem 2020). Movement along this fault, or other regional faults, could result in seismic ground shaking on the project site. The proposed project would be required to comply with the seismic design parameters of the California Building Code (CBC), as included in the City of Pico Rivera Municipal Code Section 15.08, which regulates all building and construction projects within the city and implements a minimum standard for building design and construction that includes specific requirements for seismic safety, evacuation, foundations, retaining walls, and site demolition. The CDC would ensure that buildings on-site could withstand ground shaking. Therefore, a less than significant impact related to ground shaking would occur.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Liquefaction refers to loose, saturated sand or gravel deposits that lose their load capability when subjected to intense shaking. Primary factors that trigger liquefaction are moderate to strong ground shaking (seismic source), relatively clean and loose granular soils (primarily poorly graded sands and silty sands), and saturated soil conditions (shallow groundwater).

The State of California Seismic Hazard Zone Map, Whittier Quadrangle (March 1999) shows that the project site is within a liquefaction potential zone (Salem 2020). However, groundwater was not encountered during the geotechnical investigation in July 2020 at the maximum depth explored of 51.5 feet (Salem 2020). In addition, the Geotechnical Investigation included a liquefaction analysis that indicated that soils on-site have a low potential for liquefication under seismic conditions (Salem 2020). Additionally, as previously described in Section 3.7(a)(ii), the proposed project would be required to comply with the CBC and the City's Municipal Code. Therefore, potential impacts related to liquefication would be less than significant.

iv) Landslides?

No Impact. The project site is in a flat and developed area, and does not contain, nor is adjacent to, any slope or hillside. As such, the proposed project has no potential to result in or be in the path of landslides. Therefore, the project would not cause potential substantial adverse effects related to slope and instability or seismically induced landslides and no impact would occur.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. Soil erosion increases substantially by earth-moving activities if erosion-control measures are not used. The following is a discussion of the potential erosion impacts resulting from the proposed project's construction and operational phases.

Construction Phase

Construction of the proposed project would result in excavation and exposure of underlying soils that could result in soil erosion. Construction of the proposed project would involve earthwork, such as grading and excavating, and construction equipment and vehicle use that could track soil off-site. Additionally, natural processes, such as wind and rain, could further lead to soil erosion during construction. However, construction of the proposed project would be required to comply with local and state codes regulating construction activities and soil erosion.

Concerning State regulations, the proposed project would be required to obtain a Construction General Permit (CGP) issued by the State Water Resources Control Board (SWRCB). The CGP is a requirement that minimizes water pollution from construction activities, including erosion. Since the proposed project activities would occur on greater than 1 acre (2.85 acres total) of land, the proposed improvements at the project site would be subject to the National Pollution Discharge Elimination System (NPDES) permitting regulations, including the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The proposed project's construction contractor would be required to prepare and implement a SWPPP and associated best management practices (BMPs) in compliance with the CGP during grading and construction. Adherence with existing state and local laws regulating construction activities would minimize soil erosion from project-related construction activities. Therefore, soil erosion impacts from project construction would be less than significant.

Operation Phase

The proposed project includes a three to six-story mixed-use building with subterranean parking, green spaces, common space, and paved surfaces (such as roadways, driveways, and pedestrian paths). The proposed project would introduce pervious landscaping on the site and would include a storm drain system to collect, treat, and convey stormwater into the existing storm drain system in Washington Boulevard to the south of the project site. With the development of the proposed project, the project site would not contain exposed or bare soil that would have the potential for erosion. The proposed project also includes an on-site stormwater system that would collect all runoff from the site in underground storm drain systems that convey the stormwater runoff to a proposed retention and/or water quality treatment system(s) for infiltration and/or water quality treatment before discharging back to the public system. Any off-site surface flows that enter the site would be

bypassed through the proposed storm drain system or would sheet flow to existing cross gutters consistent with existing flow patterns. The onsite treatment system would be sized according to County low impact development requirements. With the incorporation of stormwater infrastructure onsite and pervious landscaping, operation of the proposed stormwater plan would reduce the potential for soil erosion. Therefore, potential impacts related to potential for soil erosion would be less than significant.

c) 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?

Less Than Significant Impact. As described previously, the project site is flat, and does not contain, nor is adjacent to, any slope or hillside area. The project would not create slope. Thus, on or off-site landslides would not occur. Lateral spreading is a phenomenon in which soils move laterally during seismic shaking and is often associated with liquification. The amount of movement is dependent on soil strength, duration and intensity of seismic shaking, topography, and free face geometry. According to the Geotechnical Investigation, due to the relatively flat site topography, lateral spreading risks are low at the proposed project site (Salem 2020). Therefore, potential impacts would be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less Than Significant Impact. Expansive soils contain certain types of clay minerals that shrink or well as the moisture content changes; the shrinking or swelling can shift, crack, or break structures built on such soils. Arid or semiarid areas with seasonal changes of soil moisture experiences, such as southern California, have a higher potential of expansive soils than areas with higher rainfall.

In the Geotechnical Investigation, based on the result of the laboratory testing of on-site soils, the soils were predominantly very dense silty sand, well-graded sand, well-graded sand with silt, poorly graded sand, and poorly graded sand with silt; and soft to stiff silt, sandy silt, and sandy clay (Salem 2020). Since the project site includes soils with clay content, soils on-site may be expansive. As stated in the Geotechnical Investigation, it is common for project areas that contain expansive soils to have soil movement (Salem 2020). The City's Public Works Department reviews the geotechnical reports prepared for development projects to ensure proper building and safety (Salem 2020). As described in Section 3.7(a), the project would be required to comply with the CBC and the City's Municipal Code to ensure safety and adequate building construction. Therefore, impacts related to expansive soils would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The proposed project does not propose the use of septic tanks or alternative wastewater disposal systems. The proposed site is in an urbanized area of the city of Pico Rivera, and the proposed project would connect to the City's wastewater system. No impacts related to septic systems would occur.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact. The proposed project site is in an area termed the central plain of the Los Angeles Basin, between the Los Angeles River and San Gabriel River and within the Peninsular Range of southern California. This plain has been formed by deposition of alluvium within the floodplain of the Rio Hondo and San Gabriel River, which flow generally from the hills and mountains to the north southward. Published reports indicate that the Quaternary Age alluvium is from 600 to 800 feet thick in the area and is underlain by Tertiary Age marine sedimentary rocks several thousand feet in thickness. These deposits are generally fine to coarse grained, consisting primarily of mixtures of gravel, sand, and silt of valleys and floodplains. The Geotechnical Investigation determined that artificial fill material underlies the project site and deeper native soils extend beyond the maximum boring depth of 51.5 feet below grade (Salem 2020). The subsurface conditions encountered appear typical of those found in the geologic region of the site. In general, the soils within the depth of exploration consisted predominately of loose to very dense silty sand, well-graded sand, well-graded sand with silt, poorly graded sand, and poorly graded sand with silt; and soft to stiff silt, sandy silt, and sandy clay. The pavement within the test borings consisted of approximately 4 inches of asphalt concrete (AC) underlain by approximately 0 to 3 inches of aggregate base (AB). A layer of geofabric (Petromat) was encountered within the AC. The proposed project would include excavations for one level of subterranean parking (up to approximately 11 feet below ground surface), and as such would have the potential to encounter paleontological resource. In the unlikely event that the project applicant encounters paleontological resources, the proposed project shall be required to comply with PRC, Chapter 1.7, Sections 5097.5. PRC Section 5097.5 prohibits persons from knowingly and willfully excavating upon, or removing, destroying, injuring, or defacing any vertebrate paleontological site, including fossilized footprints or other paleontological feature. Therefore, compliance with regulations that are in place to protect paleontological resources would ensure that a less than significant impact would occur, and no mitigation measures are required.

3.8 GREENHOUSE GAS EMISSIONS

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as greenhouse gases (GHGs), into the atmosphere. The primary source of these GHG is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO_2), methane (CH_4), and ozone (O_3)—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. Other GHG identified by the IPCC that contribute to global warming to a lesser extent include nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons.[2]

[2] Water vapor (H_2O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but part of the feedback loop rather than a primary cause of change.

Information on manufacture of cement, steel, and other "life cycle" emissions that would occur as a result of the project are not applicable and are not included in the analysis.[3] Black carbon emissions are not included in the GHG analysis because the California Air Resources Board (CARB) does not include this pollutant in the state's Senate Bill 32 (SB 32) inventory and treats this short-lived climate pollutant separately.[4] A background discussion on the GHG regulatory setting and GHG modeling can be found in Appendix A to this Initial Study.

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. Global climate change is not confined to a particular project area and is generally accepted as the consequence of global industrialization over the last 200 years. A typical project, even a very large one, does not generate enough greenhouse gas emissions on its own to influence global climate change significantly; hence, the issue of global climate change is, by definition, a cumulative environmental impact.

Project-related construction and operation-phase GHG emissions are shown in Table 13, *Project-Related Operation GHG Emissions*. Implementation of the proposed project would result in 255 new residential units and 5,730 of retail space. The proposed project would generate 1,577 weekday vehicle trips. Furthermore, operation of the proposed project would result in an increase in water demand, wastewater and solid waste generation, area sources (e.g., consumer cleaning products), and energy usage (i.e., natural gas and electricity). Annual average construction emissions were amortized over 30 years and included in the emissions inventory to account for one-time GHG emissions from the construction phase of the project. Overall, development and operation of the proposed project would not generate annual emissions that exceed the South Coast AQMD bright-line threshold of 3,000 metric tons of carbon dioxide equivalent (MTCO2e) per year (South Coast AQMD 2010). Therefore, the proposed project's cumulative contribution to GHG emissions would be less than significant.

[3] Life cycle emissions include indirect emissions associated with materials manufacture. However, these indirect emissions involve numerous parties, each of which is responsible for GHG emissions of their particular activity. The California Resources Agency, in adopting the CEQA Guidelines Amendments on GHG emissions found that lifecycle analyses was not warranted for project-specific CEQA analysis in most situations, for a variety of reasons, including lack of control over some sources, and the possibility of double-counting emissions (CNRA 2018). Because the amount of materials consumed during the operation or construction of the proposed project is not known, the origin of the raw materials purchased is not known, and manufacturing information for those raw materials are also not known, calculation of life cycle emissions would be speculative. A life-cycle analysis is not warranted (OPR 2008).

[4] Particulate matter emissions, which include black carbon, are analyzed in Section 3.3, Air Quality. Black carbon emissions have sharply declined due to efforts to reduce on-road and off-road vehicle emissions, especially diesel particulate matter. The state's existing air quality policies will virtually eliminate black carbon emissions from on-road diesel engines within 10 years (CARB 2017a.).

3. Environmental Analysis

Table 13 Project-Related Operation GHG Emissions

Source	GHG ($MTCO_2e$/Year)
Area	7
Energy[2]	927
Mobile (Vehicle Trips)	1,774
Solid Waste	116
Water	105
Amortized Construction Emissions[1]	29
Total	2,958
South Coast AQMD Bright-Line Threshold	3,000 $MTCO_2e$/Yr
Exceeds Bright-Line Threshold?	**No**

Source: CalEEMod, Version 2020.4.
Notes: MTons = metric tons; $MTCO_2e$ = metric ton of carbon dioxide equivalent
1 Total construction emission are amortized over 30 years per South Coast AQMD methodology.
2 Energy use is adjusted by 4 percent to reflect a slightly larger building square footage to align with the project description.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than Significant Impact. Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan, the Southern California Association of Governments' (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). A consistency analysis with these plans is presented below.

CARB Scoping Plan

On December 24, 2017, CARB adopted the Final 2017 Climate Change Scoping Plan Update (Scoping Plan; plan) to address the 2030 interim target to achieve a 40 percent reduction below 1990 levels by 2030, established by SB 32 (CARB 2017b). The CARB Scoping Plan is applicable to State agencies and is not directly applicable to cities/counties and individual projects. Nonetheless, the Scoping Plan has been the primary tool that is used to develop performance-based and efficiency-based CEQA criteria and GHG reduction targets for climate action planning efforts.

Since adoption of the 2008 Scoping Plan, which was adopted to achieve the GHG reduction goals of Assembly Bill 32 (AB 32), state agencies have adopted programs identified in the plan, and the legislature has passed additional legislation to achieve the GHG reduction targets. Statewide strategies to reduce GHG emissions include the Low Carbon Fuel Standard, California Appliance Energy Efficiency regulations, California Renewable Energy Portfolio standard, changes in the Corporate Average Fuel Economy standards, and other early action measures as necessary to ensure the state is on target to achieve the GHG emissions reduction goals of AB 32 and SB 32. Also, new buildings are required to comply with the latest applicable Building Energy Efficiency Standards and CALGreen. Although the measures in the Scoping Plan apply to state agencies and not individual projects (such as the proposed project), the proposed project's GHG emissions would be reduced by statewide compliance with measures that have been adopted since AB 32 and SB 32 were adopted. Therefore,

the proposed project would not obstruct implementation of the CARB Scoping Plan, and impacts would be less than significant.

SCAG's Regional Transportation Plan/Sustainable Communities Strategy

SCAG adopted the 2020-2045 RTP/SCS (Connect SoCal) in September 2020. Connect SoCal identifies land use strategies that focus on new housing and job growth in areas rich with destinations and mobility options are consistent with a land use development pattern that supports and complements the proposed transportation network. The overarching strategy in Connect SoCal is to plan for the southern California region to grow in more compact communities in transit priority areas and priority growth areas; provide neighborhoods with efficient and plentiful public transit; establish abundant and safe opportunities to walk, bike, and pursue other forms of active transportation; and preserve more of the region's remaining natural lands and farmlands (SCAG 2020). Connect SoCal's transportation projects help to more efficiently distribute population, housing, and employment growth, and forecasted development is generally consistent with regional-level general plan data to promote active transportation and reduce GHG emissions. The projected regional development, when integrated with the proposed regional transportation network in Connect SoCal, would reduce per-capita GHG emissions related to vehicular travel and achieve the GHG reduction per capita targets for the SCAG region.

Connect SoCal does not require that local general plans, specific plans, or zoning be consistent with the RTP/SCS, but provides incentives for consistency for governments and developers. Nevertheless, the proposed project would support the goals of Connect SoCal since it is a mixed-use residential and retail development project that would provide new multifamily housing on an infill site that is served by transit, which would contribute to reducing the vehicle miles traveled between residential and service needs. In addition, as seen in Section 3.17, *Transportation*, the proposed project would result in a reduction in VMT within the city and the VMT per capita of 12.21 residential VMT would be below the City's calculated significance threshold of 12.23 VMT per capita. Therefore, the proposed project would not interfere with SCAG's ability to implement the regional strategies outlined in the Connect SoCal, and impacts would be less than significant.

3.9 HAZARDS AND HAZARDOUS MATERIALS

This section is based in part on the *Phase 1 Environmental Site Assessment Report, Vacant Commercial Property, 8825 Washington Boulevard, City of Pico Rivera*, California (Phase I ESA), October 1, 2019, prepared by Partner, Engineering and Science, Inc. (Appendix C).

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?

Less Than Significant Impact. Project construction would require small amounts of hazardous materials, including fuels, greases, and other lubricants, and coatings such as paint. The handling, use, transport, and disposal of hazardous materials by the construction phase of the proposed project would comply with existing regulations of several agencies—the United States Environmental Protection Agency (USEPA), Los Angeles County Environmental Health Division, California Division of Occupational Safety and Health (Cal/OSHA),

United States Occupational Safety and Health Administration (OSHA), and United States Department of Transportation (USDOT).

Construction projects typically maintain supplies on-site for containing and cleaning small spills of hazardous materials. However, construction activities would not involve a significant amount of hazardous materials, and their use would be temporary. Furthermore, under the Occupational Safety and Health Act of 1970, employers are responsible for providing a safe and healthful workplace. Pursuant to the Title 29 of the Code of Federal Regulations, Part 1910.1200 of OSHA, the project applicant would ensure training for project construction workers on the proper use, storage, and disposal of hazardous materials. Title 29 states that "[e]mployers shall provide employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment…Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals." All on-site activities during construction and operation would be required to adhere to federal, state, and local regulations for the management and disposal of hazardous materials.

Also, construction activities would be conducted in accordance with the SWPPP as part of the NPDES permit. The primary objective of the SWPPP is to identify, construct, implement, and maintain best management practices (BMPs) to reduce and eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site. BMPs for hazardous materials can include, but are not limited to, off-site refueling, placement of generators on impervious surfaces, establishing clean out areas for cement, etc. While the risk of exposure to hazardous materials cannot be eliminated, adherence to existing regulations would ensure compliance with safety standards related to the use and storage of hazardous materials and with the safety procedures mandated by applicable federal, state, and local laws and regulations. With the compliance of applicable regulations, the transport, use, and/or disposal of hazardous materials during construction of the proposed project would be properly managed, and the risk for accidental release of hazardous materials would be reduced. Impacts would be less than significant.

Maintenance and operation of the proposed project, which would operate as a mixed-use development, may require the use cleaners, solvents, paints, other household maintenance products, and gasoline/diesel that could be potentially hazardous. These custodial products and paints would be used in relatively small quantities, be clearly labeled, and stored and transported in compliance federal, state, and local requirements. In small quantities, these household and common commercial items are not considered hazardous materials that could result in a significant hazard to the public or the environment. With the exercise of normal safety practices and compliance with regulatory compliance measures, the proposed project would not create substantial hazards to the public or the environment. Therefore, a less than significant impact would occur.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant Impact. The project site is an undeveloped paved lot and there are no known hazardous materials on the property, as discussed in Section 3.9(d). Since the project site is devoid of structures, no asbestos or lead-based paint could be present on-site. As described previously, construction activities would involve the use of hazardous materials, which may include fuels, lubricants, coatings, and grease for the

operation and maintenance of construction equipment. These hazardous materials would be used in accordance with regulatory standards and manufacturers' specifications. They would be used in small quantities and stored so that they do not pose significant safety hazards. Further, construction activities would be temporary.

Operation of the proposed project would include the use of small amounts of hazardous materials that would include household and common commercial items, such as cleaning materials, paints, oils, fuels, pesticides, and fertilizers. These materials would be stored on-site in small quantities for cleaning and maintaining the residential, commercial, and landscaped areas. The use, storage, transport, and disposal of these potentially hazardous materials would comply with existing federal, state, and local regulations. For example, residential and commercial tenants can dispose of potentially hazardous materials at certified waste collection sites. The American Society of Testing and Materials (ASTM) International's standard defines a recognized environmental condition (REC) as follows: The presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. According to the Phase I Environmental Site Assessment prepared for the project (see Appendix C), no RECs or historical RECs are present at the project site (Partner 2019). Therefore, a less than significant impact would occur.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less Than Significant Impact. The closest existing school to the project site is the Rio Vista Elementary School, which is located more than one-quarter mile from the project site (approximately 0.6 miles away). Construction of the project is not anticipated to encounter subsurface hazardous materials and would handle small quantities of hazardous materials, which would be temporary. Operation of the proposed project would not result in the release of a significant amount of hazardous emissions, as no significant hazardous materials, substances, or wastes would be transported, used, or disposed of in conjunction with the proposed project operation. Similarly, the use of hazardous materials at the proposed mixed-use development would be limited to typical household cleaning solvents, chemicals, paints, etc. which would be used in small quantities and stored in compliance with the state and federal requirements. Also, should any future business that occupies the proposed retail space handle acutely hazardous materials, it would be required to file a Hazardous Materials Business Plan and receive a permit from the County Health Hazardous Materials Division to ensure proper use, storage, and disposal of hazardous substances. Less than significant impacts related to hazardous materials in proximity to the Rio Vista Elementary School would occur.

d) 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 it create a significant hazard to the public or the environment?

No Impact. The Phase I Environmental Site Assessment did not identify the project site or any properties in the nearby area, as included on the list of hazardous material sites complied pursuant to California Government Code Section 65962.5 (Partner 2019). In addition, a search of the California Department of Toxic Substances Control (DTSC) EnviroStor database did not identify the project site or any area within the project vicinity as

a hazardous materials site. Thus, the impacts related to hazards from being located on or adjacent to a hazardous materials site would not occur from implementation of the project. No impact would occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles or a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The proposed project is not within an airport land use plan and is not within two miles of an airport. The closest air facility is the San Gabriel Valley Airport, which is located approximately 7.5 miles north of the project site. Therefore, the proposed project would not result in an impact to an airport land use plan and would not result in a safety hazard or excessive noise for people residing or working in the project area. No impact would occur.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The proposed project would not conflict with the City's adopted emergency response or evacuation plans. According to Los Angeles County's disaster route map for the city of Pico Rivera, Rosemead and Washington Boulevards are used as disaster routes (LA County 2008). The surrounding roadways would continue to provide emergency access to the project site and surrounding properties during construction and operation of the proposed project. The Transportation Study prepared for the proposed project (contained in Appendix F) determined that proposed project weekday peak hour traffic volumes would not cause or substantially extend vehicle queuing at the project site driveways (LLG 2022). Therefore, vehicle queueing at project site driveways would not hinder emergency vehicle circulation. Further, prior to construction, the Los Angeles County Fire Department, which provides fire protection services to the city of Pico Rivera, and the City's Public Works department, would review project plans to ensure adequate site access. The proposed project would not result in inadequate emergency access and impacts to adopted emergency response and evacuation plans are less than significant.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact. The project site is in an entirely developed urban area and is not in a fire hazard zone designated by CAL FIRE (2021). No impacts would occur.

3.10 HYDROLOGY AND WATER QUALITY

Would the project:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact.

Construction

The proposed project site is currently vacant though developed as an impervious site from previous uses on the property. Implementation of the proposed project would include grading and excavation to support the subterranean parking garage, trenching for site utilities and irrigation, building construction, architectural coatings, driveway and walkway construction, landscaping, and street connection improvements. These activities have the potential to expose and loosen sediment and building materials that would have the potential to mix with stormwater and urban runoff. Since project activities would occur on greater than 1 acre (2.85 acres total), the proposed project would be required to obtain a NPDES CGP from the SWRCB and prepare a SWPPP. The SWPPP will include BMPs to reduce water quality impacts, including various measures to control on-site erosion, reduce sediment flows into stormwater and wind erosion; reduce tracking of soil and debris into adjacent roadways and off-site areas; and manage wastes, materials, wastewater, liquids, hazardous materials, stockpiles, equipment, and other site conditions to prevent pollutants from entering the storm drain system. Inspections, reporting, and stormwater sampling and analysis are also required to ensure that visible and non-visible pollutants are not discharged off-site. Implementation of the provisions of the NPDES permit and compliance with City grading requirements would minimize construction impacts through BMPs that reduce construction-related pollutants. This would ensure that any impacts to downstream waters resulting from construction activities would be less than significant.

Operation

Activities typical of mixed-use developments are anticipated for the proposed project during operation. These include day-to-day activities, such as recreation, lounging, commuting, exercising, dining, landscaping/irrigation, and other residential/commercial-related activities. Also, the proposed project would daily generate typical residential household wastes and retail waste. These include food wastes, paper products, and recyclable materials. These materials would be disposed of in on-site trash enclosures and removed for disposal by the local private waste management company. Considering these typical residential and commercial activities, potential pollutants generated by the proposed project could include suspended-solid/sediments, nutrients, heavy metals, pathogens (bacteria/virus), pesticides, oil and grease, and trash and debris. However, the proposed project would incorporate a water quality system onsite as described in Section 1.3.5, *Infrastructure Plan*, which would include a retention and/or water quality treatment system for infiltration or water quality treatment before stormwater is discharged to the public stormwater system. The water quality system onsite would be sized according to meet the County's low impact development requirements. Implementation of the water quality system onsite, in accordance with City and County requirements, would ensure that stormwater pollutants and water quality impacts remain less than significant. Therefore, operational impacts related to water quality standards would be less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact. In the Geotechnical Investigation prepared for the project, groundwater was not encountered during the subsurface investigation to the maximum depth explored of 51.5 feet (Salem 2020). The proposed project would connect to the existing 8-inch water line in Washington

Boulevard. The proposed project would introduce more pervious surfaces through landscaping, which could allow for limited groundwater recharge. As further discussed in Section 3.19, *Utilities and Service Systems,* the proposed project water supply comes from Pico Water District. According to the Pico Water District's website, potable water supplies come from groundwater from the Central Basin, which underlies the entire San Gabriel Valley (Pico Water District 2021). The basin is replenished from imported water sourced from snowmelt in the Sierra Nevada and general precipitation events. The Water Replenishment District of Southern California (WRD) also replenishes the basin by spreading tertiary-treated recycled water purchased from the Los Angeles Sanitation District and surface water from Metropolitan Water District (Pico Water District 2021). Aside from minimal landscaped areas and the demolished building footprint, the project site is currently covered with impermeable surfaces. Development of the proposed project would not substantially increase impermeable surfaces on-site in a manner than may substantially decrease or interfere with groundwater recharge. According to the Pico Water District Urban Water Management Plan (UWMP), the groundwater can supply adequate water for the next 20 years. Since the proposed project is aligned with the SCAG population projections, as described in Section 3.14, *Population and Housing,* the proposed project would not substantially interfere with groundwater supplies and recharge (Pico Water District 2016). Additionally, as further discussed in Section 3.19, *Utilities and Service Systems*, the proposed project would not result in substantial water demand beyond projected water supplies. As a result, impacts related to groundwater supplies and recharge would be less than significant.

c) 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?

Less Than Significant Impact. The project site is located between Rio Hondo Channel, 0.8 miles to the west, and the San Gabriel River, 0.9 miles to the east. Construction of the proposed project would require demolition of pavement that would expose and loosen building material and sediment, which has the potential to mix with stormwater runoff and result in erosion or siltation off-site. However, the project site does not include any substantial slopes, which reduces the erosion potential. During construction, the proposed project would require complying with the NPDES CGP, which would require the preparation of a SWPPP that includes BMPs to reduce erosion and siltation. Compliance with NPDES permit and implementation of the SWPPP would ensure that the construction of the proposed project would not result in adverse water quality impacts while the existing drainage pattern of the site is being altered.

The proposed project would introduce pervious landscaping on-site and would include a storm drain system to collect, treat, and convey stormwater into the existing storm drain system in Washington Boulevard consistent with its specific plan. The proposed water quality system may include infiltration or bio-filtration to treat runoff on-site before it enters the storm drain system. As part of the permitting approval process, the proposed drainage and water quality design and engineering plans would be reviewed by the City to ensure that the site-specific design limits the potential for erosion and siltation. Additionally, the treatment systems would be sized accordingly to meet LID requirements. Overall, the proposed drainage system and adherence to the existing regulations would ensure that the project impacts related to

alteration of a drainage pattern and erosion/siltation from operational activities would be less than significant. No mitigation measures are required.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

Less Than Significant Impact. According to the Federal Emergency Management Agency (FEMA), the project site is located within a Zone X, an area with reduced flood risk due to levee and an area located outside of the 100-year and 500-year flood plains (FEMA 2008). Soils underlying the project site consist predominately of loose to very dense silty sand, well-graded sand, well-graded sand with silt, poorly graded sand, and poorly graded sand with silt; and soft to stiff silt, sandy silt, and sandy clay, which are typically well-drained and have little to no run-off potential. During construction, the proposed project would require complying with the NPDES Construction General Permit, which would require the preparation of a SWPPP that would ensure that construction of the proposed project would not result in flooding on or offsite. As discussed in Section 1.3, *Project Description*, operation of the proposed project would include pervious landscaping and a storm drain system that would collect, treat, and convey stormwater into the existing storm drain system in Washington Boulevard to the south of the project site. The on-site stormwater system would collect all runoff from the site in underground storm drain systems that convey the stormwater runoff to a proposed retention and/or water quality treatment system(s) for infiltration and/or water quality treatment before discharging back to the public system. The proposed water quality system may include infiltration and/or bio-filtration. Thus, the project would not substantially increase the rate or amount of surface run-off which would result in flooding on- or offsite. Therefore, impacts would be less than significant.

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?

Less Than Significant Impact. Stormwater would be removed from the project site, primarily by sheet flow action across the paved surface towards the water drains throughout the property and in the public right-of-way, into the municipal sewer system. The proposed project storm drain system, including a retention basin, and implementation of BMPs for low impact development would ensure that proper drainage would be maintained at all times. This would ensure that stormwater leaving the proposed project would not exceed the capacity of public stormwater drainage systems. In addition, the project site was previously developed and largely impervious. As such, the development of the proposed project would not substantially increase impervious surfaces at the project site. The construction and operation of the proposed project would implement and adhere to BMPs, which would collect and/or treat stormwater onsite prior to being discharged to the public storm drain system. Thus, the project would not alter the existing drainage pattern in a manner that would create or contribute runoff water that would exceed existing stormwater drainage capacity. Therefore, impacts would be less than significant.

iv) Impede or redirect flood flows?

Less Than Significant Impact. According to the FEMA Map 06037C1830F, the project site is not within a flood zone and is located within a highly urbanized portion of the city with no close access to water

bodies. The project site is in Flood Zone X, which is an area determined to be outside the 0.2-percent annual chance floodplain. As detailed in the previous responses, implementation of the proposed project would introduce pervious landscaping on-site and would include a storm drain system to collect, treat, and convey stormwater into the existing storm drain system in Washington Boulevard. Any off-site surface flows that enter the site would bypass through the proposed storm drain system or would sheet flow to existing cross gutters consistent with existing flow patterns. Therefore, the project would not result in impeding or redirecting flood flows and impacts would be less than significant.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Impact. According to the FEMA Map 06037C1830F, the project site is not within a flood zone. The proposed project site is in Flood Zone X, which is an area determined to be outside the 0.2-percent annual chance floodplain. Therefore, flood hazard is low. Additionally, the project site is approximately 20 miles from the Pacific Ocean and is not within a tsunami zone.

A seiche is a surface wave created when a body of water is shaken, usually by earthquake activity. Seiches are of concern relative to water storage facilities because inundation from a seiche can occur if the wave overflows a containment wall, such as the wall of a reservoir, water storage tank, dam, or other artificial body of water. The nearest dam is the Garvey Reservoir located 5 miles north of the proposed project site; potential inundation area from this reservoir flows to the north (DSOD 2021). There are no large water tanks or dams in the area that could directly impact the proposed project site in the event of failure (DSOD 2021).

No impact would occur related to the release of pollutants due to project inundation since the proposed project site is outside of flood hazard, tsunamis or seiches zones.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact. After completion of the proposed project, ground surfaces would be either hardscape or maintained landscaping. As previously mentioned, the proposed project would not affect groundwater and therefore would not obstruct implementation of a sustainable groundwater management plan. The proposed project would comply with existing local, regional, and state regulations and would not obstruct implementation of a water quality control plan. Therefore, no impact would occur.

3.11 LAND USE AND PLANNING

Would the project:

a) Physically divide an established community?

No Impact. The proposed project site and surrounding area are fully developed with urban land uses, including residential and commercial uses. There is an established residential neighborhood to the north of the project site. There is no existing access between the proposed project site and the residential community to the north. Implementation of the proposed project would be limited to the project site that is currently vacant. Therefore, the project would not physically change the surrounding neighborhood street patterns or otherwise impede movement through the neighborhoods and therefore would not divide an established community.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact. A significant impact could occur if the project is inconsistent with the City's General Plan, zoning, or other plans that apply to the project site and were adopted for the purposes of avoiding or mitigating environmental effects. A city's general plan and zoning guide development and allowable uses within a jurisdiction over a long-term horizon to meet population and demographic shifts and City goals and needs. The City's General Plan, dated October 2014, is defined by four core values, which guide the General Plan. These core values include social well-being, excellence in place-making, respect for the natural environment, and economic vitality. The City's General Plan is composed of nine elements, which include the land use, housing, circulation, community facilities, economic prosperity, environmental resource, safety, healthy community, and noise. Each element is made up of goals and policies. The proposed project's consistency with applicable General Plan goals and policies and zoning are discussed below.

Land Use Designation and Zoning Consistency

The proposed project includes the construction of a three to six-story mixed-use building with subterranean parking, ground-floor retail and residential uses, and residential uses in floors two through six, which includes 255 dwelling units. The proposed project would include 464 parking spaces, including 437 parking spaces within the proposed structure and 27 parking spaces on-site. The proposed project would comply with all applicable provisions of the Pico Rivera Municipal Code and the development standards and design guidelines established by the specific plan, such as setback, landscaping requirements, and buffering between residential neighborhoods.

The project site is currently zoned General Commercial (C-G) with a general plan land use designation of Mixed-Use/Housing Element Site Opportunity Area 8 (the Rosemead Boulevard and Washington Boulevard Opportunity Area) (Pico Rivera 2014). The purpose of the mixed-use designation is to provide a different style of development than traditional neighborhoods, commercial, and employment areas that are physically separated from one another. The special planning area "Housing Element Site" is designated to help meet the needs of the RHNA. The proposed project would require a change from the current zoning designation of General Commercial (GC) to Specific Plan (SP), as well as a zone code amendment to add SP for this area to

the Zoning Map. Additionally, the proposed project would change the current general plan land use designations of Mixed-Use/Housing Element Site Opportunity Area 8 to SP.

The intent of the SP land use designation is to be used in combination with the underlying general plan land use designations to allow for the creation of flexible standards. While the proposed project includes a zone change, zoning code amendment, and a General Plan amendment to redesignate the site as "Specific Plan," the proposed project supports the intent of the current general plan land use designation on-site. Additionally, the proposed project would support the Housing Element designation by providing housing units on-site. Upon approval of the proposed project's zone change, zone code amendment, conditional use permit, and General Plan amendment, the proposed project would be consistent with the applicable general plan land use designations, policies, and zoning requirements. Therefore, the proposed project is consistent with the zoning and general plan land use designations on-site.

Land Use Element

The proposed project supports the City's Land Use Element. The proposed project is consistent with Goal 3.6, which focuses on improving the community image through high-quality design and ongoing maintenance, and Goal 3.8, which aims to have diverse and attractive commercial, office, and mixed-use developments that serve community needs and contribute to economic vitality. The proposed project is in an urbanized area largely surrounded by commercial uses. The northwest side of the project site is adjacent to a single-family residential neighborhood. The project site and the residential neighborhood are separated by a block wall. As described in Section 3.1, *Aesthetics,* the proposed project includes the implementation of the Specific Plan that would include development standards and design guidelines that would guide site design, building design, parking, landscaping, and services, which is consistent with Policy 3.6-1. Consistent with Policy 3.6-2, Sustainable Development, which promotes land development practices that reduce energy and water consumption, GHG emissions, and disposal of waste, the proposed project's location and proximity to commercial services would promote walking and bicycling and reduces use of automobiles. As described in Section 3.17, *Transportation*, the proposed project site is located near existing public transportation routes and would be designed to promote the use of public transportation as an alternative to automobiles. The project site provides pedestrian connectivity throughout the Pico Rivera Marketplace and into public sidewalks. The project site also provides safe and convenient accessibility to public transportation. The site is adjacent to public transit Line 50 along Washington Boulevard, metro Line 266 on Rosemead Boulevard, as well as the proposed Rosemead Boulevard Transition Station and Gold Line Extension Alternative. Additionally, future surface parking would be shaded, which would reduce the urban heat island effect. The proposed project would integrate water conservation and water quality measures consistent with applicable state regulations.

The proposed project is consistent with Goal 3.8, which aims to have diverse and attractive commercial, office, and mixed-use developments that serve community needs and contribute to economic vitality. The proposed project would be consistent with Policy 3.8-4, which promotes high-quality mixed-use development that is compatible with surrounding uses and enhances adjacent streetscapes. The proposed project would provide for the development of a mixed-use development, with pedestrian-scale ground-floor commercial uses that would have outdoor seating and contribute to the visual character of Washington Boulevard and the Pico Rivera Marketplace to the east of the project. The proposed project would be consistent with Policy 3.8-7, which

requires screening, setback, or buffering from projects adjacent to residential neighborhoods. The proposed project would include setbacks from the adjacent residential neighborhood to the northwest and include privacy block wall and hedges along the project site border with the residential neighborhood. Additionally, the proposed project would step down to three stories on the northwest corner near the residential community and rooftop recreation activities would be located toward the southeast side of the proposed project, away from the residential community. Therefore, the proposed project supports the Land Use Element.

Housing Element

The proposed project supports the City's General Plan Housing Element. The project site is identified as a "Housing Element Site." The Housing Element identifies 13 areas within the city that have the potential to rezone to accommodate its housing needs under the RHNA. The project site is within the Housing Element's Area 11, which proposes a mixed-use zone and minimum density of 30 dwelling units per acre. The proposed project includes a mixed-use building with ground-floor retail and five levels of residential units at a density of approximately 89.5 dwelling units per acre. The proposed project would add diversity to the City's housing stock by providing studio, junior one-bedroom, one-bedroom, two-bedroom, and three-bedroom units that would serve a range of income levels. The proposed project would also reserve 13 dwelling units as affordable housing. The proposed project's consistency with applicable Housing Element goals and policies are further discussed below.

The proposed project is consistent with Goal 2, which encourages access to opportunities for affordable housing, and Goal 4, to provide adequate sites to meet the existing and future housing needs. The proposed project is the development of a mixed-use building, which includes 255 residential units; 13 units are dedicated to affordable housing. The proposed project's high-density housing would help the City meet its housing needs. The proposed project is also consistent with Goal 3, which aims to ensure an adequate supply of housing for households with special needs, and Goal 6, which aims to promote equal housing opportunities. The proposed project would be implemented in accordance with ADA and all applicable State laws. The proposed project would be available to all persons regardless of race, religion, sex, marital status, ancestry, national origin, color, or disability. Therefore, the proposed project supports the Housing Element.

Environmental Resource Element

The proposed project support goals and objectives within the Environmental Resource Element of the General Plan. For example, Policy 8.1-4, Efficient Land Use Patterns, which promotes efficient land use patterns by promoting walkability, bicycle use, and non-motorized transportation. As described above and in Section 3.17, *Transportation*, the proposed project supports and includes walkability and bicycle paths to improve non-motorized transportation. The proposed project would also be conveniently situated adjacent to commercial uses and the Pico Rivera Marketplace, which allows for employment opportunities and commercial services within close proximity of the project site, reducing the need for travel and promoting walkability. Consistent with Policy 8.2-18, Electric Vehicles, which encourages electric vehicle charging stations, the proposed project also includes 44 electric vehicle charging station (EVCS) ready parking spaces for residential use and 3 EVCS parking spaces for retail uses.

The proposed project would be consistent with Policy 8.3-3, Tree Planting, which promotes planting shade trees, and Policy 8.6-6, Native Plants, which encourages the use of native and drought-tolerant plants and landscaping. The proposed project includes planning of native California palms and other native species to provide shade within the landscape. Therefore, the proposed project supports the Environmental Resource Element.

The proposed project would not therefore conflict with existing plans, policies, or regulations adopted for the purpose of avoiding or mitigating environmental effects. Therefore, impacts would be less than significant.

3.12 MINERAL RESOURCES

Would the project:

a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

No Impact. The California Geological Survey Mineral Resources Project provides information about California's nonfuel mineral resources. The Mineral Resources Project classifies lands throughout the state that contain regionally significant mineral resources as mandated by Surface Mining and Reclamation Act of 1975. The California Geological Survey classifies mineral resources area as one of the following four Mineral Resource Zones (MRZs), Scientific Resource Zones (SZ), or Identified Resource Areas (IRAs):

- **MRZ-1:** A Mineral Resource Zone where adequate information indicates that no significant mineral deposits are present or likely to be present.
- **MRZ-2:** A Mineral Resource Zone where adequate information indicates that significant mineral deposits are present, or a likelihood of their presence and development should be controlled.
- **MRZ-3:** A Mineral Resource Zone where the significance of mineral deposits cannot be determined from the available data.
- **MRZ-4:** A Mineral Resource Zone where there is insufficient data to assign any other MRZ designation.
- **SZ Areas:** Containing unique or rare occurrences of rocks, minerals, or fossils that are of outstanding scientific significance shall be classified in this zone.
- **IRA Areas:** County or State Division of Mines and Geology Identified Areas where adequate production and information indicates that significant minerals are present.

Areas designated MRZ-2 are areas where adequate information indicates that significant mineral deposits are present, or a likelihood of their presence, and development should be controlled. The project site is not within a MRZ-2 area (CGS 2010). The project site is within MRZ-3, which is classified as areas containing mineral deposits the significance of which cannot be determined from preliminary data (CGS 2015). Further, the Pico Rivera General Plan Environmental Resources Element identifies that there are no commercially viable sand and gravel resources in the area (Pico Rivera 2014). The project site was previously developed with a commercial

building and has no history of mining. Based on the project site's location, development of the proposed project would not result in the loss of availability of known mineral resources. No impact would occur.

b) 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?

No Impact. As discussed under Section 3.12(a), the project site is not within a MRZ-2 zone (CGS 2010). Additionally, the Pico Rivera General Plan Environmental Resources Element identifies that there are no commercially viable sand and gravel resources in the area (Pico Rivera 2014). The project site is currently zoned General Commercial (C-G) with a general plan land use designation of Mixed-use/Housing Element Site Opportunity Area 8 (the Rosemead Boulevard and Washington Boulevard Opportunity Area) (Pico Rivera 2014). The project site is in an urbanized area of Pico Rivera, and no mineral extraction operations currently occur within the vicinity of the project site. No impact would occur.

3.13 NOISE

Noise Fundamentals

Noise is unwanted sound, known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal, state, and city governments have established criteria to protect public health and safety and to prevent the disruption of certain human activities, such as classroom instruction, communication, or sleep. Appendix D provides the fundamentals of noise and vibration, additional local regulatory background information, and the construction and traffic noise modeling data for the proposed project.

Environmental Setting

The noise environment in the project area includes roadway noise from Washington Boulevard and Rosemead Boulevard and noise from the surrounding retail uses.

Sensitive Receptors

Certain land uses are particularly sensitive to noise and vibration. These uses include residences, schools, hospital facilities, houses of worship, and open space/recreation areas where quiet environments are necessary for the enjoyment, public health, and safety of the community. The nearest sensitive receptors are single-family residences adjacent to the proposed project site, to the north and west.

Per the *CBIA v. BAAQMD* ruling, it is generally no longer the purview of the CEQA process to evaluate the impact of existing environmental conditions on any given project. As a result, while the noise from existing sources is considered as part of the baseline, the direct effects of exterior noise from nearby noise and vibration sources relative to land use compatibility of a future project is no longer a required topic for impact evaluation under CEQA. Generally, no determination of significance is required with the exception of certain school projects, projects affected by airport noise, and projects that would exacerbate existing conditions (i.e., projects that would have a significant operational noise impact).

3. Environmental Analysis

Applicable Standards

State Regulations

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a general plan that includes a noise element prepared according to guidelines adopted by the Governor's Office of Planning and Research. According to these guidelines, the purpose of the noise element is to "limit the exposure of the community to excessive noise levels."

California Code of Regulations, Title 24, Chapter 12

Current law states that every local agency enforcing building regulations, such as cities and counties, must adopt the provisions of the CBC within 180 days of its publication. The California Building Standards Commission establishes the publication date of the CBC. The most recent building standards adopted by the legislature and used throughout the State is the 2019 version. Jurisdictions often adopt local, more restrictive amendments based on local geographic, topographic, or climatic conditions. The State of California codifies noise insulation standards in the CBC. These noise standards are for new construction in California for the purposes of interior compatibility with exterior noise sources. The regulations specify that acoustical studies must be prepared when new buildings with habitable rooms that are near major transportation noises, and where such noise sources create an exterior noise level of 60 dBA community noise equivalent level (CNEL)/L_{dn} or higher. Acoustical studies that accompany building plans must demonstrate that the structure design limits interior noise in habitable rooms to 45 dBA CNEL/L_{dn}.

City of Pico Rivera

General Plan Noise Element

Stationary Noise

The Pico Rivera Noise Element includes exterior noise standards to determine noise and land use compatibility. Exterior noise standards can be found under Policy 11.1-1, Land Use Compatibility. This policy strives to achieve and maintain land use patterns that are consistent with the noise compatibility guidelines summarized in Table 14, *Maximum Allowable Environmental Noise Standards*.

Table 14 Maximum Allowable Environmental Noise Standards

Land Use	Exterior Noise Level at Property Line CNEL, dB
Residential (Low-Density, Multifamily, Mixed-Use)	65
Transient Lodging (Motels/Hotels)	65
Schools, Libraries, Churches, Hospitals/Medical Facilities, Nursing Homes, Museums	70
Theaters, Auditoriums	70
Playgrounds, Parks	75
Golf Courses, Riding Stables, Water Recreation	75
Office Buildings, Business Commercial, and Professional	70
Industrial, Manufacturing, and Utilities	75

Source: Pico Rivera 2014
Notes:
The noise level standard is the maximum decibel level that may be imposed upon the referenced land use. Where a proposed use is not specifically listed in this table, the use shall comply with the noise exposure standards for the nearest similar use, as determined by the City's Planning Director.

Vibration

Vibration standards can be found under Policy 11.3-2, Vibration Standards, of the Noise Element. This policy requires construction projects and new developments to ensure acceptable interior vibration levels at nearby noise-sensitive uses based on the Federal Transit Administration (FTA) criteria summarized in Table 15, *Groundborne Vibration Impact Criteria for Vibration Annoyance*. "Category 2" would apply to the nearby single-family residences, and "Frequent Events" are assumed for a conservative analysis.

Table 15 Groundborne Vibration Impact Criteria for Vibration Annoyance

Land Use Category	Impact Levels, VdB		
	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Category 1: Buildings where vibration would interfere with interior operations	65[a]	65[a]	65[a]
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses	75	78	83

Source: Pico Rivera 2014, Noise Element
Notes: Though the General Plan Noise Element references FTA 2006, a newer version of the *FTA Transit Noise and Vibration Impact Assessment Manual* has been published (FTA 2018) and the criteria have not changed.
[1] "Frequent Events" is defined as more than 70 vibration events of the same source per day
[2] "Occasional Events" is defined as between 30 and 470 vibration events of the same source per day.
[3] "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day
[a] This criterion limit is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels.

Construction Noise

The City's General Plan Noise Element Policy 11.3-1, Construction Noise, states that construction-related noise and vibration within 500 feet of noise-sensitive uses be limited to 7:00 a.m. to 7:00 p.m., and that haul truck deliveries be subject to the same hours specified for construction. The City does not have an established criterion for construction noise. The FTA provides criteria for acceptable construction noise levels and

recommends a daytime noise threshold of 80 dBA $L_{eq(8hr)}$ for residential uses. For the purposes of this analysis, the FTA criterion is applied to nearby sensitive receptors to determine impact significance.

Municipal Code

Noise is also regulated by the Pico Rivera Municipal Code, under Section 8.40.010, Unnecessary Noises Prohibited. This section states that no person shall make, cause, or suffer, or permit to be made, upon any premises owned, occupied, or controlled by him, any unnecessary noises or sounds that are physically annoying to persons of ordinary sensitiveness, or which are so harsh or so prolonged or unnatural or unusual in their use, time, or place as to occasion physical discomfort to the inhabitants of any neighborhood.

Would the project result in:

a) Generation of 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?

Less Than Significant Impact With Mitigation Incorporated.

Construction Noise

Construction would occur over approximately 23 months and include the following activities: demolition, grading and excavation, trenching for site utilities and irrigation, building construction, architectural coatings, and paving.

Construction Vehicles

The transport of workers and materials to and from the construction site could incrementally increase noise levels along access roads. Individual construction vehicle pass-bys may create momentary noise levels of up to approximately 85 dBA (L_{max}) at 50 feet from the vehicle, but these occurrences would generally be infrequent and short-lived.

Construction Equipment

Noise generated by on-site construction equipment is dependent on the type of equipment used, its location relative to sensitive receptors, and the timing and duration of noise-generating activities. Each phase of construction would involve different kinds of equipment and has distinct noise characteristics. The basis for noise levels from construction activities are typically the loudest piece or pieces of equipment. The dominant equipment noise source is typically the equipment's engine, although work-piece noise (such as dropping of materials) can also be noticeable.

The noise produced at each construction phase is determined by combining the L_{eq} contributions from each piece of equipment used at a given time, while accounting for the ongoing time variations of noise emissions (commonly referred to as the usage factor). Heavy equipment, such as a dozer or a loader, can have maximum, short-duration noise levels of up to 85 dBA at 50 feet. However, overall noise emissions vary considerably, depending on the specific construction activity performed at any given moment. Noise attenuation due to

distance, the number and type of equipment, and the load and power requirements to accomplish tasks at each construction phase would result in different noise levels from construction activities at a given receptor. Since noise from construction equipment is intermittent and diminishes at a rate of at least 6 dBA per doubling of distance (conservatively ignoring other attenuation effects from air absorption, ground effects, and shielding effects), the average noise levels at noise-sensitive receptors could vary considerably, because mobile construction equipment would move around the project site with different loads and power requirements. Noise levels from project-related construction activities were calculated from the simultaneous use of all applicable construction equipment during each phase at spatially averaged distances (i.e., from the approximate acoustical center of the specific phase) to the property line of the nearest receptors. Although construction may occur across the entire construction area, the area around the center of construction activities best represents the potential average construction-related noise levels at the various sensitive receptors. No pile driving is proposed as part of project construction.

Anticipated construction activity information was provided by the project applicant and input to the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) (FHWA 2006). The associated, aggregate sound levels—grouped by construction phase—are summarized in Table 16, *Project-Related Construction Noise, L_{eq} dBA*. RCNM modeling input and output worksheets are included in Appendix D.

Table 16 Project-Related Construction Noise, L_{eq} dBA

Construction Activity Phase	Residences to the West	Residences to the North
	90 feet	*90 feet*
Demolition	**81**	**81**
	200 feet	*165 feet*
Site Preparation	74	76
Rough Grading	75	76
Fine Grading	70	72
Utility Trenching	72	74
	65 feet	*100 feet*
Building Construction	**82**	78
Architectural Coating	71	68
	50 feet	*50 feet*
Paving	**82**	**82**

Notes:
Bold = Exceeds 80 dBA Leq.
Calculations performed with the FHWA RCNM software are included in Appendix D.
Decibels rounded to the nearest whole number.

As shown in Table 16, construction-related noise levels could, at times, exceed the 80 dBA $L_{eq(8hr)}$ threshold at the nearest sensitive receptors, and therefore this impact would be potentially significant. Implementation of Mitigation Measure N-1 would reduce this impact to a level that is less than significant.

3. Environmental Analysis

Mitigation Measures

N-1 Prior to issuance of demolition, grading, and/or building permits, a note shall be provided on construction plans indicating that during grading, demolition, and construction, the project applicant shall be responsible for requiring contractors to implement the following measures to limit construction-related noise:

- Per City requirements, construction activity shall be limited to the hours of 7:00 a.m. and 7:00 p.m.;
- During the entire active construction period, equipment and trucks used for project construction shall use the best available noise-control techniques (e.g., improved mufflers, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible;
- Require that impact tools (e.g., jack hammers and hoe rams) be hydraulically or electrically powered wherever possible. Where the use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used along with external noise jackets on the tools;
- Stationary equipment such as generators, air compressors shall be located as far as feasible from nearby noise-sensitive residential uses to the north and west;
- Stockpiling of materials shall be located as far as feasible from nearby noise-sensitive residential receptors to the north and west;
- At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, that includes permitted construction days and hours, as well as the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, they shall investigate, take appropriate corrective action, and report the action to the City;
- Signs shall be posted at the job site entrance(s), within the on-site construction zones, and along queueing lanes (if any) to reinforce the prohibition of unnecessary engine idling. All other equipment shall be turned off if not in use for more than 5 minutes;
- During the entire active construction period and to the extent feasible, the use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. The construction manager shall use smart back-up alarms, which automatically adjust the alarm level based on the background noise level, or switch off back-up alarms and replace with human spotters in compliance with all safety requirements and laws; and
- Erect temporary noise barriers (at least as high as the exhaust of equipment and breaking line-of-sight between noise sources and sensitive receptors) to maintain construction noise levels at or below the performance standard of 80 dBA L_{eq} at the property line of

nearby residences to the north and west. Barriers shall be constructed with a solid material that has a density of at least 1.5 pounds per square foot with no gaps from the ground to the top of the barrier.

Operational Stationary Noise

Recreation and Open Space

The proposed project would include common open space of passive, plaza-type green space, and rooftop amenities for residents. Some of the ground common open space would be open to the public while others would be private, only accessible to residents, as shown in Figure 5, *Open Space and Rooftop Recreation Concept*. Outdoor rooftop residential amenities would include a swimming pool, jacuzzi, barbecue area, and a garden/green area. Outdoor recreational areas accessible only to residents would generate minimal noise because of private use limitations and maximum capacity requirements. The rooftop amenities would be on the roof of a three to six-story mixed-use building, approximately 100 feet south the nearest noise-sensitive receptors (single-family residences to the northwest). Due to the height of the proposed mixed-use building, rooftop amenities would be substantially shielded by the roof line, reducing noise levels at the receiver property line. In addition, the rooftop amenities would be located towards the east side of the building away from the residential neighborhood, which further reduces noise levels at the receiver property line.

The nearest open space area to noise-sensitive receptors, which are the single-family residences located directly north to the project site and abuts the project site boundary, would be the proposed private open space area on the ground level. Noise would consist mostly of people talking. No amplified music or public address systems are proposed. This use would not generate substantial noise. Therefore, impacts would be less than significant.

Retail Uses

The proposed project would include approximately 5,730 square feet of retail space, which may include coffee shops, print shops, laundry, or tailoring services to serve the local community and future residents. This proposed commercial space uses would not introduce new types of noise into the project area. Therefore, impacts would be less than significant.

Mechanical Equipment

Typical heating, ventilating, and air conditioning system (HVAC) noise is 72 dBA L_{eq} at a distance of three feet. The nearest sensitive receptors to potential HVAC equipment would be the single-family residences approximately 100 feet to the north. At this distance, HVAC noise levels would attenuate to approximately 42 dBA L_{eq}. Converted to CNEL, this would be 49 dBA CNEL, which would be below the maximum allowable environmental exterior noise standard of 65 dBA CNEL for residential uses (Table 14). Therefore, impacts would be less than significant.

Traffic Noise

Audible increases generally refer to a change of 3 dBA or more since this level has been found to be the threshold of perceptibility in exterior environments. The second category, "potentially audible" impacts, refers to a change in noise level between 1 and 3 dBA. The last category includes changes in noise level of less than

3. Environmental Analysis

1 dBA, which are typically "inaudible" to the human ear except under quiet conditions in controlled environments. Only "audible" changes in noise levels at sensitive receptor locations (i.e., 3 dBA or more) are considered potentially significant. A doubling of traffic flows (i.e., 10,000 to 20,000 vehicles per day) would be needed to create a 3 dBA CNEL increase in traffic-generated noise levels. A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas. Most people can detect changes in sound levels of approximately 3 dBA under normal, quiet conditions, and changes of 1 to 3 dBA are detectable under quiet, controlled conditions. Changes of less than 1 dBA are usually indiscernible. A change of 5 dBA is readily discernible to most people in an exterior environment. Based on this, the following thresholds of significance are used to assess traffic noise impacts at sensitive receptor locations:

- Greater than 1.5 dBA increase for ambient noise environments of 65 dBA CNEL and higher.
- Greater than 3 dBA increase for ambient noise environments of 60 to 64 CNEL.
- Greater than 5 dBA increase for ambient noise environments of less than 60 dBA CNEL.

PM peak-hour traffic volumes provided by LLG along the proposed project roadway segments in the traffic study area were used to analyze traffic noise increases from the proposed project (LLG 2022). The analysis compares Existing with Project PM peak-hour trips to Existing No Project PM peak-hour trips logarithmically to estimate the noise increase along study roadway segments. As shown in Table 17, *Project-Related Traffic Noise Increase*, project-related trips would result in a permanent noise level increase of up to 0.1 dBA CNEL or less along study roadway segments. The permanent traffic noise increase would less than 1.5 dBA CNEL in all cases. Therefore, project-related traffic noise would be less than significant.

Cumulative traffic noise increase was determined by comparing Future Plus Project to Existing No Project PM peak-hour trips. The resulting cumulative noise increase would be up to 0.3 dBA or less along study roadway segments. Cumulative increase would be less than 1.5 dBA CNEL in all cases. Therefore, cumulative traffic noise would be less than significant.

Table 17 Project-Related Traffic Noise Increase

	PM Peak-Hour Trips				dBA CNEL	
Roadway Segment	Existing No Project	Existing Plus Project	Future No Project	Future Plus Project	Project Noise Increase	Cumulative Noise Increase
Paramount Boulevard north of Washington Boulevard	1,975	1,988	2,085	2,098	0.0	0.3
Paramount Boulevard south of Washington Boulevard	2,233	2,246	2,330	2,343	0.0	0.2
Washington Boulevard east of Paramount Boulevard	3,022	3,081	3,138	3,197	0.1	0.2
Washington Boulevard west of Paramount Boulevard	3,414	3,447	3,545	3,578	0.0	0.2
Crossway Drive north of Washington Boulevard	294	294	301	301	0.0	0.1

Table 17 Project-Related Traffic Noise Increase

Roadway Segment	PM Peak-Hour Trips				dBA CNEL	
	Existing No Project	Existing Plus Project	Future No Project	Future Plus Project	Project Noise Increase	Cumulative Noise Increase
Crossway Drive south of Washington Boulevard	550	550	566	566	0.0	0.1
Washington Boulevard east of Crossway Drive	2,818	2,877	2,927	2,986	0.1	0.3
Washington Boulevard west of Crossway Drive	2,730	2,789	2,836	2,895	0.1	0.3
Rosemead Boulevard north of Coffman and Pico Road	2,464	2,484	2,576	2,596	0.0	0.2
Rosemead Boulevard south of Coffman and Pico Road	2,418	2,438	2,528	2,548	0.0	0.2
Coffman and Pico Road east of Rosemead Boulevard	49	49	50	50	0.0	0.1
Coffman and Pico Road west of Rosemead Boulevard	125	125	130	130	0.0	0.2
Rosemead Boulevard north of Washington Boulevard	2,226	2,251	2,330	2,355	0.0	0.2
Rosemead Boulevard south of Washington Boulevard	2,192	2,212	2,299	2,319	0.0	0.2
Washington Boulevard east of Rosemead Boulevard	2,526	2,559	2,622	2,655	0.1	0.2
Washington Boulevard west of Rosemead Boulevard	2,556	2,592	2,657	2,693	0.1	0.2

Source: Traffic volumes from LLG Engineers, 2021.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact With Mitigation Incorporated.

Construction Vibration

Construction activities can generate varying degrees of ground vibration, depending on the construction procedures and equipment. Operation of construction equipment generate vibrations that spread through the ground and diminish with distance from the source. The effect on buildings near a construction site varies depending on soil type, ground strata, and receptor-building construction. The effects from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Vibration from construction activities rarely reaches the levels that can damage structures.

Vibration Annoyance

As mentioned in the above, the City's General Plan establishes groundborne vibration annoyance thresholds per FTA criteria. A significant impact would occur if vibration levels would exceed 72 VdB at sensitive receptors. Vibration from the project would be generated from temporary construction activities. To determine

average vibration levels at the nearest sensitive receptor, vibration levels are projected by measuring levels from the center of the project site. Since the project site is an "L" shape, it was divided into two portions to estimate two acoustical centers where construction would generally be located. The nearest acoustical center to single-family residences to the west would be approximately 95 feet away from the proposed project. The nearest acoustical center to single-family residences to the north would be approximately 210 feet away. As shown in Table 18, *Vibration Levels for Typical Construction Equipment*, vibration levels could potentially exceed the 72 VdB threshold at residences to the west during paving if a vibratory roller is used. Implementation of Mitigation Measure N-2 would reduce this impact to a level of less than significant.

Table 18 Vibration Levels for Typical Construction Equipment

Equipment	FTA Reference Vibration Levels VdB at 25 feet	VdB at Residences to west - 95 feet	VdB at Residences to north - 210 feet
Vibratory Roller	94	77	66
Large Bulldozer	87	70	59
Caisson Drilling	87	70	59
Loaded Trucks	86	69	58
Jackhammer	79	62	51
Small Bulldozer	58	41	30

Source: Federal Transit Administration (FTA), 2018.

Architectural Damage

For reference, a vibration level of 0.2 inches per second (in/sec) peak particle velocity (PPV) is used as the limit for non-engineered timber and masonry buildings, which is applied to the surrounding structures (FTA 2018). For reference, Table 19, *Vibration Levels for Typical Construction Equipment*, shows typical construction equipment produce vibration levels up to 0.21 in/sec PPV at a distance of 25 feet. A significant impact would occur if vibration levels would exceed 0.2 in/sec PPV at the façade of the surrounding structures. Construction activity could occur within 15 feet of sensitive receptors (single-family residences to the north and west). This would include grading and paving. As shown in Table 19, vibration levels could exceed 0.20 in/sec PPV. Specifically, if a vibratory roller is used within 25 feet of a residential structure and if grading equipment such as a large dozer operates within approximately 15 feet of a nearby residential structure. Therefore, impacts would be potentially significant. With implementation of Mitigation Measure N-2, impacts associated to vibration-induced architectural damage would be reduced to less than significant.

Table 19 Vibration Levels for Typical Construction Equipment

Equipment	FTA Reference Vibration Levels PPV (in/sec) at 25 feet	PPV (in/sec) at 15 feet to north and west
Vibratory Roller	0.21	0.45
Large Bulldozer	0.089	0.19
Caisson Drilling	0.089	0.19
Loaded Trucks	0.076	0.16
Jackhammer	0.035	0.08
Small Bulldozer	0.003	0.01

Source: Federal Transit Administration (FTA), 2018.

Operational Vibration

Operation of the proposed project would not include any substantial long-term vibration sources. Thus, no significant vibration effects from operation of the proposed project would occur.

Mitigation Measures

N-2 If paving activity during construction is required within 135 feet of nearby residential structures, use of a static roller in lieu of a vibratory roller shall be employed. Grading and earthwork activities within 15 feet of nearby residential structures shall be conducted with off-road equipment that is limited to 100 horsepower or less.

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?

No Impact. The nearest public airport is San Gabriel Valley Airport, approximately 7.5 miles northeast of the project site. People residing or working in the project area would not be exposed to excessive aircraft noise levels. There would be no impact.

3.14 POPULATION AND HOUSING

Would the project:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less Than Significant Impact.

Construction

Construction of the project would provide short-term jobs over an approximate 23-month period. Many of the construction jobs would be temporary and would be specific to the project site. It is anticipated that the

project-related construction labor force would already be located in the project vicinity and from the greater Los Angeles area, and workers would not be expected to relocate their places of residence as a consequence of working on the project. Therefore, temporary construction of the project would not be expected to induce substantial population growth or demand for housing, and a less than significant impact would occur.

Operation

State law requires SCAG to develop a Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) every four years. The most recent RTP/SCS, titled Connect SoCal, was adopted on September 3, 2020. The RTP/SCS is an important regional document to guide land use planning and transportation projects in the region. Demographic projections and changes in the region are therefore an essential component for the RTP/SCS. In conjunction with the RTP/SCS, SCAG develops the RHNA every eight years.

Table 20, *Population and Housing Growth Projections for the City of Pico Rivera*, indicates the growth projections for the city of Pico Rivera. Table 20 shows that the Connect SoCal projects that the city of Pico Rivera will experience a growth of 6.14 percent, 11.44 percent, and 9.24 percent in population, housing, and employment respectively, by 2045 based on 2016 levels. The proposed project would account for approximately 20.1 percent of the projected population growth and 13.4 percent of the projected housing unit growth between 2016 and 2045. The project site is identified in the City's housing element Area 11 site; these identified areas are targeted for rezoning so that the city can meet its RHNA allocation.

Table 20 Population and Housing Growth Projections for the City of Pico Rivera

	2016	2045	Change 2016-2045	Percent Increase	Proposed Project	2016 Plus Project
Population	63,500	67,400	3,900	6.14	812	64,312
Household	16,600	18,500	1,900	11.44	255	16,855
Employment	24,900	27,200	2,300	9.24	11	24,910
Job-Housing Ratio	1.50	1.47	-0.03	n/a	n/a	1.47

Source: SCAG. 2020, Final Connect SoCal Demographics and Growth Forecast Adopted, https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_demographics-and-growth-forecast.pdf?1606001579
Based on 550 square feet per employee (USGBC 2021)

The proposed project consists of the development of 255 new dwelling units and generate approximately 812 residents. For a conservative estimate, this analysis assumes that all 812 residents are new residents to the city of Pico Rivera, though a portion of the project residents may be existing city residents who decide to move to the project site. As shown in Table 20, the proposed project's anticipated population, household, and employment generation is within the anticipated growth for the city.

As shown in Table 20, SCAG projects that the City's jobs-housing ratio would be 1.47 in 2045. The jobs-housing ratio in 2045 would be 1.47 with the proposed project; therefore, there would be no change to the job-housing ratio with the implementation of the proposed project.

Additionally, the proposed project is located within an urbanized area and is served by existing utilities. The proposed project would not require road extensions nor extensions of other infrastructure beyond utility hook ups. The proposed project would not generate indirect population growth.

Since the proposed project would not generate unplanned population growth and would not generate indirect population growth, the operation of the proposed project would result in a less than significant impact.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The project site is developed, vacant land. As such, no existing persons or housing currently reside at the project site. For this reason, the proposed project would not displace persons or housing and no impact would occur.

3.15 PUBLIC SERVICES

This section is based in part on informational service letters and questionnaires that were sent out to each service provider covered by the topics in this section. Service provider letters are included as Appendix 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, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services.

a) Fire protection?

Less Than Significant Impact. Fire protection and emergency medical services in the city of Pico Rivera are provided by the Los Angeles County Fire Department (LACFD). Services include fire suppression, emergency medical, rescue and fire prevention, and hazardous materials coordination services. There are three existing fire stations within two miles of the project site, which include (see Figure 11, *Public Services Near the Project Site*, for the location of these three stations in relation to the project site):

- **Fire Station 103,** located at 7300 S. Paramount Boulevard, 0.6 miles from the project site.
- **Fire Station 25,** located at 9209 E. Slauson Avenue, 1 mile from the project site.
- **Fire Station 40,** located at 4864 S. Durfee Avenue, 1.6 miles from the project site.

According to the LACFD, the proposed project would receive fire protection services from Fire Station 103 which has a daily staffing of 7 uniform personnel, including a 3-person engine company, which is an engine company with some limited paramedic capabilities, and 4-person urban search and rescue (USAR) Task Force. The project site may also receive fire protection services from a 2nd due station, Fire Station 25 which is staffed with a 4-person engine company and includes daily staffing of 4 uniform personnel. The LACFD uses the national guidelines of 5-minute response time for first unit and 8-minute response time for advanced life support in urban areas. As of 2020, Fire Station 103 had an emergency response time of 5:21 minutes (Durbin 2021).

The proposed project would include new fire prevention infrastructure pursuant to current code requirements. Pico Rivera has adopted the California Fire Code (Title 24, Part 9 of the California Code of Regulations) in the city of Pico Rivera Municipal Code as Section 15.44.010, which regulates new structures related to safety provisions, emergency planning, fire-resistant construction, fire protection systems, and appropriate emergency access throughout a site. The proposed project's adherence to the existing fire code requirements would be verified as part of the regular permitting process. Additionally, a fire double detector check valve would be installed for the fire line, and two new fire hydrants would also be installed on-site.

As the project site is less than two miles from three fire stations, and the project would be constructed pursuant to existing California Fire Code regulations, the proposed project would not result in the need for new or physically altered Fire Department facilities that could cause significant environmental impacts. LACFD determined that proposed project would not result in a significant impact to fire services and LACFD anticipates that no major difference in service demand would occur due to the proposed project (Durbin 2021). As discussed in Section 3.14, *Population and Housing*, the proposed project's population and housing is consistent with the growth projections for the city of Pico Rivera. Further, the operation of the proposed project would contribute to property taxes and Special Tax that would help fund LACFD and hire more personnel, if needed. Development of the project would not result in the need for construction associated with an expansion of existing or development of a new fire station. Therefore, the project would result in less than significant impacts related to fire protection services.

b) Police protection?

Less Than Significant Impact. Pico Rivera policing services are provided by the Los Angeles County Sheriff's Department (LASD). The closest Sheriff's station is the Pico Rivera Sheriff's Station located at 6631 Passons Boulevard, 0.8 miles from the project site (see Figure 11). According to the LASD, the Pico Rivera Sheriff's Station typically has a daily staffing between 4-7 cars and 1-3 motorcycles. The LASD current response time within the service area is 34.5 minutes for routine calls, 9.3 minutes for priority calls, and 3.6 minutes for emergency calls, which is within policy standards. There are no existing deficiencies in police protection services within the city (Hutak 2021). The proposed project includes construction of 255 multi-family units and 5,730 square feet of commercial retail space within an existing commercial and residential area. As discussed in Section 3.14(a), the proposed project population and housing is within growth projections for the city of Pico Rivera. Typically, residential uses result in a higher demand for police protection services compared to other uses because residential uses add new residents to an area and result in more time spent at onsite (e.g., at home) compared to other uses (i.e., commercial uses). Therefore, while the proposed project may lead to an increase in demand for police protection services, such as increase in service calls and traffic enforcement, by adding new residents to the area, such an increase is within the projected growth for the city, and LASD has indicated that there are no existing deficiencies. The proposed project would also include design elements that would deter criminal activity, such as security gates, and residents-only key cards for the residential areas, as well as security lighting for the residential and commercial areas. LASD indicates that its primary source of funding for this station is through its contract with the city of Pico Rivera. The proposed project would be required to pay all applicable impact fees and would contribute to applicable taxes to continue funding the police station. These fees are in place to address any incremental development project impact and are to be used for infrastructure improvements and services. Development of the project would not result in the need for

construction associated with an expansion of existing or development of a new sheriff station. The proposed project would result in a less than significant impact to police services and no mitigation measures are required.

c) Schools?

Less Than Significant Impact. The El Rancho Unified School District (District) would serve the proposed project. The District serves grades kindergarten through 12, with one Elementary, one Middle School, and two High Schools. The proposed project site is within the school boundaries of Rio Vista Elementary School (grades K-5), Rivera Middle School (grades 6-8), El Rancho High School (grades 9-12), and Salazar Continuation High School. Table 21, *Schools Serving the Project Site*, summarizes each of the school's enrollment. Figure 11, *Public Services Near the Project Site*, shows the location of the four schools in relation to the project site.

Table 21 Schools Serving the Project Site

School	Distance from Project Site	Total Enrollment				
		2016-17	2017-18	2018-19	2019-20	2020-21
Rio Vista Elementary School	0.7 miles	445	475	473	481	456
Rivera Middle School	1 mile	646	631	596	584	550
El Rancho High School	1 mile	2,508	2,433	2,364	2,297	2,305
Salazar High School	1 mile	189	178	147	128	163

Source: California Department of Education, 2021, Data Quest, Annual Enrollment Data, https://dq.cde.ca.gov/dataquest/

Los Angeles Unified School District (LAUSD) student generation factors were used to determine the number of students that could be generated by the proposed project, by school level. The proposed project would construct 255 new dwelling units. Table 22, *New Student Generation Summary*, shows that the proposed project would conservatively generate approximately 59 elementary students, 16 middle school students, and 33 high school students.

Table 22 New Student Generation Summary

School Level	Dwelling Units	Generation Factor	Students
Elementary (TK-6)	255	0.2269	59
Middle (7-8)	255	0.0611	16
High (9-12)	255	0.1296	33
		Total	**108**

Sources: LAUSD, 2020 (March), 2020 Developer Fee Justification Study Los Angeles Unified School District.

The proposed project would be required to pay school impact fees, pursuant to SB 50, to reduce impacts to the school system. The school districts collect these fees at the time of issuance of building permits. The California legislature has found that funding program established by SB 50 constitutes "full and complete mitigation of the impacts" on the provision of adequate school facilities (Government Code Section 65995(h)). SB 50 sets

forth a state school facilities construction program that includes restrictions on a local jurisdiction's ability to demand mitigation of a project's impacts on school facilities in excess of fees in Education Code 17620.

The addition of students generated by the proposed project to area schools would not substantially increase enrollment. Development of the project would not result in the need for construction associated with an expansion of existing or development of new schools such that environmental impacts would result. Therefore, project-related impacts to school facilities would be less than significant.

d) Parks?

Less Than Significant Impact. The City of Pico Rivera has approximately 102 acres of developed park and recreation facilities (Pico Rivera 2014), and there are approximately 1.22 acres of developed parkland within a half-mile radius of the project site (California State Parks 2021). In addition to city parks, regional parks in Los Angeles County provide recreational opportunities for City of Pico Rivera residents. The Los Angeles County Regional Parks and Open Space District has identified 3.3 acres per 1,000 people as typical number of park users in the local and regional area. According to the California State Parks Department, there are three county parks located within 2.5 miles of the project site. The closest county parks are Amigo Park, located approximately 1.9 miles from the project site; Sorensen Park, located 2.1 miles from the project site; and McNees Park, located approximately 2.5 miles from the project site (Torres 2021).

Rio Vista and Smith Park are the closest city parks to the project site and are located approximately 0.5 miles north of the proposed project site. The City's General Plan identifies Smith Park as a community park of 16 acres with a multipurpose auditorium, baseball/softball fields, football/soccer stadium, basketball courts, picnic facilities, drinking fountains, Olympic-size swimming pool, parking lot, walking path, and maintenance yard. Rio Vista Park contains playground equipment, drinking fountains, picnic benches and barbeques, lit softball fields, outdoor restrooms, and outdoor basketball courts (Pico Rivera 2022). In addition to Smith Park and Rio Vista Park, 3 additional City-owned parks exist within 2 mile of the project site including Rivera Park, located approximately 1.4 miles from the project site; Rio Hondo Park, located approximately 1.8 miles from the project site; and Veterans and Ladies Auxiliary Park, located approximately 1.6 miles from the project site. Additionally, Table 23, *City and County Parks Near the Project Site,* provides a list of other parks and their facilities within close proximity to the project site, including Whittier Narrows Recreation Area. See Figure 11, *Public Services Near the Project Site*, for the location of the parks in relation to the project site.

According to the City's Healthy Communities Element, the City has a goal of providing three acres of parkland per 1,000 people. The City currently has a parkland ratio of approximately 1.3 acres per 1,000 residents, and there is approximately 0.21 acres of parkland per 1,000 residents within a half-mile radius of the project site (Torres 2021). Consistent with Policy 10.7-3 of the Healthy Communities Element of the General Plan, new residential development can either dedicate land onsite or contribute to in-lieu fees for project associated parkland space. Implementation of the proposed project would generate approximately 812 new residents who, conservatively assuming all come from outside of Pico Rivera, would create an additional demand for park resources. This demand for park services would be met in part by providing on-site recreational amenities and open space onsite. The proposed project includes the development of approximately 17,010 square feet of rooftop pool/community recreation for residents. The ground floor includes 28,770 square feet of public and

private common open space. Each residential unit would also have a balcony. The proposed project's demands for park space would be partially offset by the provision of open space and recreational uses on-site. In addition to the onsite recreational facilities for residents and open space, the proposed project would be required to applicable pay park and recreation in-lieu fees. Provision of recreational and open space facilities onsite along with the payment of in-lieu fees would ensure that the proposed project would not warrant the need for new or physically altered facilities. Therefore, the impact for the proposed project related to parks would be less than significant.

e) Other public facilities?

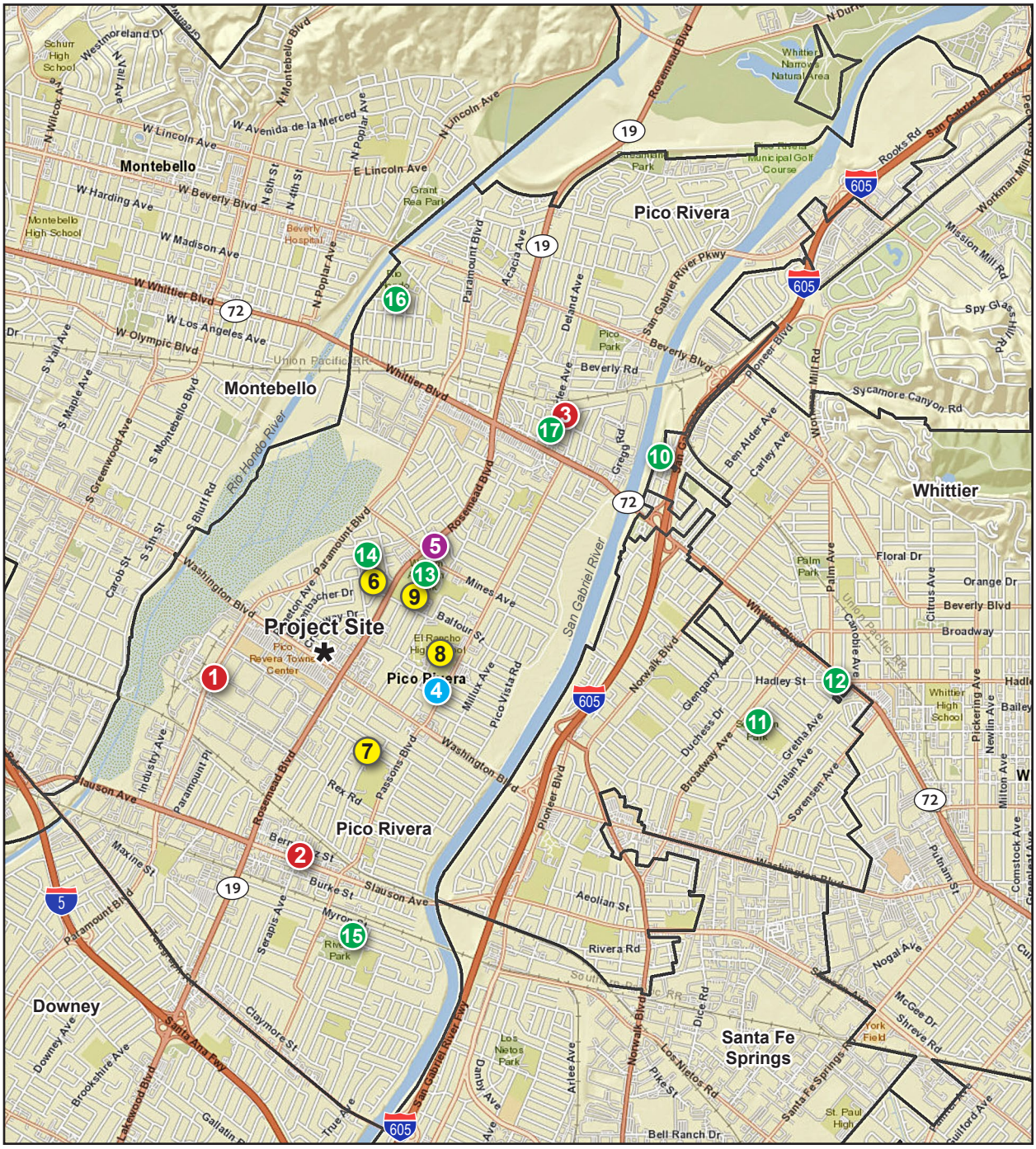
Less Than Significant Impact. In addition to the public facilities discussed in Sections 3.15(a) to (d), this analysis anticipates that a portion of the project residents would use public libraries. The city of Pico Rivera is served by the Los Angeles County Public Library system. As shown in Figure 11, the project site is served by the Pico Rivera Library located at 9001 Mines Avenue located one mile northeast of the project site (Patrick 2021). The Los Angeles County Public Libraries operates four additional libraries within 5 miles of the project site. These include Chet Holifield Library, Sorensen Library, Los Nietos Library, and Rivera Library. According to the Los Angeles County Library, service level guidelines entail a minimum of 0.5 gross square foot of library facility space per capita, 3.0 items (books and other library materials) per capita for regional libraries and 2.75 items per capita for community libraries, and 1.0 public access computer service per 1,000 people served. Currently, the Pico Rivera Library contains 54,502 collection items, 32 public access computers, and 16,000 square feet of facility space, which does not meet the minimum requirement of for the existing population of the service area by 55,974 collection items, 8 public access computers, and 4,087 square feet of facility space.

The service letter response from Los Angeles County Library (LACL) indicates that Pico Rivera Library is not currently meeting its minimum requirements for the population of the service area based on the service level guidelines (see Appendix E). The proposed project would contribute to this deficiency. The LACL has indicated that the anticipated population growth associated with the proposed project would result in the need for an additional 2,208 collection items, 1 public access computer, and 402 square feet of facility space for the library. To meet the service demands of the current population and the proposed project (cumulative), the library would require a total of 112,684 collection items, 41 public access computers, and 20,488 square feet of facility space. However, LACL indicates that the proposed project would not result in the need for a physical expansion of library facilities (Patrick 2021). While the closest library to the project site is the Pico Rivera library, the proposed project's residents can assess any library in the LACL network. In addition to physical collection items, the Los Angeles County Library provides access to a digital library which includes online resources such as eBooks, audiobooks, and digital magazines.

While the addition of project residents would not result in a substantially adverse physical change to library facilities or warrant the need for new or physically altered facilities, additional service needs are requested, which would be coordinated between the Library, the City, and the project applicant directly. The need for materials or funds would not result in a physical change in the environment. Additionally, operation of the proposed project would contribute to funding sources that support the Los Angeles County library system, such as property taxes. As development occurs, property tax revenue should grow proportionally with the property tax collections. Therefore, with access to online resources, and the proposed project' payment of property taxes,

the proposed project would not have a substantial impact associated with the provision of new or physically altered facilities; impacts to libraries would be less than significant.

Figure 11 - Public Services near the Project Site



City Boundary

1. Fire Station 103
2. Fire Station 25
3. Fire Station 40
4. Pico Rivera Sheriff's Station
5. Pico Rivera Library
6. Rio Vista Elementary School
7. Rivera Middle School
8. El Rancho High School
9. Salazar High School
10. Amigo Park - County Park
11. Sorensen Park - County Park
12. McNees Park - County Park
13. Smith Park
14. Rio Vista Park
15. Rivera Park
16. Rio Hondo Park
17. Veterans and Ladies Auxiliary Park

0 4,000
Scale (Feet)

Source: ESRI, 2022

3. Environmental Analysis

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3.16 RECREATION

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?

Less Than Significant Impact. The city of Pico Rivera has approximately 102 acres of developed park and recreation facilities (Pico Rivera 2014). Recreation facilities in the city include, but are not limited to, the Sports Arena/Bicentennial Park Campground, Pico Rivera Community Gardens, Pico Rivera Youth Center, Pico Rivera Senior Center, and Centre for the Arts. In addition to city parks, regional parks in Los Angeles County provide recreational opportunities for city of Pico Rivera residents. Whittier Narrows Recreation Area, Whittier Narrows Natural Area/Nature Center, Whittier Narrows Golf Course, Amigo Park, and Pio Pico State Historical Parks are regional parks and recreation facilities which would also be available to project site residents.

Rio Vista and Smith Park are the closest City parks to the project site; both are approximately 0.5 miles north of the project site. The City's General Plan identifies Smith Park as a community park of 16 acres with multipurpose auditorium, baseball/softball fields, football/soccer stadium, basketball courts, picnic facilities, drinking fountains, Olympic-size swimming pool, parking lot, walking path, and maintenance yard. Rio Vista Park contains playground equipment, drinking fountains, picnic benches and barbeques, lit softball fields, outdoor restrooms, and outdoor basketball courts (Pico Rivera 2022). In addition to Smith Park and Rio Vista Park, six additional parks exist within two mile of the project site (see Table 23, *City and County Parks near the Project Site*).

The closest regional park to the project site is Amigo Park, approximately 2 miles to the northeast. This regional park is approximately 4 acres, and equipped with softball fields, children's play area, multipurpose field, picnic area, and walking and biking trails. Whittier Narrows Natural Area and Nature Center is approximately 4 miles to the northeast, and the 133-acre regional park is characterized by a 400-acre sanctuary of riparian woodland that borders the San Gabriel River, four lakes, many plants and animal natives to wetlands, and winter sanctuary for migrating waterfowl. Other park amenities also include civic art, animal exhibits, picnic tables, libraries, museums, and nature centers.

As discussed under Section 3.15(d), the proposed project's park and recreation demand would be met by a combination of onsite amenities and payment of in-lieu fees. Provision of onsite recreational amenities along with the payment of in-lieu fees would ensure that the proposed project's residents would not 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. Therefore, a less than significant impact on city and regional recreation facilities would occur.

Table 23 City and County Parks near the Project Site

Park	Location	Facilities/Resources
Amigo Park – County Park	5700 Juarez Ave, Whittier, CA 90606 1.9 miles from project site	Equipped with softball fields, children play area, multipurpose field, picnic area, and walking and biking trails
Sorensen Park – County Park	11419 Rose Hedge Dr, Whittier, CA 90606 2.1 miles from project site	Baseball and softball fields, play structures, basketball courts, and green space
McNees Park – County Park	11590 Hadley Blvd. Whittier, CA 90606 2.5 miles from project site	Green space
Smith Park	6016 Rosemead Boulevard Pico Rivera, CA 90660 0.5 mile from project site	A community park of 16 acres with multipurpose auditorium, baseball/softball fields, football/soccer stadium, basketball courts, picnic facilities, drinking fountains, Olympic-size swimming pool, parking lot, and maintenance yard
Rio Vista Park	8751 Coffman and Pico Rd, Pico Rivera, CA 90660 0.5 mile from project site	Sports focused public recreation area
Rivera Park	9530 Shade Ln, Pico Rivera, CA 90660 1.4 miles from project site	Baseball and softball fields, handball courts, picnic facilities and play equipment
Rio Hondo Park	P, 8421 San Luis Potosi, Pico Rivera, CA 90660 1.8 miles from project site	13 acres of multipurpose auditorium, play structures, fields, and hard courts.
Veterans and Ladies Auxiliary Park	4904 Durfee Ave, Pico Rivera, CA 90660 1.6 miles from project site	Play structures and benches

Source: Pico Rivera, 2014, Pico Rivera General Plan Healthy Community Element.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

Less Than Significant Impact. As discussed under Sections 3.15(d) and 3.16(a), the proposed project's park and recreation demand would be met by a combination of area recreational facilities, onsite amenities and payment of in-lieu fees. The proposed project includes the development of public and private recreational uses and open spaces. The ground floor of the proposed project development would include 28,770 square feet of private and common public open space (passive, plaza-type green spaces). Additionally, the roof would include private space consisting of a pool and recreational facilities, such as a gym and clubhouse, for residents and their guest, totaling to 17,010 square feet. The proposed project does not involve the construction of recreational facilities beyond what is proposed on-site. Therefore, a less than significant impacts would occur under the proposed project.

3.17 TRANSPORTATION

This section is based in part on the *Transportation Impact Analysis Report, The Mercury Project, City of Pico Rivera, California* (Traffic Report), April 26, 2022, prepared by Linscott, Law & Greenspan, Engineers (LLG) (Appendix F).

Would the project:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less Than Significant Impact. A significant impact may occur if the proposed project conflicts with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. The City's Circulation Element sets forth goals and policies pertaining to complete streets, transit and public transportation, bicycle routes and pedestrian facilities, and safety, among others. The proposed project would support the City's Circulation Element.

The proposed project supports Goal 5.1 of the Circulation Element, which promotes active living, improves local air quality, and enhances the livability of the community through an integrated multimodal network that serves all users and offers convenient mobility options. The proposed project supports Goal 5.4, which promotes a balanced transportation system where bicycling and walking are alternative methods to the automobile. The proposed project supports Policy 5.1-4, which addresses smart growth development that integrates transportation and land use decisions to promote development that is compact, walkable, and transit oriented. Public transit service in the vicinity of the project is currently provided by the Los Angeles County Metropolitan Transportation Authority (Metro), Montebello Transit, and Norwalk Transit. A total of nine public transit routes provide service near the project site, which includes 40 buses or trains during peak AM hours and 41 buses or trains during peak PM hours. The proposed project would also provide pedestrian and bicycle facilities on-site and would support the use of public transportation, as further discussed below.

The proposed project is located along Washington Boulevard, which is currently served by public bus transit service provided by Montebello Bus Line 50. The project site is within proximate walking distance from existing bus stops along Washington Boulevard. The proposed project would not affect access or safety at the existing bus stops, nor is it expected to hinder public transit service along Washington Boulevard. According to Los Angeles County Metropolitan Transportation's (Metro) website, Metro is currently proceeding with the CEQA EIR process for the Eastside Transit Corridor Phase 2 (Metro project) which proposes an extension of the Metro L (Gold) Line and includes a station at Rosemead and Washington Boulevard, near the project site. Metro's project funding and schedule includes two cycles for funding and anticipated development, cycle one in 2029 and cycle two in 2053 (Metro 2021). The Metro project would provide more accessibility to the project site and for residents and customers to travel within Pico Rivera and surrounding communities. Development of the proposed project would not prevent the City from completing any proposed transit, bicycle, or pedestrian facilities.

The proposed project is located adjacent to the Pico Rivera Marketplace and would provide pedestrian accessibility within the Pico Rivera Marketplace and to Rosemead and Washington Boulevards. The proposed

project would include short-term and long-term bicycle facilities on-site. The proposed project would be designed to encourage pedestrian activity and walking to transit opportunities and the adjacent commercial areas. The Walkability score for the project site is approximately 81 (Very Walkable) out of 100. Walkability is a term for the extent to which walking is readily available as a safe, connected, accessible, and pleasant mode of transport. Walkways are planned within the proposed project, which will connect to adjacent sidewalks in a manner that promotes walkability. The proposed project's location near public transit, provisions of on-site bicycle facilities, and connecting pedestrian access to the existing sidewalks promotes active living, healthy air quality, a multimodal network, and smart-growth development principles. Further, the proposed project would not preclude the City from constructing bicycle facilities or pursuing bicycle network improvements along local roadways adjacent to the project site.

Proposed project features would include landscaped pedestrian walkways connecting facilities within the site, as well as connections with the adjacent public sidewalks on Washington Boulevard and connections to the Pico Rivera Marketplace. The proposed project also includes street tees and streetscaping plants along public frontages in accordance with the City's standards to increase tree canopy and provide safe and inviting new pedestrian network. These design features would further support Policy 5.4-3, Continuous Network, and Policy 5.4-6, Pedestrian Network.

The proposed project would support Goal 5.2, which aims at providing a safe and efficient movement of people, goods, and services. As further discussed in Checklist Question, 3.17(c), the proposed project driveways would not impede traffic movement along Washington Boulevard. Additionally, the proposed project's design would incorporate transportation demand management (TDM), including increase residential density, integrated affordable and below market rate housing, and limited residential parking supply (further discussed below) that would reduce the number of vehicles leaving the project site.

The proposed project would not have a significant impact on active transportation or public transit in the vicinity of the project site. The proposed project would accommodate pedestrian and bicycle access via exclusive walkways that connect the proposed project to the public sidewalks. The walkways minimize the extent of pedestrian and bicycle interaction with vehicles at the site and provide a comfortable, convenient, and safe environment, which in turn can encourage use of active transportation modes. The project site is further planned to provide bicycle parking facilities for use by residents, retail employees, and the public and accessibility to existing and proposed bicycle lanes near the project site. The proposed project is therefore found to be in alignment with the City's General Plan Circulation Element goals and policies to promote pedestrian and bicycle safety and provide appropriate and supportive active transportation infrastructure.

The proposed project would be consistent with the General Plan's goals and policies, and the proposed project is not found to result in conflicts with adopted policies, plans, or programs, nor is it expected to negatively affect the performance or safety of existing or planned pedestrian, bicycle, or transit facilities. It is determined that the proposed project would have a less than significant impact on transit, roadway, bicycle, and pedestrian facilities in the vicinity of the project site.

b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?

Less Than Significant Impact. The City has adopted thresholds of significance for determining impacts related to vehicle miles traveled (VMT) consistent with the California Office of Planning and Research's Technical Advisory. The City has adopted the County of Los Angeles Transportation Impact Analysis Guidelines which are used to determine whether a project would adequately reduce total VMT, and as such determined the following screening criteria for certain land development projects that may be presumed to result in a less than significant VMT impact:

- Projects that result in a net increase of 110 or less daily vehicle trips
- Projects located in a High-Quality Transit Area (i.e., within half-mile distance of an existing rail transit station or located within half-mile of two or more existing bus routes with a frequency of service interval of 15 minutes or less during morning and evening peak hours)
- Project is locally serving retail (less than 50,000 square feet), including gas stations, banks, restaurants, shopping center.
- Local-serving community colleges, K-12 schools, local parks, daycare centers, etc.
- Residential projects with 100 percent affordable housing
- Community institutions project (public library, fire station, local government)
- Local-serving hotels (e.g., non-destination hotels)
- Local-serving assembly uses (places of worship, community organizations)
- Public parking garages and parking lots
- Assisted living or senior housing projects
- Affordable, supportive, or transitional housing projects

Projects are not required to satisfy all the screening criteria to screen out of further VMT analysis; satisfaction of one criterion is sufficient for screening purposes. Although the commercial (retail/restaurant) portion of the project qualifies for screening out of a VMT analysis because it would be less than 50,000 square feet (5,730 square feet proposed) and therefore locally serving, a VMT analysis is still required for the residential component of the proposed project because it does not meet one of the criteria above to be screened out.

The most readily available Southern California Association of Governments Regional Travel Demand Model (SCAG RTDM) was used to determine the residential VMT per capita for the city of Pico Rivera. The baseline residential VMT per capita utilizing SCAG RTDM for the city of Pico Rivera is provided below:

- City of Pico Rivera residential VMT: 14.39 residential VMT per capita

- Residential significance threshold: 12.23 VMT per capita (i.e., 15% below the existing baseline residential VMT per capita)

As the commercial (retail/restaurant) portion of the proposed project screens out, since it is less than 50,000 square feet and therefore locally-serving, the residential VMT per capita associated with the proposed project was compared to the city of Pico Rivera baseline residential VMT per capita in order to determine whether or not the proposed project would be expected to result in a significant impact.

Project-specific regional travel demand modeling was conducted using the SCAG Regional Travel Demand Model (RTDM). The proposed project is located within Traffic Analysis Zone 21804400. The proposed project totals were converted into socio-economic data, which describes both demographic and economic characteristics of the region by Traffic Analysis Zone and were then coded into the SCAG RTDM. The VMT analysis results for the residential component of the proposed project using the SCAG RTDM estimates the residential VMT per capita for the proposed project to be 14.13 residential VMT per capita.

The 2021 California Air Quality Pollution Control Officers Association (CAPCOA) *Handbook for Analyzing Greenhouse Gas Emissions Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* provides a comprehensive set of guidelines for assessing and quantifying reductions in greenhouse gas emissions (GHG). Strategies to reduce vehicle miles traveled (VMT) are broadly referred to as transportation demand management (TDM) strategies due to the focus on reducing the amount of automobile travel generated by a project. The Handbook lists 30 quantified measures covering a total of six transportation sectors. The following three TDM strategies have been included as project design features. The combination of the following TDM measures results in a 14.49 percent reduction in VMT. More information regarding TDMs can be found in Appendix F, *Transportation Impact Analysis*.

- **Increase Residential Density (9.79%):** This measure accounts for the VMT reduction achieved by a project that is designed with a higher density of dwelling units compared to the average residential density in the country. When reductions are being calculated from a baseline derived from a travel demand model, the residential density of the relevant traffic analysis zone (TAZ) is used for the comparison instead. Increased densities affect the distance people travel and provide greater options for the mode of travel they choose. Increasing residential density results in shorter and fewer trips by single-occupancy vehicles and thus a reduction in VMT.

  The project-generated VMT is derived from the SCAG travel demand model data. Therefore, the proposed project's potential VMT reduction is determined by comparing the residential density in TAZ 21804400, the specific TAZ where the project is located within, without and with the residential development. The residential density of the TAZ was determined based on parcel-level data obtained from the Los Angeles County Office of the Assessor, which reports the type of residential development (e.g., single family, duplex, multi-family), the number of units, and the acreage of each parcel.

- **Integrated Affordable and Below Market Rate Housing (1.43%):** This measure requires inclusion of below market rate (BMR) housing. BMR housing provides greater opportunity for lower income families to live closer to job centers and achieve a jobs/housing match near transit. Increasing affordable housing

creates the opportunity for a greater diversity of people to be closer to their desired destinations and the resources they may need to access. Close proximity to destinations allows for more opportunities to use active transportation and transit and to be less reliant on private vehicles.

- **Limited Residential Parking Supply (3.84%):** This measure will reduce the total parking supply available at a residential project or site. Limiting the amount of parking available creates scarcity and adds additional time and inconvenience to trips made by private auto, thus disincentivizing driving as a mode of travel. Reducing the convenience of driving results in a shift to other modes and decreased VMT and thus a reduction in GHG emissions. This strategy changes the on-site parking supply to provide less than the amount of vehicle parking required by city of Pico Rivera Code. Based on published literature and other site-specific parking surveys of other mixed-use projects' actual peak parking demands, lower than Code-required parking supplies have been determined to be sufficient. Through the Specific Plan, lower parking requirements and types of supply within the project site are being incorporated to encourage smart growth development and alternative transportation choices by project residents and employees. The proposed residential on-site parking supply (i.e., a total of 464 spaces) is planned to be less than the amount of vehicle parking that would have otherwise been required for the residential portion of the project through strict application of the City's Code (i.e., a residential Code requirement of 573 spaces). Parking restrictions would be implemented and enforced at the existing Pico Marketplace to prohibit tenants from parking in the center overnight. The signage would also include verbiage that notes that any violations of the parking restriction are subject to towing.

With the application of TDM strategies discussed above, the proposed project would result in a 14.49-percent reduction in VMT. The residential VMT per capita for the proposed project would subsequently be reduced to 12.08 residential VMT per capita, which is below the calculated City significance threshold of 12.23 residential VMT per capita. Therefore, with the application of TDM strategies, the proposed project would result in a less than significant impact.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact. Vehicular access to the project site is planned to be accommodated by a total of three vehicle access points: one existing driveway on Washington Boulevard and two new vehicle access points on the eastern side of the project site that would provide access from Pico Rivera Marketplace. An existing driveway on Rosemead Boulevard would provide access to the project site through the Pico Rivera Marketplace. Descriptions of the proposed project site access driveways are provided below.

Existing Washington Boulevard Main Project Driveway

This existing driveway is on the north side of Washington Boulevard along the easterly property boundary directly west of the existing McDonald's restaurant and currently serves the existing McDonald's restaurant adjacent to the project site. This driveway would provide access to the main internal roadway surrounding the proposed project and to the gated subterranean parking entrance for the project. The driveway would continue to accommodate left-turn ingress and right-turn ingress and egress traffic movements (i.e., no left-turns out). No physical modifications are proposed at this driveway.

Existing Rosemead Boulevard Driveway

This existing driveway is on the west side of Rosemead Boulevard north of Washington Boulevard. This signalized driveway currently serves the existing Pico Rivera Marketplace and would also serve the proposed project. The driveway would continue to accommodate full access (i.e., left-turn and right-turn ingress and egress traffic movements).

The new vehicle access points on the east side of the proposed project site would be designed and constructed to ensure adequate vehicle and emergency access and provide a continuous path of travel within the Pico Rivera Marketplace. The proposed project does not include any major changes to roadways, driveways, or circulation. The proposed project's driveways and vehicular access points would not introduce hazardous design features. Additionally, the proposed project is a mixed-use project within an urban area and does not include incompatible uses such as farm equipment. As such, the proposed project does not represent an incompatible use. Therefore, the impact would be less than significant to geometric design features or incompatible uses.

d) Result in inadequate emergency access?

Less Than Significant Impact. Washington Boulevard and Rosemead Boulevard are designated as Major Roadways (Pico Rivera 2014) and are designated as disaster routes (LA County 2008) that may be used for emergency access during disaster. The proposed project would use the existing driveways from the major roadways located along the project site. Within the project site, vehicular circulation would be accommodated by a drive aisle which is adjacent to the east and north sides of the proposed building. The drive aisle would be no less than 28 feet wide in order to accommodate Fire Department access to the project site. Implementation of the proposed project would be limited to the project site and would not hinder vehicle access along Washington Boulevard nor Rosemead Boulevard. Therefore, the proposed project would result in less than significant impacts to emergency access.

3.18 TRIBAL CULTURAL RESOURCES

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).

No Impact. The proposed project site has been previously developed and disturbed. The project site does not meet any of the historic resource criteria and does not meet the definition of a historic resource pursuant to CEQA. Implementation of the project would not result in any substantial adverse change in a tribal cultural resource defined pursuant to PRC Section 5024.1 or PRC Section 5020.1 (k). No impact would occur.

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less Than Significant Impact with Mitigation Incorporated. The proposed project site is located within a highly urbanized area and has been previously developed and disturbed. The project site does not meet any of the historical resources criteria outlined in the PRC Section 5024.1. No known tribal cultural resources exist onsite.

In considering the significance of the resource to a California Native American tribe, the City contacted the Native American Heritage Commission (NAHC) for the listing of tribes with traditional lands or cultural places located within the boundaries of the project site and to search the Sacred Lands File (see Appendix G). The Sacred Lands File search yielded negative results (see Appendix G to this Addendum). NAHC also provided a list of seven Native American tribes with traditional lands or cultural places within the boundaries of the project site. These California Native American tribes include:

- Gabrieleño Band of Mission Indians - Kizh Nation
- Gabrieleño / Tongva San Gabriel Band of Mission Indians
- Gabrieleño / Tongva Nation
- Gabrieleño Tongva Indians of California Tribal Council
- Gabrieleño Tongva Tribe
- Santa Rosa Band of Cahuilla Indians
- Soboba Band of Luiseno Indians

The City sent out tribal consultation letters to the seven tribes via certified mail and email pursuant to Senate Bill 18 and Assembly Bill 52. The letter was sent to six tribes on May 14, 2021, and the letter was sent to Soboba Band of Luiseno Indians on June 17, 2021. The City received one request to consult from the Gabrieleño Band of Mission Indians – Kizh Nation. The City received a response from the Soboba Band of Luiseno Indians, which recommended that the city contact the Gabrieleño/Tongva San Gabriel Band of Mission Indians. The Gabrieleño/Tongva San Gabrieleño Band of Mission Indians was on the list provided by NAHC and received a tribal consultation letter. No response was received from this tribe. The City followed up with all tribes on NAHC list and did not receive additional responses.

The City held a consultation call with the Gabrieleño Band of Mission – Kizh Nation on March 15, 2022. Given input provided by the tribe during consultation, the project site's location in relation to sacred communities, sacred water courses, and traditional trade routes, and the level of proposed ground disturbance necessary during construction, the proposed project was determined to have a high potential to impact previously unidentified tribal cultural resources. As requested by the Gabrieleño Band of Mission Indians – Kizh Nation, the proposed project would implement mitigation measures TCR-1 through TCR-3.

3. Environmental Analysis

With incorporation of mitigation measures TCR-1 through TCR-3, project impacts to tribal cultural resources would be less than significant.

Mitigation Measures

TCR-1 Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities

- The project applicant/lead agency shall retain a Native American Monitor from or approved by the Gabrieleño Band of Mission Indians – Kizh Nation. The monitor shall be retained prior to the commencement of any "ground-disturbing activity" associated with the construction of the proposed project at all project locations (i.e., both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching.
- A copy of the executed monitoring agreement shall be submitted to the lead agency prior to the earlier of the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity.
- The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Tribe. Monitor logs will identify and describe any discovered tribal cultural resources, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the project applicant/lead agency upon written request to the Tribe.
- On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the Kizh from a designated point of contact for the project applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities on the project site or in connection with the project are complete; or (2) a determination and written notification by the Kizh to the project applicant/lead agency that no future, planned construction activity and/or development/construction phase at the project site possesses the potential to impact Kizh TCRs.
- Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the Kizh monitor and/or Kizh archaeologist. The Kizh will recover and retain all discovered TCRs in the form and/or

manner the Tribe deems appropriate, in the Tribe's sole discretion, and for any purpose the Tribe deems appropriate, including for educational, cultural and/or historic purposes.

TCR-2 Unanticipated Discovery of Human Remains and Associated Funerary Objects

- Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in Public Resources Code Section 5097.98, are also to be treated according to this statute.
- If Native American human remains and/or grave goods discovered or recognized on the project site, then all construction activities shall immediately cease. Health and Safety Code Section 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and all ground-disturbing activities shall immediately halt and shall remain halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe they are Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission, and Public Resources Code Section 5097.98 shall be followed.
- Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2).
- Construction activities may resume in other parts of the project site at a minimum of 200 feet away from discovered human remains and/or burial goods, if the Kizh determines in its sole discretion that resuming construction activities at that distance is acceptable and provides the project manager express consent of that determination (along with any other mitigation measures the Kizh monitor and/or archaeologist deems necessary). (CEQA Guidelines Section 15064.5(f).)
- Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods. Any historic archaeological material that is not Native American in origin (non-TCR) shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.
- Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.

TCR-3 Procedures for Burials and Funerary Remains

- As the Most Likely Descendant ("MLD"), the Koo-nas-gna Burial Policy shall be implemented. To the Tribe, the term "human remains" encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited

to, the preparation of the soil for burial, the burial of funerary objects with the deceased, and the ceremonial burning of human remains.

- If the discovery of human remains includes four or more burials, the discovery location shall be treated as a cemetery and a separate treatment plan shall be created.
- The prepared soil and cremation soils are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects. Cremations will either be removed in bulk or by means as necessary to ensure complete recovery of all sacred materials.
- In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials will be removed.
- In the event preservation in place is not possible despite good faith efforts by the project applicant/developer and/or landowner, before ground-disturbing activities may resume on the project site, the landowner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects.
- Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony will be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the project site but at a location agreed upon between the Tribe and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered.
- The Tribe will work closely with the project's qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be prepared and shall include (at a minimum) detailed descriptive notes and sketches. All data recovery data recovery-related forms of documentation shall be approved in advance by the Tribe. If any data recovery is performed, once complete, a final report shall be submitted to the Tribe and the NAHC. The Tribe does not authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains.

3.19 UTILITIES AND SERVICE SYSTEMS

Would the project:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less Than Significant Impact. The proposed project would connect sewer, storm drain, and water lines to existing infrastructure along Washington Boulevard.

Water Supply Facilities

The Pico Water District (District) provides water to the project site. The Pico Water District currently relies solely on groundwater and has a pumping allocation of 3,624 AFY, and has an average groundwater production of 2,780 AFY. The Pico Water District operates five wells with a combination pumping capacity of 7,500 gallons per minute, one booster pump station, and one reservoir with 1.25 million gallons of storage (Grajeda 2021).

The project site is currently served by an existing water line along the north side of Washington Boulevard, which provides the domestic water and fire water connections to the project site. An existing 8-inch water line that connects to Washington Boulevard and extends throughout the existing retail center parking lot area provides fire water service for the project site. The proposed project would connect to this existing water line. Based on the CalEEMod model conducted as part of the Air Quality and Greenhouse Gas Analysis (see Appendix A), the proposed project, including indoor and outdoor water use, is anticipated to be approximately 81,076 gallons per day (29,592,834 gallons per year or approximately 91 acre-feet per year), which is within the District's groundwater pumping capacity. Pico Water District's 2015 UWMP concludes there is an adequate and reliable supply of water to provide for existing demand and estimated growth through year 2040 (Pico Water District 2016). The proposed project does not meet the criteria for preparing a water supply assessment.[5] Since the proposed project, would not result in unexpected direct or indirect population growth as discussed in Section 3.14, *Population and Housing*, the proposed project would be within the UWMP's anticipated water demands.

As discussed in Section 1.3, *Project Description,* the proposed project would connect to an existing 8-inch water line in Washington Boulevard. As required by the Pico Water District, the proposed project would be reviewed by the Pico Water District in line with its Pico Water District's New Construction/Development Procedures, which outlines steps and procedures for water connection and service and implements water conservation standards and fire flow requirements (Pico Water District 2017). Since the proposed project is within the anticipated water demand of the UWMP, the proposed project would not result in or require the construction of new or expanded water facilities. The proposed project would result in a less than significant impact related to water supply and infrastructure.

[5] Water supply assessments are required for projects with more than 250,000 square feet of commercial floor space, a retail center with more than 500,000 square feet of floor space, or 500 dwelling units.

3. Environmental Analysis

Wastewater Treatment Facilities

The proposed project is anticipated to generate 32,398[6] gpd of wastewater. As discussed in the Community Facilities Element of the city of Pico Rivera General Plan, the city of Pico Rivera's Sewer Division is responsible for the collection of wastewater within the city's limits and delivery to the trunk sewer mains of Los Angeles County Sanitation District (LACSD) (Pico Rivera 2014). Existing sewer mains in the vicinity of the project site include an 8-inch sewer line within Goodbee Street and extends west into and through the project site in a 15-foot-wide sewer easement. The proposed project would provide sewer connection to the existing 8-inch line in the northwest corner of the project site and/or the sewer line along the northern border of the project site. The collected wastewater flows south towards the Los Coyotes Water Reclamation Plant of LACSD in the city of Cerritos. The LACSD is responsible for all trunk sewer line and treatment. The Los Coyotes Water Reclamation Plant has a design capacity of 37.5 mgd (LACSD 2021). The projected sewer demand of 32,398 gpd represents approximately 0.86 percent of the wastewater treatment plant's design capacity. As such, the proposed project would not result in or require the construction of new or expanded wastewater treatment facilities. The proposed project would result in a less than significant impact.

Stormwater Drainage Facilities

The project site is largely paved with impervious surfaces. The existing storm drain system in the project site area includes a parkway culvert storm drain system on the north side of Washington Boulevard that collects existing street drainage flows from Washington Boulevard as well as on-site runoff and off-site adjacent properties runoff, and runoff from the tributary located in the existing residential uses to the north. The proposed project would include a storm drain system to collect, treat, and convey stormwater into the existing storm drain system and introduce pervious landscaping on the project site. Therefore, the proposed project would result in a less than significant impact and no mitigation measures are required.

Electricity Facilities

SCE provides electricity to the project site. As discussed in Section 1.3, *Project Description*, the proposed project would connect to existing facilities in the public right-of-way. The proposed project would not require new or expanded electric power facilities other than connections to the existing electricity grid. The proposed project would result in a less than significant impact and no mitigation measures are required.

Natural Gas Facilities

SoCalGas provides natural gas service to the city of Pico Rivera, including the project site. The availability of natural gas service is based on present gas supply and regulatory policies. As a public utility, SoCalGas is under the auspices of the California Public Utilities Commission and federal regulatory agencies. Should these agencies take any action that affects gas supply or the conditions under which service is available, gas service would be provided in accordance with revised conditions. Development of the proposed project would comply with regulations and standards pertaining to natural gas and would connect to the existing natural gas

[6] 32,398 gpd is based on the generation rates provided in the 2006 City of Los Angeles CEQA Guidelines. Studio Generation Rate: 80 gpd/DU, 1 Bedroom Generation Rate 120 gpd/DU, 2 Bedroom Generation Rate 160 gdp/DU, 3 Bedroom Generation Rate 200 gpd/DU, Retail Space 80gpd/1,000 sq.ft., and Lobby Space 80gpd/1,000 sq.ft.

infrastructure. The proposed project would result in a less than significant impact and no mitigation measures are required.

Telecommunication Facilities

A variety of telecommunication facilities, including telephone, cable television, and high-speed internet services, exist in the city of Pico Rivera, and are provided by private service providers. As such, the area is adequately served by telecommunications facilities. The proposed project would include on-site connections to off-site telecommunication services and facilities in the immediate area of the project site. Facilities and infrastructure for the various telecommunication providers are adequate to serve the needs of the proposed project. The proposed project would not result in or require the construction of new or expanded telecommunication facilities. The proposed project would result in a less than significant impact and no mitigation measures are required.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Less Than Significant Impact. The Pico Water District supplies water to the project site. The Pico Water District uses groundwater from the Central Basin Groundwater Basin. The basin is replenished by snowmelt in the Sierra Nevada and precipitation. It is also replenished by the Water Replenishment District of Southern California, by spreading tertiary-treated recycled water purchased from LACSD and surface water from MWD (Pico Water District 2021).

Pursuant to California Water Code Sections 10610 through 10657 (Urban Water Management Planning Act), urban water suppliers are required to prepare, adopt, and file a UWMP. The city of Pico Rivera adopted the Pico Water District 2015 UWMP in May 2016. The UWMP evaluates the Pico Water District's water supply and demand reliability for 25 years into the future (Pico Water District 2016). Pico Water District's 2015 UWMP concludes that there is adequate and reliable supply of water to provide for existing demand and estimated growth through the year 2040. The UWMP determined that the Pico Water District is capable of meeting customer water demands during normal-year, single-dry-year, and multiple-dry-year conditions.

The proposed project is expected to generate water demand of 81,076 gallons per day (29,592,834 gallons per year or approximately 91 acre-feet per year), which includes both indoor and outdoor water use. As discussed in Section 3.19(a), Pico Water District has a remaining groundwater pumping capacity of 844 AFY, and the proposed project's water demand is well within the remaining capacity. The proposed project is consistent with the city's anticipated growth projection, and therefore is not anticipated to adversely affect the Pico Water District's water supplies. Additionally, the Pico Water District would review the proposed project consistent with the Pico Water District's New Construction/Development Procedures, which outlines steps and procedures for water connection and service and implements water conservation standards and fire flow requirements (Pico Water District 2017). The proposed project would result in a less than significant impact related to water supply.

c) 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?

Less Than Significant Impact. As discussed above, existing sewer mains in the vicinity of the project site include an 8-inch sewer line within Goodbee Street and extends west into and through the project site in a 15-foot-wide sewer easement. The proposed project would provide sewer connection to the existing 8-inch line in the northwest corner of the project site and/or the sewer line along the northern border of the project site. The flows would be conveyed to the Los Coyotes Water Reclamation Plant in the city of Cerritos that is operated by the LACSD. The facility provides both primary, secondary, and tertiary treatment for approximately 37.5 mgd. The proposed project would generate approximately 32,398 gpd of additional wastewater, which would be accommodated by the Los Coyotes Water Reclamation Plant (LACSD 2021). Therefore, impacts related to wastewater treatment capacity would be less than significant.

d) 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?

Less Than Significant Impact. According to the Los Angeles Countywide Integrated Waste Management Plan, 19 landfills across southern California accept solid waste from incorporated cities and unincorporated areas of Los Angeles County. Of these landfills, 15 landfills currently accept various categories of solid waste from the "other" category, which would include the city of Pico Rivera, and have a total remaining capacity of 573.6 million tons of solid waste. The nearest Los Angeles County Landfill is the Savage Canyon Landfill located 5 miles east of the project site (LA County 2020a). The Savage Canyon Landfill currently receives approximately 291 tons of solid waste per day and is permitted to accept 3,500 tons per day; it has a remaining permitted capacity of approximately 4,447,108 tons and is permitted to operate through 2055 (LA County 2020a; CalRecycle 2021).

Since there are no existing onsite structures, construction/demolition waste would be limited to paved areas. Regarding project operation, based on a solid waste generation of approximately 10 pounds per dwelling unit per day for multifamily and 0.006 pounds per square foot per day for commercial retail (CalRecycle n.d.), the mixed-use building would generate approximately 2,250 pounds per day from residential and 35 pounds per day from retail for a total of 2,285 pounds of solid waste per day or approximately 1.14 tons per day. Therefore, the proposed project would only account for 0.03 percent of the permitted solid waste accepted per day at Savage Canyon Landfill. Thus, the existing landfills that serve Los Angeles County have sufficient permitted capacity to accommodate the project's solid waste disposal need, and impacts would be less than significant.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less Than Significant Impact. The proposed project would result in new development that would generate an increased amount of solid waste. All solid waste-generating activities within the city of Pico Rivera are subject to the requirements set forth in Section 5.408.1 of the California Green Building Standards Code that requires demolition and construction activities to recycle or reuse a minimum of 75 percent of the nonhazardous construction and demolition waste, and AB 341 that requires diversion of a minimum of 75

percent of operational solid waste. Implementation of the proposed project would be consistent with all state regulations, as ensured through the City's project permitting process. Therefore, the proposed project would comply with all solid waste statute and regulations, and impacts would be less than significant.

3.20 WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. The proposed project site and the surrounding communities are not in a Very High Fire Hazard Severity Zone (VHFHSZ) designated by CAL FIRE (2021). The closest VHFHSZ is approximately 2.3 miles west of the project site, on the west side of the city of Whitter (CAL FIRE 2021). Additionally, the project site and the surrounding area are not in a Special Protection Area, as designated by the City's General Plan Safety Element (Pico Rivera 2014). Therefore, the proposed project would not substantially impair any emergency response or evacuation plans and no impact would occur.

b) 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?

No Impact. The proposed project site is in an urbanized area and is generally flat. As stated in Section 3.20(a), the project site is not in a VHFHSZ mapped by CAL FIRE or the city of Pico Rivera nor is it in a Special Protection Area identified in the city of Pico Rivera Safety Element (CAL FIRE 2021; Pico Rivera 2014). Since the proposed project site is not in or near state responsibility areas or lands classified as VHFHSZ, no impact would occur.

c) 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?

No Impact. As stated in Section 3.20(a), the proposed project site is not in a VHFHSZ mapped by CAL FIRE or the City, nor is it in a Special Protection Area identified in the City of Pico Rivera Safety Element (CAL FIRE 2021; Pico Rivera 2014). Additionally, the proposed project is within a highly urbanized area which has existing infrastructure; the proposed project would not require the installation or maintenance of infrastructure that would exacerbate fire risk as the project site is not within a VHFHSZ. Therefore, no impact would occur.

d) 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. As stated in Section 3.20(a), the project site is not in a VHFHSZ mapped by CAL FIRE or the City, nor is it within a Special Protection Area identified in the City of Pico Rivera Safety Element (CAL FIRE 2021; Pico Rivera 2014). The project site does not include, nor is adjacent to, slopes or hillsides that would become unstable. In addition, the proposed project would include a storm drain system to collect, treat, and

convey the stormwater into the existing storm drain system in Washington Boulevard. Therefore, no impact would occur.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant Impact. As discussed in Section 3.4, *Biological Resources*, the proposed project site though currently vacant, is primarily developed with paved and former parking areas. It therefore does not contain any special-status or sensitive biological resources. The proposed project would not substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a sensitive plant or animal community, or substantially reduce the number or restrict the range of a rare or endangered plant or animal.

As discussed in Section 3.5, *Cultural Resources*, the project site currently vacant, is primarily developed with paved and former parking areas. The proposed project therefore does not eliminate important examples of the major periods of California history and would not have an adverse impact on California's prehistoric cultural resources. Further, the proposed project would incorporate mitigation measure CUL-1, which provides procedures in the event of an accidental archaeological find. Adherence with applicable CUL-1 would ensure that impacts related to cultural resources is less than significant. Therefore, impacts would be less than significant and no additional mitigation measures are required.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less Than Significant Impact. As discussed previously in this Initial Study, the proposed project would have no impact, a less than significant impact, or a less than significant impact with mitigation measures to aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, energy, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, and wildfire. As discussed in Traffic Report (Appendix F) and consistent with the County's TIA guidelines, since the expected significant residential VMT per capita project-related impact can be reduced to a less than significant level, the proposed project would result in a less than significant cumulative impact related to VMT. Therefore, the proposed project would not result in failure to achieve short-term nor long-term environmental goals. Therefore, all impacts are individually limited and would not result in any cumulatively significant impact. Impacts would be less than significant, and no mitigation measures are required.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant Impact. As discussed in the previous analyses, the proposed project would not result in significant direct or indirect adverse impacts or result in substantial adverse effects on human beings. Impacts would be less than significant, and no mitigation measures are required.

4. References

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SUPPLEMENT TO THE MITIGATED NEGATIVE DECLARATION

DATE	January 18, 2023
TO	City of Pico Rivera Community and Economic Development Department
ADDRESS	6615 Passons Blvd Pico Rivera, CA 90660
CONTACT	Julia Gonzalez, Deputy Director
FROM	Addie Farrell, Principal in Charge Mariana Zimmermann, Project Manager
SUBJECT	Follow up to IS/MND based on Removal of Affordable Housing Component
PROJECT NUMBER	OPL-01

The Mercury Project Initial Study/Mitigated Negative Declaration (IS/MND) was circulated for a 30-day public review beginning Friday, July 8, 2022, and additional comments were received during the City of Pico Rivera Planning Commission hearing on November 21, 2022. PlaceWorks understands that the affordable housing component of the proposed project (13 dwelling units) is recommended for removal. The proposed project's 255 dwelling units would instead all be market rate - there would be no change to the total number of residential units or any other changes to the project as described in the Specific Plan or IS/MND. As a result of the removal of the affordable housing component, the proposed project's transportation demand management strategies were also updated to include the "Implement Subsidized or Discounted Transit Program" TDM strategy (see "Transportation" below). This supplemental memorandum demonstrates that the removal of affordable housing component does not result in a new significant impact and does not result in a substantial revision as defined by California Environmental Quality Act (CEQA) Guidelines Section 15073.5(b).

CEQA Guidelines Section 15073.5 requires recirculation of a negative declaration when the document must be substantially revised after public notice of its availability, but prior to adoption. CEQA Guidelines Section 15073.5(b) defines "substantial revision" as:

1) A new, avoidable significant effect is identified and mitigation measures or project revisions must be added in order to reduce the effect to insignificance, or

2) The lead agency determines that the proposed mitigation measures or project revisions will not reduce potential effects to less than significance and new measures or revisions must be required.

Recirculation is not required when "measures or conditions of project approval are added after circulation of the negative declaration which are not required by CEQA, which do not create new significant

environmental effects and are not necessary to mitigate an avoidable significant effect" (CEQA Guidelines Section 15073.5(c)(3)).

TRANSPORTATION

A transportation memo evaluating the revised project was prepared by Linscott Law & Greenspan (included as Attachment A to this memo).

The IS/MND for the proposed project identified three transportation demand management (TDM) strategies as project features to reduce vehicle miles traveled (VMT), including (1) increase residential density (9.79% reduction); (2) integrated affordable and below market rate housing (1.43% reduction); and (3) limited residential parking supply (3.84%). As the 13 units of affordable housing are not considered "market-rate" units, the "integrated affordable and below market rate housing" TDM strategy was replaced with the TDM strategy listed below. The new TDM strategy has been identified as an applicable project feature and replacement for the previously included CAPCOA TDM strategy (i.e., Integrate Affordable and Below Market Rate Housing) for the proposed project.

- Implement Subsidized or Discounted Transit Program: As a project feature, this measure would provide a 35% subsidy for project residents/units (one transit pass subsidized per unit) who demonstrate proof of purchase of a monthly transit pass from Metro. The number of transit passes subsidized each month would be limited to the equivalent of 10% of the total project units constructed so as to encourage utilization of the transit passes by project residents. The subsidized transit pass program would end when the Metro Eastside Transit Corridor Phase 2 becomes operational, resulting in greater public transit opportunities for all project residents.

The proposed TDM measure would reduce project VMT by 0.32 percent and when combined with the other project TDM strategies (Increase Residential Density and Limit Residential Parking Supply), results in an overall project VMT of 12.22 residential VMT per capita, which is below the City significance threshold of 12.23 residential VMT per capita. Accordingly, the revised project with the updated project feature, results in a less than significant transportation impact related based on the VMT metric.

The substitute TDM strategy (Implement Subsidized or Discounted Transit Program) has been identified as a project feature to replace the previously included TDM strategy. Accordingly, no further analysis or review of potential transportation impacts is required and the overall results and conclusions of the prior transportation impact analysis report remain valid. Therefore, this revision to the project's TDM Program will continue to ensure less than significant impacts related to consistency with CEQA Guidelines Section 15064.3, subdivision (b) of the CEQA Guidelines related to VMT (see pages 110-112 of the Initial Study/MND), and no measures are required. The shift of 13 dwelling units from affordable housing to market-rate housing does not represent a substantial revision to the IS/MND's VMT analysis, and the proposed project would continue to result in a less than significant impact to transportation. Recirculation is not required.

AIR QUALITY AND GREENHOUSE GAS EMISSIONS

As discussed above, the removal of the residential component would result in a VMT efficiency of 12.22 residential VMT per capita, which is 0.14 residential VMT per capita higher than the proposed project with the affordable housing component. However, the revised project's emissions would continue to be under the South Coast Air Quality Management District (South Coast AQMD) significance thresholds for air quality and GHG emissions, as identified in the IS/MND analysis, and the modifications to the proposed project would not result in a new environmental impact.

Modeling for air quality and GHG emissions in the IS/MND is conservatively based on residential VMT that is 11,746 miles per weekday. Based on the proposed project's residential population (see Table 3, *Residential*

Population, in the IS/MND), the revised proposed project would generate 9,923 total residential miles on a weekday (12.22 VMT/person x 812 people). As shown in Appendix A, *Air Quality and Greenhouse Gas Emissions Analyses,* to the IS/MND, the air quality and GHG emissions analyses conservatively evaluated residential VMT of 11,746 total residential miles on a weekday. Therefore, the shift of 13 dwelling units from affordable housing to market-rate housing does not represent a substantial revision to the IS/MND's air quality and GHG analyses, and the proposed project would continue to result in a less than significant impact to air quality and GHGs Recirculation is not required.

LAND USE CONSISTENCY

The proposed project would continue to provide 255 dwelling units comprised of studios, one bedrooms, two bedrooms, and three bedrooms. The proposed project would add to the City's housing stock and availability and would continue to help the City meet its housing needs. Therefore, the proposed project continues to be consistent with the City's Housing Element. The revised proposed project does not represent a substantial revision to the IS/MND's land use consistency analysis, and the proposed project would continue to result in a less than significant impact to land use and planning. Recirculation is not required.

CONCLUSION

As demonstrated above, the removal of the affordable housing component and incorporation of the "Implement Subsidized or Discounted Transit Program" TDM strategy, would not result in new, avoidable significant effects. The conclusions in the IS/MND continue to hold, and the IS/MND does not require recirculation. Recirculation is not required when "measures or conditions of project approval are added after circulation of the negative declaration which are not required by CEQA, which do not create new significant environmental effects and are not necessary to mitigate an avoidable significant effect" (CEQA Guidelines Section 15073.5(c)(3)).

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MEMORANDUM

To:	Addie Farrell Mariana Zimmermann PlaceWorks	Date:	January 16, 2023
From:	David S. Shender, P.E. Francesca S. Bravo Linscott, Law & Greenspan, Engineers	LLG Ref:	1-21-4418-1
Subject:	The Mercury Project – Supplemental Transportation Assessment		

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This memorandum has been prepared by Linscott, Law & Greenspan, Engineers (LLG) to summarize the supplemental transportation assessment prepared for the proposed Mercury project located in the City of Pico Rivera. LLG previously prepared the Transportation Impact Analysis Report dated July 5, 2022 for a prior project development program. The findings of the transportation impact analysis report were confirmed by the City of Pico Rivera's Contract Traffic Engineer on August 19, 2022.

LLG has prepared the updated project trip generation forecast based on the currently proposed modified project. Briefly, it is concluded that based on a review of the trip generation forecast, the proposed project is anticipated to generate a nominal change in traffic volumes during the AM and PM peak hours and on a daily basis. In addition, a substitute Transportation Demand Management (TDM) strategy (T-9: Implement Subsidized or Discounted Transit Program) has been identified as a project feature to replace a previously included TDM strategy. Accordingly, no further analysis or review of potential transportation impacts is required and the overall results and conclusions of the prior transportation impact analysis report remain valid.

Modified Project Description

The project site is located at 8825 Washington Boulevard, situated along the north side of Washington Boulevard, west of Rosemead Boulevard. The modified project consists of the development of 255 residential dwelling units ("market rate"), 5,730 square feet of commercial/retail space; 1,750 square feet of ground-floor lobby/leasing space; and 13,500 square feet of recreational amenities. The affordable housing component is no longer proposed to be part of the project. No changes to the site access and circulation scheme are proposed as part of the modified project. A breakdown of the residential and commercial components and their corresponding sizes is shown below:

Land Use	Prior Project	Modified Project
Multi-Family Housing	242 Dwelling Units	255 Dwelling Units
Affordable Housing	13 Dwelling Units	-
Retail	2,865 Square Feet	2,865 Square Feet
Restaurant	2,865 Square Feet	2,865 Square Feet

Updated Project Trip Generation

The updated trip generation forecast for the modified project is summarized in ***Table 1***. As shown in *Table 1*, the modified project is forecast to generate 109 vehicle trips (37 inbound trips and 72 outbound trips) during the AM peak hour and 134 vehicle trips (80 inbound trips and 54 outbound trips) during the PM peak hour. Over a 24-hour period, the proposed project is forecast to generate 1,608 daily trip ends during a typical weekday.

The prior project was forecast to generate 111 vehicle trips during the AM peak hour, 134 vehicle trips during the PM peak hour, and 1,594 vehicle trip ends during a typical weekday. When compared with the trip generation forecast for the project analyzed in the approved July 5, 2022 transportation impact analysis report, it is concluded that the trip generation forecast for the modified project description results in a minor increase in traffic volumes on a daily basis (14 trips). Additionally, the trip generation forecast for the modified project reflects a decrease of 2 vehicle trips during the AM peak hour and an equivalent number of vehicle trips in the PM peak hour when compared to the prior project. For comparison purposes, a copy of the trip generation forecast for the previously approved project is attached (Table 1 from the transportation impact analysis report).

The previous transportation impact analysis determined that project-related effects are not expected at the four analyzed intersections during the analyzed AM and PM peak hours. Thus, based on the relatively equivalent number of vehicle trips, the modified project is also not expected to result in any project-related effects at the study intersections during the peak hours.

Updated Project TDM Strategies

A review of the transportation demand management (TDM) strategies was also conducted due to the elimination of the affordable housing component for the proposed project. TDM Strategy T-4, Integrate Affordable and Below Market Rate Housing, is no longer an applicable project design feature for the proposed project.

As described in the July 5, 2022 transportation impact analysis report, the California Air Pollution Control Officers Association's (CAPCOA*) Handbook for Analyzing Greenhouse Gas Emissions Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*[1] ("2021 Handbook") provides a comprehensive list of TDM strategies.

[1] *Handbook for Analyzing Greenhouse Gas Emissions Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity Final Draft*, California Air Pollution Control Officers Association, December 2021, adopted December 15, 2021.

The TDM strategy below has been identified as an applicable project design feature and replacement for the previously included CAPCOA TDM strategy (i.e., T-4: Integrate Affordable/Below Market Rate Housing) for the project:

- T-9: Implement Subsidized or Discounted Transit Program:

  As a project feature, this measure would provide a 35% subsidy for project residents/units (one transit pass subsidized per unit) who demonstrate proof of purchase of a monthly transit pass from Metro. The number of transit passes subsidized each month would be limited to the equivalent of 10% of the total project units constructed so as to encourage utilization of the transit passes by project residents. The subsidized transit pass program would end when the Metro Eastside Transit Corridor Phase 2 becomes operational, resulting in greater public transit opportunities for all project residents.

The proposed TDM measure would reduce project VMT by 0.32% and when combined with T-1 (Increase Residential Density) and T-15 (Limit Residential Parking Supply), results in an overall project VMT of 12.22 residential VMT per capita, which is below the City significance threshold of 12.23 residential VMT per capita. Accordingly, the modified project with the updated project feature, results in a less than significant transportation impact related based on the VMT metric.

Summary

It is concluded that based on a review of the trip generation forecast, the modified Mercury project is anticipated to result in a nominal change in traffic volumes during the AM and PM peak hours and on a daily basis. In addition, a substitute TDM strategy (T-9: Implement Subsidized or Discounted Transit Program) has been identified as a project feature to replace the previously included TDM strategy. Accordingly, no further analysis or review of potential transportation impacts is required and the overall results and conclusions of the prior transportation impact analysis report remain valid.

Please feel free to contact us should you have any questions or comments regarding this supplemental transportation assessment.

Attachments

Table 1
MODIFIED PROJECT TRIP GENERATION [1]

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Apartment [3]	255 DU	1,387	24	68	92	68	44	112
- Less 15% Internal Capture/Captive Market [4]		(208)	(4)	(10)	(14)	(10)	(7)	(17)
Retail [5]	2,865 GLSF	108	2	1	3	5	6	11
Restaurant [6]	2,865 GSF	321	15	13	28	17	11	28
TOTAL		**1,608**	**37**	**72**	**109**	**80**	**54**	**134**

[1] Source: ITE "Trip Generation Manual", 10th Edition, 2017 and Transportation Assessment Guidelines (TAG), City of Los Angeles Department of Transportation (LADOT), July 2020.

[2] Trips are one-way traffic movements, entering or leaving.

[3] ITE Land Use Code 221 (Multi-Family [Mid-Rise]) trip generation average rates.
- Daily Trip Rate: 5.44 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.36 trips/dwelling units; 26% inbound/74% outbound
- PM Peak Hour Trip Rate: 0.44 trips/dwelling units; 61% inbound/39% outbound

[4] Source: ITE "Trip Generation Handbook", 3rd Edition, 2017 and the National Cooperative Highway Research Program (NCHRP) Report 684 - "Enhanced Internal Trip Capture Estimation for Mixed-Use Developments", 2011. Internal capture and Captive markets trips are trips made to and from other components of the project and other uses in the immediate vicinity of the site. A 15% internal capture/captive market reduction factor has been applied to reflect the internal trip making between the project land uses and other uses in the area.

[5] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
- Daily Trip Rate: 37.75 trips/1,000 SF; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.94 trips/1,000 SF; 62% inbound/38% outbound
- PM Peak Hour Trip Rate: 3.81 trips/1,000 SF; 48% inbound/52% outbound

[6] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.
- Daily Trip Rate: 112.18 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 9.94 trips/1,000 SF of floor area; 55% inbound/45% outbound
- PM Peak Hour Trip Rate: 9.77 trips/1,000 SF of floor area; 62% inbound/38% outbound

LINSCOTT LAW & GREENSPAN engineers

TRANSPORTATION IMPACT ANALYSIS REPORT

THE MERCURY PROJECT

City of Pico Rivera, California
July 5, 2022

Prepared for:

Optimus Properties, LLC
1801 Century Park East, Suite 2100
Los Angeles, California 90067

LLG Ref. 1-21-4418-1

Prepared by:

Francesca S. Bravo
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Table 2-1
PROJECT TRIP GENERATION [1]

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Apartment [3]	242 DU	1,316	23	64	87	65	41	106
- Less 15% Internal Capture/Captive Market [4]		(197)	(3)	(10)	(13)	(10)	(6)	(16)
Affordable Housing [5]	13 DU	54	3	4	7	3	2	5
- Less 15% Internal Capture/Captive Market [4]		(8)	0	(1)	(1)	0	0	0
Retail [6]	2,865 GLSF	108	2	1	3	5	6	11
Restaurant [7]	2,865 GSF	321	15	13	28	17	11	28
TOTAL		**1,594**	**40**	**71**	**111**	**80**	**54**	**134**

[1] Source: ITE "Trip Generation Manual", 10th Edition, 2017 and Transportation Assessment Guidelines (TAG), City of Los Angeles Department of Transportation (LADOT), July 2020.

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[4] Source: ITE "Trip Generation Handbook", 3rd Edition, 2017 and the National Cooperative Highway Research Program (NCHRP) Report 684 - "Enhanced Internal Trip Capture Estimation for Mixed-Use Developments", 2011. Internal capture and Captive markets trips are trips made to and from other components of the project and other uses in the immediate vicinity of the site. A 15% internal capture/captive market reduction factor has been applied to reflect the internal trip making between the project land uses and other uses in the area.

[5] LADOT trip generation average rates for Family Affordable Housing.
- Daily Trip Rate: 4.16 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.52 trips/dwelling unit; 38% inbound/62% outbound
- PM Peak Hour Trip Rate: 0.38 trips/dwelling unit; 55% inbound/45% outbound

[6] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
- Daily Trip Rate: 37.75 trips/1,000 SF; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.94 trips/1,000 SF; 62% inbound/38% outbound
- PM Peak Hour Trip Rate: 3.81 trips/1,000 SF; 48% inbound/52% outbound

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- PM Peak Hour Trip Rate: 9.77 trips/1,000 SF of floor area; 62% inbound/38% outbound

VMT Reduction Summary

Measure No.	Name	% VMT Reduction
Land Use		
T-1	Increase Residential Density	9.79%
	Land Use Subtotal	**9.79%**
Trip Reduction Programs		
T-9	Implement Subsidized or Discounted Transit Program	0.32% *
	Trip Reduction Programs Subtotal	**0.32%**

* Measure T-9 applies to residential VMT only.

Parking or Road Pricing/Management		
T-15	Limit Residential Parking Supply	3.84% *
	Parking or Road Pricing/Management Subtotal	**3.84%**

* Measure T-15 applies to residential VMT only.

Neighborhood Design	
Neighborhood Design Subtotal	**0.00%**
Transit	
Transit Subtotal	**0.00%**
Clean Vehicles and Fuels	
Clean Vehicles and Fuels Subtotal	No VMT Reduction
Total VMT Reduction	**13.53%**

CAPCOA 2021 Handbook
VMT Reduction Calculation Worksheets

Measure T-1. Increase Residential Density	
Subsector	Land Use
Measure Scale	Project/Site
Maximum Reduction	30.0%

Project VMT Reduction Due to Increased Residential Density		
B	Residential density of project development (du/acre)	8.9
C	Residential density of typical development (du/acre)	6.16
D	Elasticity of VMT with respect to residential density	-0.22
A	VMT Reduction = [(B - C) / C] * D	9.79%
	VMT Reduction	***9.79%***

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VMT Reduction Calculation Worksheets

Measure T-9. Implement Subsidized or Discounted Transit Program	
Subsector	Trip Reduction Programs
Measure Scale	Project/Site
Maximum Reduction	5.5%

Project VMT Reduction Due to Subsidized or Discounted Transit Program		
B	Average transit fare without subsidy ($)	$50.00
C	Subsidy amount ($)	$17.50
D	Percent of employees/residents eligible for subsidy	100.0%
E	Percent of project-generated VMT from employees/residents	100.0%
F	Transit mode share of all trips or work trips [1]	4.23%
G	Elasticity of transit boardings with respect to transit fare price	-0.43
H	Percent of transit trips that would otherwise be made in a vehicle	50.0%
I	Conversion factor of vehicle trips to VMT	1
A	VMT Reduction = (C/B) * G * D * E * F * H * I	0.32%
	VMT Reduction	***0.32%***

[1] Table T-3.1. Average Transit and Vehicle Mode Share of All Trips by California Core-Based Statistical Area

Core-Based Statistical Area	**Mode Share**	
	Transit	**Vehicle**
Los Angeles-Long Beach-Anaheim	4.23%	94.19%
Riverside-San Bernardino-Ontario	1.37%	96.88%
Sacramento-Roseville-Arden-Arcade	2.90%	95.04%
San Diego-Carlsbad	2.40%	94.85%
San Francisco-Oakland-Hayward	11.38%	86.96%
San Jose-Sunnyvale-Santa Clara	6.69%	91.32%

Table T-9.1. Average Transit Mode Share of Work Trips by California Core-Based Statistical Area

Core-Based Statistical Area	**Transit Mode Share of Work Trips**
Los Angeles-Long Beach-Anaheim	5.39%
Riverside-San Bernardino-Ontario	1.12%
Sacramento-Roseville-Arden-Arcade	5.44%
San Diego-Carlsbad	4.74%
San Francisco-Oakland-Hayward	25.60%
San Jose-Sunnyvale-Santa Clara	6.11%

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VMT Reduction Calculation Worksheets

Measure T-15. Limit Residential Parking Supply	
Subsector	Parking or Road Pricing/Management
Measure Scale	Project/Site
Maximum Reduction	13.7%

	Project VMT Reduction Due to Limiting Residential Parking Supply	
B	Residential parking demand (parking spaces)	542
C	Project residential parking supply (parking spaces) [1]	390
D	Percentage of project VMT generated by residents	100.0%
E	Percent of household VMT that is commute based	37.0%
F	Percent reduction in commute mode [2]	37.0%
A	VMT Reduction = -([B - C]/B) * D * E * F	3.84%
	Residential VMT Reduction	***3.84%***

[1] Parking supply is considered limited when demand exceeds supply. If demand is equal to or less than supply, then implementation of this measure would not result in VMT reductions.

[2] Percent reduction in commute mode share by driving among households in areas with scarce parking.

Appendix

Appendix A Air Quality and Greenhouse Gas Analyses

Appendix

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Air Quality and Greenhouse Gas Appendix

Air Quality and Greenhouse Gas Background and Modeling Data

AIR QUALITY

Climate/Meteorology

SOUTH COAST AIR BASIN

The project site lies in the South Coast Air Basin (SoCAB), which includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The SoCAB is in a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean in the southwest quadrant, with high mountains forming the remainder of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds (South Coast AQMD 2005).

Temperature and Precipitation

The annual average temperature varies little throughout the SoCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station nearest to the project site with temperature data is the Montebello, California Monitoring Station (ID No. 045790). The lowest average temperature is reported at 47.2°F in December, and the highest average temperature is 89.7°F in August (WRCC 2021).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from October through April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast, with slightly heavier shower activity in the east and over the mountains. Rainfall historically averages 14.78 inches per year in the project area (WRCC 2021).

Humidity

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog, especially along the coast, are frequent. Low clouds, often referred to as high fog, are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the (South Coast AQMD 2005).

Wind

Wind patterns across the south coastal region are characterized by westerly or southwesterly onshore winds during the day and by easterly or northeasterly breezes at night. Wind speed is somewhat greater during the dry summer months than during the rainy winter season.

Between periods of wind, periods of air stagnation may occur, both in the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During the winter and fall months, surface high-pressure systems over the SoCAB, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally continue a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the transport and diffusion of pollutants by inhibiting their eastward transport. Air quality in the SoCAB 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 (South Coast AQMD 2005).

Inversions

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, there are two similarly distinct types of temperature inversions that control the vertical depth through which pollutants are mixed. These are the marine/subsidence inversion and the radiation inversion. The combination of winds and inversions are critical determinants in leading to the highly degraded air quality in summer and the generally good air quality in the winter in the project area (South Coast AQMD 2005).

Air Quality Regulations

The proposed project has the potential to release gaseous emissions of criteria pollutants and dust into the ambient air; therefore, it falls under the ambient air quality standards promulgated at the local, state, and federal levels. The project site is in the SoCAB and is subject to the rules and regulations imposed by the South Coast Air Quality Management District (South Coast AQMD). However, South Coast AQMD reports to California Air Resources board (CARB), and all criteria emissions are also governed by the California and national Ambient Air Quality Standards (AAQS). Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized below.

AMBIENT AIR QUALITY STANDARDS

The Clean Air Act (CAA) was passed in 1963 by the US Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The CAA allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve

and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS, based on even greater health and welfare concerns.

These National AAQS and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect "sensitive receptors" most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based AAQS for seven air pollutants. As shown in Table 1, these pollutants include ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb). In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

Table 1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Ozone (O_3)[3]	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm	
Respirable Coarse Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m^3	150 µg/m^3	
Respirable Fine Particulate Matter ($PM_{2.5}$)[4]	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m^3	

Table 1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Lead (Pb)	30-Day Average	1.5 µg/m^3	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m^3	
	Rolling 3-Month Average	*	0.15 µg/m^3	
Sulfates (SO_4)[5]	24 hours	25 µg/m^3	*	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hours	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Source: CARB 2016.
Notes: ppm: parts per million; µg/m^3: micrograms per cubic meter
* Standard has not been established for this pollutant/duration by this entity.
1 California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2 National standards (other than O_3, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
3 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
4 On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
5 On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building and Energy Efficiency Standards

- Title 24, Part 11, CCR: Green Building Standards Code

CRITERIA AIR POLLUTANTS

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. Air pollutants are categorized as primary or secondary pollutants. Primary air pollutants are those that are emitted directly from sources and include CO, VOC, NO_2, SO_X, PM_{10}, $PM_{2.5}$, and Pb. Of these, CO, SO_2, NO_2, PM_{10}, and $PM_{2.5}$ are "criteria air pollutants," which means that ambient air quality standards (AAQS) have been established for them. VOC and oxides of nitrogen (NO_x) are air pollutant precursors that form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and NO_2 are the principal secondary pollutants. A description of each of the primary and secondary criteria air pollutants and their known health effects is presented below.

Carbon Monoxide (CO) is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion, engines and motor vehicles operating at slow speeds are the primary source of CO in the SoCAB. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation (South Coast AQMD 2005, USEPA 2021). The SoCAB is designated as being in attainment under the California AAQS and attainment (serious maintenance) under the National AAQS (CARB 2021a).

Volatile Organic Compounds (VOC) are compounds composed primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Other sources of VOCs include evaporative emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. There are no ambient air quality standards established for VOCs. However, because they contribute to the formation of ozone (O_3), South Coast AQMD has established a significance threshold for this pollutant (South Coast AQMD 2005).

Nitrogen Oxides (NO_x) are a byproduct of fuel combustion and contribute to the formation of O_3, PM_{10}, and $PM_{2.5}$. The two major forms of NO_x are nitric oxide (NO) and nitrogen dioxide (NO_2). The principal form of NO_2 produced by combustion is NO, but NO reacts with oxygen to form NO_2, creating the mixture of NO and NO_2 commonly called NO_x. NO_2 acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO_2 is only potentially irritating. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 part per million (ppm). NO_2 absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure (South Coast AQMD 2005, USEPA 2021). The SoCAB is designated as an attainment (maintenance) area under the National AAQS and attainment area under the California AAQS (CARB 2021a).

Sulfur Dioxide (SO_2) is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and from chemical processes at chemical plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO_2 (South Coast AQMD 2005, USEPA 2021). When sulfur dioxide forms sulfates (SO_4) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_X). Thus, SO_2 is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. At lower concentrations and when combined with particulates, SO_2 may do greater harm by injuring lung tissue. The SoCAB is designated as attainment under the California and National AAQS (CARB 2021a).

Suspended Particulate Matter (PM_{10} and $PM_{2.5}$) consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM_{10}, include the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004 inch) or less. Inhalable fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 microns (i.e., 2.5 millionths of a meter or 0.0001 inch) or less. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind action on arid landscapes also contributes substantially to local particulate loading (i.e., fugitive dust). Both PM_{10} and $PM_{2.5}$ may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems (South Coast AQMD 2005).

The US Environmental Protection Agency's (EPA) scientific review concluded that $PM_{2.5}$, which penetrates deeply into the lungs, is more likely than PM_{10} to contribute to health effects and at concentrations that extend well below those allowed by the current PM_{10} standards. These health effects include premature death and increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individuals with cardiopulmonary disease such as asthma); decreased lung functions (particularly in children and individuals with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms (South Coast AQMD 2005). There has been emerging evidence that even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤ 0.1 millionths of a meter or <0.000004 inch), known as ultrafine particulates (UFPs), have human health implications, because UFPs toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs (South Coast AQMD 2013). However, the EPA or CARB have yet to adopt AAQS to regulate these particulates. Diesel particulate matter (DPM) is classified by the CARB as a carcinogen (CARB 1998). Particulate matter can also cause environmental effects such as visibility impairment,[1] environmental damage,[2] and aesthetic damage[3] (South Coast AQMD 2005; USEPA 2021). The SoCAB is in nonattainment and serious nonattainment for $PM_{2.5}$ under the California

[1] $PM_{2.5}$ is the main cause of reduced visibility (haze) in parts of the United States.

[2] Particulate matter can be carried over long distances by wind and then settle on ground or water, making lakes and streams acidic; changing the nutrient balance in coastal waters and large river basins; depleting the nutrients in soil; damaging sensitive forests and farm crops; and affecting the diversity of ecosystems.

[3] Particulate matter can stain and damage stone and other materials, including culturally important objects such as statues and monuments.

and National AAQS, respectively. For PM_{10}, the SoCAB is nonattainment under the California AAQS and in attainment (serious maintenance) under the National AAQS (CARB 2021a).[4]

Ozone (O_3) is commonly referred to as "smog" and is a gas that is formed when VOCs and NO_x, both by-products of internal combustion engine exhaust, undergo photochemical reactions in the presence of sunlight. O_3 is a secondary criteria air pollutant. O_3 concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for the formation of this pollutant. O_3 poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O_3 can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O_3 also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O_3 also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, O_3 harms sensitive vegetation during the growing season (South Coast AQMD 2005; USEPA 2021). The SoCAB is designated as extreme nonattainment under the National AAQS (8-hour) and as nonattainment under the California AAQS (1-hour and 8-hour). (CARB 2021a).

Lead (Pb) is a metal found naturally in the environment as well as in manufactured products. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood. The effects of lead most commonly encountered in current populations are neurological effects in children and cardiovascular effects in adults (e.g., high blood pressure and heart disease). Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits, and lowered IQ (South Coast AQMD 2005; USEPA 2021). The major sources of lead emissions have historically been mobile and industrial sources. As a result of the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline. However, in 2008 the EPA and CARB adopted stricter lead standards, and special monitoring sites immediately downwind of lead sources recorded very localized violations of the new state and federal standards.[5] As a result of these violations, the Los Angeles County portion of the SoCAB is designated nonattainment under the National AAQS for lead (South Coast AQMD 2012; CARB 2021a). Because emissions of lead are found only in projects that are permitted by South Coast AQMD, lead is not a pollutant of concern for the project.

[4] CARB approved the South Coast AQMD's request to redesignate the SoCAB from serious nonattainment for PM_{10} to attainment for PM_{10} under the National AAQS on March 25, 2010, because the SoCAB did not violate federal 24-hour PM_{10} standards from 2004 to 2007. The EPA approved the State of California's request to redesignate the South Coast PM_{10} nonattainment area to attainment of the PM_{10} National AAQS, effective on July 26, 2013.

[5] Source-oriented monitors record concentrations of lead at lead-related industrial facilities in the SoCAB, which include Exide Technologies in the City of Commerce; Quemetco, Inc., in the City of Industry; Trojan Battery Company in Santa Fe Springs; and Exide Technologies in Vernon. Monitoring conducted between 2004 through 2007 showed that the Trojan Battery Company and Exide Technologies exceed the federal standards (South Coast AQMD 2012).

TOXIC AIR CONTAMINANTS

The public's exposure to air pollutants classified as toxic air contaminants (TACs) is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant (HAP) pursuant to Section 112(b) of the federal Clean Air Act (42 United States Code §7412[b]) is a toxic air contaminant. Under state law, the California Environmental Protection Agency (Cal/EPA), acting through CARB, is authorized to identify a substance as a TAC if it determines that the substance is an air pollutant that may cause or contribute to an increase in mortality or to an increase in serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance (i.e., a point below 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 to minimize emissions. To date, CARB has established formal control measures for 11 TACs, all of which are identified as having no safe threshold.

Air toxics from stationary sources are also regulated in California under the Air Toxics "Hot Spot" Information and Assessment Act of 1987. Under AB 2588, toxic air contaminant 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, are required to communicate the results to the public in the form of notices and public meetings.

By the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs (CARB 1999). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

Diesel Particulate Matter

In 1998, CARB identified particulate emissions from diesel-fueled engines (diesel PM) as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

CARB has promulgated the following specific rules to limit TAC emissions:

- 13 CCR Chapter 10, Section 2485, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

- 13 CCR Chapter 10, Section 2480, Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- 13 CCR Section 2477 and Article 8, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

Community Risk

In addition, to reduce exposure to TACs, CARB developed and approved the *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) to provide guidance regarding the siting of sensitive land uses in the vicinity of freeways, distribution centers, rail yards, ports, refineries, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. This guidance document was developed to assess compatibility and associated health risks when placing sensitive receptors near existing pollution sources. CARB's recommendations on the siting of new sensitive land uses were based on a compilation of recent studies that evaluated data on the adverse health effects from proximity to air pollution sources. The key observation in these studies is that proximity to air pollution sources substantially increases exposure and the potential for adverse health effects. There are three carcinogenic toxic air contaminants that constitute the majority of the known health risks from motor vehicle traffic, DPM from trucks, and benzene and 1,3-butadiene from passenger vehicles. CARB recommendations are based on data that show that localized air pollution exposures can be reduced by as much as 80 percent by following CARB minimum distance separations.

Multiple Airborne Toxics Exposure Study (MATES)

The Multiple Air Toxics Exposure Study (MATES) is a monitoring and evaluation study on ambient concentrations of TACs and estimated the potential health risks from air toxics in the SoCAB. In 2008, South Coast AQMD conducted its third update to the MATES study (MATES III). The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,200 in a million. The largest contributor to this risk was diesel exhaust, accounting for 84 percent of the cancer risk (South Coast AQMD 2008b).

South Coast AQMD recently released the fourth update (MATES IV). The results showed that the overall monitored risk for excess cancer from a lifetime exposure to ambient levels of air toxics decreased to approximately 418 in one million. Compared to the 2008 MATES III, monitored excess cancer risks decreased by approximately 65 percent. Approximately 90 percent of the risk is attributed to mobile sources while 10 percent is attributed to TACs from stationary sources, such as refineries, metal processing facilities, gas stations, and chrome plating facilities. The largest contributor to this risk was diesel exhaust, accounting for approximately 68 percent of the air toxics risk. Compared to MATES III, MATES IV found substantial improvement in air quality and associated decrease in air toxics exposure. As a result, the estimated basin-wide population-weighted risk decreased by approximately 57 percent compared to the analysis done for the MATES III time period (South Coast AQMD 2015a).

The Office of Environmental Health Hazard Assessment (OEHHA) updated the guidelines for estimating cancer risks on March 6, 2015. The new method utilizes higher estimates of cancer potency during early life exposures, which result in a higher calculation of risk. There are also differences in the assumptions on

breathing rates and length of residential exposures. When combined together, South Coast AQMD estimates that risks for a given inhalation exposure level will be about 2.7 times higher using the proposed updated methods identified in MATES IV (e.g., 2.7 times higher than 418 in one million overall excess cancer risk) (South Coast AQMD 2015a).

Air Quality Management Planning

The South Coast AQMD is the agency responsible for preparing the air quality management plan (AQMP) for the SoCAB in coordination with the Southern California Association of Governments (SCAG). Since 1979, a number of AQMPs have been prepared.

2016 AQMP

On March 3, 2017, the South Coast AQMD adopted the 2016 AQMP as an update to the 2012 AQMP. The 2016 AQMP addresses strategies and measures to attain the following National AAQS:

- 2008 National 8-hour ozone standard by 2031,
- 2012 National annual $PM_{2.5}$ standard by 2025[6],
- 2006 National 24-hour $PM_{2.5}$ standard by 2019,
- 1997 National 8-hour ozone standard by 2023, and the
- 1979 National 1-hour ozone standard by year 2022.

It is projected that total NO_X emissions in the SoCAB would need to be reduced to 150 tons per day (tpd) by year 2023 and to 100 tpd in year 2031 to meet the 1997 and 2008 federal 8-hour ozone standards. The strategy to meet the 1997 federal 8-hour ozone standard would also lead to attaining the 1979 federal 1-hour ozone standard by year 2022 (South Coast AQMD 2017), which requires reducing NO_X emissions in the SoCAB to 250 tpd. This is approximately 45 percent additional reductions above existing regulations for the 2023 ozone standard and 55 percent additional reductions above existing regulations to meet the 2031 ozone standard.

Reducing NO_X emissions would also reduce $PM_{2.5}$ concentrations in the SoCAB. However, as the goal is to meet the 2012 federal annual $PM_{2.5}$ standard no later than year 2025, South Coast AQMD is seeking to reclassify the SoCAB from "moderate" to "serious" nonattainment under this federal standard. A "moderate" non-attainment would require meeting the 2012 federal standard by no later than 2021.

Overall, the 2016 AQMP is composed of stationary and mobile-source emission reductions from regulatory control measures, incentive-based programs, co-benefits from climate programs, mobile-source strategies, and reductions from federal sources such as aircrafts, locomotives, and ocean-going vessels. Strategies outlined in the 2016 AQMP would be implemented in collaboration between CARB and the EPA (South Coast AQMD 2017).

[6] The 2016 AQMP requests a reclassification from moderate to serious non-attainment for the 2012 National $PM_{2.5}$ standard.

LEAD STATE IMPLEMENTATION PLAN

In 2008, EPA designated the Los Angeles County portion of the SoCAB nonattainment under the federal lead (Pb) classification due to the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in Vernon and the City of Industry exceeding the new standard. The rest of the SoCAB, outside the Los Angeles County nonattainment area remains in attainment of the new standard. On May 24, 2012, CARB approved the SIP revision for the federal lead standard, which the EPA revised in 2008. Lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011. The SIP revision was submitted to EPA for approval.

AREA DESIGNATIONS

The AQMP provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards through the State Implementation Plan (SIP). Areas are classified as attainment or nonattainment areas for particular pollutants, depending on whether they meet ambient air quality standards. Severity classifications for ozone nonattainment range in magnitude from marginal, moderate, and serious to severe and extreme.

- **Unclassified:** a pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.

- **Attainment:** a pollutant is in attainment if the CAAQS for that pollutant was not violated at any site in the area during a three-year period.

- **Nonattainment:** a pollutant is in nonattainment if there was at least one violation of a state AAQS for that pollutant in the area.

- **Nonattainment/Transitional:** a subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

The attainment status for the SoCAB is shown in Table 2. The SoCAB is designated in attainment of the California AAQS for sulfates. The SoCAB is designated as nonattainment for lead (Los Angeles County only) under the National AAQS.

Table 2 Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
Ozone – 1-hour	Nonattainment	No Federal Standard
Ozone – 8-hour	Nonattainment	Extreme Nonattainment
PM_{10}	Nonattainment	Attainment (Serious Maintenance)
$PM_{2.5}$	Nonattainment	Nonattainment[1]
CO	Attainment	Attainment
NO_2	Attainment	Attainment (Maintenance)
SO_2	Attainment	Attainment
Lead	Attainment	Nonattainment (Los Angeles County only)[2]

Table 2 Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
All others	Attainment/Unclassified	Attainment/Unclassified

Source: CARB 2021a.
[1] The South Coast AQMD is seeking to reclassify the SoCAB from "moderate" to "serious" nonattainment under federal $PM_{2.5}$ standard.
[2] In 2010, the Los Angeles portion of the SoCAB was designated nonattainment for lead under the new federal and existing state AAQS as a result of large industrial emitters. Remaining areas in the SoCAB are unclassified.

Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of the project site are best documented by measurements taken by the South Coast AQMD. The project site is located within Source Receptor Area (SRA) 5 – Southeast LA County. The air quality monitoring station closest to the project site is the Pico Rivera - 4144 San Gabriel Monitoring Station, which monitors O_3, NO_x, and $PM_{2.5}$. Information regarding PM_{10} is supplemented by data from the Azusa Monitoring Station. The most current five years of data from these monitoring stations are included in Table 3, *Ambient Air Quality Monitoring Summary*. The data show regular violations of the state and federal O_3, state PM_{10}, and federal $PM_{2.5}$ standards in the last five years.

Table 3 Ambient Air Quality Monitoring Summary

Pollutant/Standard	Number of Days Threshold Were Exceeded and Maximum Levels during Such Violations				
	2016	2017	2018	2019	2020
Ozone (O_3)[1]					
State 1-Hour ≥ 0.09 ppm (days exceed threshold)	9	7	3	5	20
State & Federal 8-hour ≥ 0.07 ppm (days exceed threshold)	6	9	5	7	23
Max. 1-Hour Conc. (ppm)	0.111	0.118	0.115	0.108	0.169
Max. 8-Hour Conc. (ppm)	0.081	0.086	0.082	0.091	0.114
Nitrogen Dioxide (NO_2)[1]					
State 1-Hour ≥ 0.18 ppm (days exceed threshold)	0	0	0	0	0
Federal 1-Hour ≥ 0.100 ppm (days exceed threshold)	0	0	0	0	0
Max. 1-Hour Conc. (ppb)	0.0632	0.0750	0.0768	0.0618	0.0692
Coarse Particulates (PM_{10})[2]					
State 24-Hour > 50 µg/m^3 (days exceed threshold)	12	7	10	4	9
Federal 24-Hour > 150 µg/m^3 (days exceed threshold)	0	0	0	0	0
Max. 24-Hour Conc. (µg/m^3)	74.0	83.9	78.3	82.0	152.3
Fine Particulates ($PM_{2.5}$)[1]					
Federal 24-Hour > 35 µg/m^3 (days exceed threshold)	2	1	2	1	5
Max. 24-Hour Conc. (µg/m^3)	46.5	49.5	56.3	50.2	82.9

Source: CARB 2021b.
ppm: parts per million; parts per billion, µg/m^3: micrograms per cubic meter
Notes: * Data not available.
[1] Data obtained from the Pico Rivera-4144 San Gabriel Monitoring Station
[2] Data obtained from the Azusa Monitoring Station

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases.

Residential areas are also considered to be sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, as the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public. The nearest sensitive receptors to the proposed project site are the residences along Goodbee Street and Birchleaf Avenue to the northwest.

Methodology

Projected construction-related air pollutant emissions are calculated using the California Emissions Estimator Model (CalEEMod), Version 2020.4. CalEEMod compiles an emissions inventory of construction (fugitive dust, off-gas emissions, on-road emissions, and off-road emissions), area sources, indirect emissions from energy use, mobile sources, indirect emissions from waste disposal (annual only), and indirect emissions from water/wastewater (annual only) use. The calculated emissions of the project are compared to thresholds of significance for individual projects using the South Coast AQMD's *CEQA Air Quality Analysis Guidance Handbook*.

Thresholds of Significance

The analysis of the proposed project's air quality impacts follows the guidance and methodologies recommended in South Coast AQMD's *CEQA Air Quality Handbook* and the significance thresholds on South Coast AQMD's website (South Coast AQMD 1993). CEQA allows the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. South Coast AQMD has established thresholds of significance for regional air quality emissions for construction activities and project operation. In addition to the daily thresholds listed above, projects are also subject to the AAQS. These are addressed though an analysis of localized CO impacts and localized significance thresholds (LSTs).

REGIONAL SIGNIFICANCE THRESHOLDS

The South Coast AQMD has adopted regional construction and operational emissions thresholds to determine a project's cumulative impact on air quality in the SoCAB. Table 4 lists South Coast AQMD's regional significance thresholds that are applicable for all projects uniformly regardless of size or scope. There is

growing evidence that although ultrafine particulates contribute a very small portion of the overall atmospheric mass concentration, they represent a greater proportion of the health risk from PM. However, the EPA or CARB have not yet adopted AAQS to regulate ultrafine particulates; therefore, South Coast AQMD has not developed thresholds for them.

Table 4 South Coast AQMD Significance Thresholds

Air Pollutant	Construction Phase	Operational Phase
Reactive Organic Gases (ROGs)/ Volatile Organic Compounds (VOCs)	75 lbs/day	55 lbs/day
Nitrogen Oxides (NO_X)	100 lbs/day	55 lbs/day
Carbon Monoxide (CO)	550 lbs/day	550 lbs/day
Sulfur Oxides (SO_X)	150 lbs/day	150 lbs/day
Particulates (PM_{10})	150 lbs/day	150 lbs/day
Particulates ($PM_{2.5}$)	55 lbs/day	55 lbs/day

Source: South Coast AQMD 2019.

Projects that exceed the regional significance threshold contribute to the nonattainment designation of the SoCAB. The attainment designations are based on the AAQS, which are set at levels of exposure that are determined to not result in adverse health. Exposure to fine particulate pollution and ozone causes myriad health impacts, particularly to the respiratory and cardiovascular systems:

- Linked to increased cancer risk ($PM_{2.5}$, TACs)
- Aggravates respiratory disease (O_3, $PM_{2.5}$)
- Increases bronchitis (O_3, $PM_{2.5}$)
- Causes chest discomfort, throat irritation, and increased effort to take a deep breath (O_3)
- Reduces resistance to infections and increases fatigue (O_3)
- Reduces lung growth in children ($PM_{2.5}$)
- Contributes to heart disease and heart attacks ($PM_{2.5}$)
- Contributes to premature death (O_3, $PM_{2.5}$)
- Linked to lower birth weight in newborns ($PM_{2.5}$) (South Coast AQMD 2015b)

Exposure to fine particulates and ozone aggravates asthma attacks and can amplify other lung ailments such as emphysema and chronic obstructive pulmonary disease. Exposure to current levels of $PM_{2.5}$ is responsible for an estimated 4,300 cardiopulmonary-related deaths per year in the SoCAB. In addition, University of Southern California scientists responsible for a landmark children's health study found that lung growth improved as air pollution declined for children aged 11 to 15 in five communities in the SoCAB (South Coast AQMD 2015c).

Mass emissions in Table 4 are not correlated with concentrations of air pollutants but contribute to the cumulative air quality impacts in the SoCAB. Therefore, regional emissions from a single project do not single-handedly trigger a regional health impact. South Coast AQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of air quality in the SoCAB. To achieve

the health-based standards established by the EPA, South Coast AQMD prepares an AQMP that details regional programs to attain the AAQS.

CO HOTSPOTS

Areas of vehicle congestion have the potential to create pockets of CO called hot spots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hot spots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the SoCAB and in the state have steadily declined.

In 2007, the SoCAB was designated in attainment for CO under both the California AAQS and National AAQS. The CO hot spot analysis conducted for the attainment by the South Coast AQMD for busiest intersections in Los Angeles during the peak morning and afternoon periods plan did not predict a violation of CO standards.[7] As identified in the South Coast AQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SoCAB in previous years, prior to redesignation, were a result of unusual meteorological and topographical conditions and not a result of congestion at a particular intersection. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2017).

LOCALIZED SIGNIFICANCE THRESHOLDS

The South Coast AQMD developed LSTs for emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ generated at the project site (offsite mobile-source emissions are not included in the LST analysis). LSTs represent the maximum emissions at a project site that are not expected to cause or contribute to an exceedance of the most stringent federal or state AAQS and are shown in Table 5.

[7] The four intersections were: Long Beach Boulevard and Imperial Highway; Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day with LOS E in the morning peak hour and LOS F in the evening peak hour.

Table 5 South Coast AQMD Localized Significance Thresholds

Air Pollutant (Relevant AAQS)	Concentration
1-Hour CO Standard (CAAQS)	20 ppm
8-Hour CO Standard (CAAQS)	9.0 ppm
1-Hour NO_2 Standard (CAAQS)	0.18 ppm
Annual NO_2 Standard (CAAQS)	0.03 ppm
24-Hour PM_{10} Standard – Construction (South Coast AQMD)[1]	10.4 µg/m^3
24-Hour $PM_{2.5}$ Standard – Construction (South Coast AQMD)[1]	10.4 µg/m^3
24-Hour PM_{10} Standard – Operation (South Coast AQMD)[1]	2.5 µg/m^3
24-Hour $PM_{2.5}$ Standard – Operation (South Coast AQMD)[1]	2.5 µg/m^3

Source: South Coast AQMD 2019.
ppm – parts per million; µg/m^3 – micrograms per cubic meter
[1] Threshold is based on South Coast AQMD Rule 403. Since the SoCAB is in nonattainment for PM_{10} and $PM_{2.5}$, the threshold is established as an allowable change in concentration. Therefore, background concentration is irrelevant.

To assist lead agencies, South Coast AQMD developed screening-level LSTs to back-calculate the mass amount (lbs. per day) of emissions generated onsite that would trigger the levels shown in Table 5 for projects under 5-acres. These "screening-level" LSTs tables are the localized significance thresholds for all projects of five acres and less; however, it can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required to compare concentrations of air pollutants generated by the project to the localized concentrations shown in Table 5.

In accordance with South Coast AQMD's LST methodology, the screening-level construction LSTs are based on the acreage disturbed per day based on equipment use. The screening-level construction LSTs for the project site in SRA 5 are shown in Table 6, *South Coast AQMD Screening-Level Construction Localized Significance Thresholds,* for sensitive receptors within 82 feet (25 meters).

Table 6 South Coast AQMD Screening-Level Construction Localized Significance Thresholds

	Threshold (lbs/day)[1]			
Acreage Disturbed	Nitrogen Oxides (NO_X)	Carbon Monoxide (CO)	Coarse Particulates (PM_{10})	Fine Particulates ($PM_{2.5}$)
≤1.00 Acre Disturbed Per Day	80	571	4.00	3.00
1.38 Acres Disturbed Per Day	93	680	5.12	3.37
1.94 Acres Disturbed Per Day	112	843	6.81	3.94
2.00 Acres Disturbed Per Day	114	861	7.00	4.00
2.85 Acres Disturbed Per Day	130	1,036	8.98	4.85

Source: South Coast AQMD 2008a and 2011.
[1] LSTs are based on receptors within 82 feet (25 meters) in SRA 5.

Because the project is not an industrial project that has the potential to emit substantial sources of stationary emissions, operational LSTs are not an air quality impact of concern associated with the project.

Health Risk

Whenever a project would require use of chemical compounds that have been identified in South Coast AQMD Rule 1401, placed on CARB's air toxics list pursuant to AB 1807, or placed on the EPA's National Emissions Standards for Hazardous Air Pollutants, a health risk assessment is required by the South Coast AQMD. Table 7, *Toxic Air Contaminants Incremental Risk Thresholds*, lists the TAC incremental risk thresholds for operation of a project. The purpose of this environmental evaluation is to identify the significant effects of the proposed project on the environment, not the significant effects of the environment on the proposed project. (*California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal.4th 369 (Case No. S213478)*). CEQA does not require CEQA-level environmental document to analyze the environmental effects of attracting development and people to an area. However, the environmental document must analyze the impacts of environmental hazards on future users, when a proposed project exacerbates an existing environmental hazard or condition. Residential, commercial, and office uses do not use substantial quantities of TACs and typically do not exacerbate existing hazards, so these thresholds are typically applied to new industrial projects.

Table 7 South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds

Maximum Incremental Cancer Risk	≥ 10 in 1 million
Hazard Index (project increment)	≥ 1.0
Cancer Burden in areas ≥ 1 in 1 million	> 0.5 excess cancer cases

Source: South Coast AQMD 2019.

GREENHOUSE GAS EMISSIONS

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHG, to the atmosphere. Climate change is the variation of Earth's climate over time, whether due to natural variability or as a result of human activities. The primary source of these GHG is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHG—water vapor,[8] carbon (CO_2), methane (CH_4), and ozone (O_3)—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. Other GHG identified by the IPCC that contribute to global warming to a lesser extent include nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).[9] The major GHG are briefly described below.

[8] Water vapor (H_2O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but part of the feedback loop rather than a primary cause of change.

[9] Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (CARB 2017a). However, state and national GHG inventories do not yet include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

- **Carbon dioxide (CO_2)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g. manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.

- **Methane (CH_4)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in municipal landfills and water treatment facilities.

- **Nitrous oxide (N_2O)** is emitted during agricultural and industrial activities as well as during combustion of fossil fuels and solid waste.

- **Fluorinated gases** are synthetic, strong GHGs that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances. These gases are typically emitted in smaller quantities, but because they are potent GHGs, they are sometimes referred to as high global-warming-potential (GWP) gases.

    - *Chlorofluorocarbons (CFCs*) are GHGs covered under the 1987 Montreal Protocol and used for refrigeration, air conditioning, packaging, insulation, solvents, or aerosol propellants. Since they are not destroyed in the lower atmosphere (troposphere, stratosphere), CFCs drift into the upper atmosphere where, given suitable conditions, they break down ozone. These gases are also ozone-depleting gases and are therefore being replaced by other compounds that are GHGs covered under the Kyoto Protocol.

    - *Perfluorocarbons (PFCs)* are a group of human-made chemicals composed of carbon and fluorine only. These chemicals (predominantly perfluoromethane [CF_4] and perfluoroethane [C_2F_6]) were introduced as alternatives, along with HFCs, to the ozone-depleting substances. In addition, PFCs are emitted as by-products of industrial processes and are used in manufacturing. PFCs do not harm the stratospheric ozone layer, but they have a high global warming potential.

    - *Sulfur Hexafluoride (SF_6)* is a colorless gas soluble in alcohol and ether, slightly soluble in water. SF_6 is a strong GHG used primarily in electrical transmission and distribution systems as an insulator.

    - *Hydrochlorofluorocarbons (HCFCs)* contain hydrogen, fluorine, chlorine, and carbon atoms. Although ozone-depleting substances, they are less potent at destroying stratospheric ozone than CFCs. They have been introduced as temporary replacements for CFCs and are also GHGs.

    - *Hydrofluorocarbons (HFCs)* contain only hydrogen, fluorine, and carbon atoms. They were introduced as alternatives to ozone-depleting substances to serve many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are also used in manufacturing. They do not significantly deplete the stratospheric ozone layer, but they are strong GHGs (IPCC 2001; USEPA 2020).

GHGs are dependent on the lifetime or persistence of the gas molecule in the atmosphere. Some GHGs have stronger greenhouse effects than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 8. The GWP is used to convert GHGs to CO_2-equivalence (CO_2e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Fourth Assessment Report (AR4) GWP values for CH_4, a project that generates 10 metric tons (MT) of CH_4 would be equivalent to 250 MT of CO_2 (IPCC 2007).

Table 8 GHG Emissions and Their Relative Global Warming Potential Compared to CO_2

GHGs	Second Assessment Report Atmospheric Lifetime (Years)	Fourth Assessment Report Atmospheric Lifetime (Years)	Second Assessment Report Global Warming Potential Relative to CO_2[1]	Fourth Assessment Report Global Warming Potential Relative to CO_2[1]
Carbon Dioxide (CO_2)	50 to 200	50 to 200	1	1
Methane[2] (CH_4)	12 (±3)	12	21	25
Nitrous Oxide (N_2O)	120	114	310	298
Hydrofluorocarbons:				
HFC-23	264	270	11,700	14,800
HFC-32	5.6	4.9	650	675
HFC-125	32.6	29	2,800	3,500
HFC-134a	14.6	14	1,300	1,430
HFC-143a	48.3	52	3,800	4,470
HFC-152a	1.5	1.4	140	124
HFC-227ea	36.5	34.2	2,900	3,220
HFC-236fa	209	240	6,300	9,810
HFC-4310mee	17.1	15.9	1,300	1,030
Perfluoromethane: CF_4	50,000	50,000	6,500	7,390
Perfluoroethane: C_2F_6	10,000	10,000	9,200	12,200
Perfluorobutane: C_4F_{10}	2,600	NA	7,000	8,860
Perfluoro-2-methylpentane: C_6F_{14}	3,200	NA	7,400	9,300
Sulfur Hexafluoride (SF_6)	3,200	NA	23,900	22,800

Source: IPCC 1995, 2007, 2013.
Notes:
1 The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO_2 is not included.
2 Based on 100-year time horizon of the GWP of the air pollutant compared to CO_2.
3 The GWP values in the IPCC's Fifth Assessment Report (2013) reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO_2. However, South Coast AQMD uses the AR4 GWP values to maintain consistency in statewide GHG emissions modeling. In addition, the 2017 Scoping Plan Update was based on the AR4 GWP values.

California's Greenhouse Gas Sources and Relative Contribution

In 2020, the statewide GHG emissions inventory was updated for 2000 to 2018 emissions using the GWPs in IPCC's AR4.[10] Based on these GWPs, California produced 425.3 $MMTCO_2e$ GHG emissions in 2018. California's transportation sector was the single largest generator of GHG emissions, producing 39.9 percent of the state's total emissions. Industrial sector emissions made up 21.0 percent, and electric power generation

[10] Methodology for determining the statewide GHG inventory is not the same as the methodology used to determine statewide GHG emissions under Assembly Bill 32 (2006).

made up 14.8 percent of the state's emissions inventory. Other major sectors of GHG emissions include commercial and residential (9.7 percent), agriculture and forestry (7.7 percent) high GWP (4.8 percent), and recycling and waste (2.1 percent) (CARB 2020a).

Since the peak level in 2004, California statewide GHG emissions dropped below the 2020 GHG limit of 431 $MMCO_2e$ in 2016 and have remained below the 2020 GHG limit since then. In 2018, emissions from routine GHG emitting activities statewide were 6 $MMTCO_2e$ lower than the 2020 GHG limit. Per capita GHG emissions in California have dropped from a 2001 peak of 14.0 $MTCO_2e$ per person to 10.7 $MTCO_2e$ per person in 2018, a 24 percent decrease. Transportation emissions decreased in 2018 compared to the previous year, which is the first year over year decrease since 2013. Since 2008, California's electricity sector has followed an overall downward trend in emissions. In 2018, solar power generation has continued its rapid growth since 2013. Emissions from high-GWP gases increased 2.3 percent in 2018 (2000-2018 average year-over-year increase is 6.8 percent), continuing the increasing trend as they replace Ozone Depleting Substances (ODS) being phased out under the 1987 Montreal Protocol. Overall trends in the inventory also demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product (GDP)) is declining, representing a 43 percent decline since the 2001 peak, while the state's GDP has grown 59 percent during this period (CARB 2020a).

Regulatory Settings

REGULATION OF GHG EMISSIONS ON A NATIONAL LEVEL

The US Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 U.S. Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings do not in and of themselves impose any emission reduction requirements but allow the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation (USEPA 2009).

To regulate GHGs from passenger vehicles, EPA was required to issue an endangerment finding. The finding identifies emissions of six key GHGs—CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and SF_6—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the project's GHG emissions inventory because they constitute the majority of GHG emissions and, per South Coast AQMD guidance, are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

US Mandatory Report Rule for GHGs (2009)

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 MT or more of CO_2 per year are required to submit an annual report.

Update to Corporate Average Fuel Economy Standards (2017 to 2026)

The federal government issued new Corporate Average Fuel Economy (CAFE) standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon in 2025. On March 30, 2020, the EPA finalized an updated CAFE and GHG emissions standards for passenger cars and light trucks and established new standards covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021 to 2026. However, in May 2020, California and 22 other states; the District of Columbia; the cities of Los Angeles, Denver, and New York; and the counties of San Francisco and Denver filed a lawsuit with the U.S. Court of Appeals for the District of Columbia Circuit, challenging the SAFE Rule. To date, a ruling has not been made on the lawsuit. In addition, a consortium of automakers and California have agreed on a voluntary framework to reduce emissions that can serve as an alternative path forward for clean vehicle standards nationwide. Automakers who agreed to the framework are Ford, Honda, BMW of North America, and Volkswagen Group of America. The framework supports continued annual reductions of vehicle GHG emissions through the 2026 model year, encourages innovation to accelerate the transition to electric vehicles, and gives industry the certainty needed to make investments and create jobs. This commitment means that the auto companies which are party to the voluntary agreement will only sell cars in the United States that meet these standards (CARB 2020b).

EPA Regulation of Stationary Sources under the Clean Air Act (Ongoing)

Pursuant to its authority under the Clean Air Act, the EPA has been developing regulations for new, large, stationary sources of emissions, such as power plants and refineries. Under former President Obama's 2013 Climate Action Plan, the EPA was directed to develop regulations for existing stationary sources as well. On June 19, 2019, the EPA issued the final Affordable Clean Energy (ACE) rule which became effective on August 19, 2019. The ACE rule was crafted under the direction of President Trump's Energy Independence Executive Order. It officially rescinds the Clean Power Plan rule issued during the Obama Administration and sets emissions guidelines for states in developing plans to limit CO_2 emissions from coal-fired power plants.

REGULATION OF GHG EMISSIONS ON A STATE LEVEL

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in Executive Order S-3-05, Executive Order B-30-15, Assembly Bill 32 (AB 32), Senate Bill 32 (SB 32) and Senate Bill 375 (SB 375).

Executive Order S-3-05

Executive Order S-3-05, signed June 1, 2005. Executive Order S-3-05 set the following GHG reduction targets for the State:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

Assembly Bill 32, the Global Warming Solutions Act (2006)

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in AB 32. AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in Executive Order S-03-05.

CARB 2008 Scoping Plan

The final Scoping Plan was adopted by CARB on December 11, 2008. The *2008 Scoping Plan* identified that GHG emissions in California are anticipated to be approximately 596 $MMTCO_2e$ in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 $MMTCO_2e$ (471 million tons) for the state (CARB 2008). In order to effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 $MTCO_2e$ per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.

First Update to the Scoping Plan

CARB completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The First Update to the Scoping Plan was adopted at the May 22, 2014, board hearing. The update highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals defined in the original 2008 Scoping Plan. As part of the update, CARB recalculated the 1990 GHG emission levels with the updated AR4 GWPs, and the 427 $MMTCO_2e$ 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, is slightly higher at 431 $MMTCO_2e$ (CARB 2014).

As identified in the Update to the Scoping Plan, California is on track to meeting the goals of AB 32. However, the update also addresses the state's longer-term GHG goals within a post-2020 element. The post-2020 element provides a high-level view of a long-term strategy for meeting the 2050 GHG goals, including a recommendation for the state to adopt a midterm target. According to the Update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with or exceeds the trajectory created by statewide goals (CARB 2014). CARB identified that reducing emissions to 80 percent below 1990 levels will require a fundamental shift to efficient, clean energy in every sector of the economy. Progressing toward California's 2050 climate targets will require significant acceleration of GHG reduction rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit (CARB 2014).

Executive Order B-30-15

Executive Order B-30-15, signed April 29, 2015, sets a goal of reducing GHG emissions in the state to 40 percent of 1990 levels by year 2030. Executive Order B-30-15 also directs CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in Executive Order S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, Safeguarding California, in order to ensure climate change is accounted for in state planning and investment decisions.

Senate Bill 32 and Assembly Bill 197

In September 2016, Governor Brown signed SB 32 and AB 197 into law, making the Executive Order goal for year 2030 into a statewide mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direction emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

2017 Climate Change Scoping Plan Update

Executive Order B-30-15 and SB 32 required CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. On December 24, 2017, CARB adopted the 2017 Climate Change Scoping Plan Update, which outlines potential regulations and programs, including strategies consistent with AB 197 requirements, to achieve the 2030 target. The 2017 Scoping Plan establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030 (CARB 2017c).

California's climate strategy will require contributions from all sectors of the economy, including enhanced focus on zero- and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables, such as solar roofs, wind, and other types of distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning, to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for GHG reductions at stationary sources complement local air pollution control efforts by the local air districts to tighten criteria air pollutants and TACs emissions limits on a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing ZEV buses and trucks;
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030).
- Implementation of SB 350, which expands the Renewables Portfolio Standard (RPS) to 50 percent RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks.
- Implementing the Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing methane and hydrofluorocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- Continued implementation of SB 375.

- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

In addition to the statewide strategies listed above, the 2017 Climate Change Scoping Plan also identified local governments as essential partners in achieving the State's long-term GHG reduction goals and identified local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends statewide targets of no more than 6 $MTCO_2e$ or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. CARB recommends that local governments evaluate and adopt robust and quantitative locally-appropriate goals that align with the statewide per capita targets and the State's sustainable development objectives and develop plans to achieve the local goals. The statewide per capita goals were developed by applying the percent reductions necessary to reach the 2030 and 2050 climate goals (i.e., 40 percent and 80 percent, respectively) to the State's 1990 emissions limit established under AB 32. For CEQA projects, CARB states that lead agencies have discretion to develop evidenced-based numeric thresholds (mass emissions, per capita, or per service population)—consistent with the Scoping Plan and the state's long-term GHG goals. To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from VMT, and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits. Where further project design or regional investments are infeasible or not proven to be effective, CARB recommends mitigating potential GHG impacts through purchasing and retiring carbon credits.

The Scoping Plan scenario is set against what is called the business-as-usual (BAU) yardstick—that is, what would the GHG emissions look like if the State did nothing at all beyond the existing policies that are required and already in place to achieve the 2020 limit, as shown in Table 9. It includes the existing renewables requirements, advanced clean cars, the "10 percent" Low Carbon Fuel Standard (LCFS), and the SB 375 program for more vibrant communities, among others. However, it does not include a range of new policies or measures that have been developed or put into statute over the past two years. Also shown in the table, the known commitments are expected to result in emissions that are 60 $MMTCO_2e$ above the target in 2030. If the estimated GHG reductions from the known commitments are not realized due to delays in implementation or technology deployment, the post-2020 Cap-and-Trade Program would deliver the additional GHG reductions in the sectors it covers to ensure the 2030 target is achieved.

Table 9 2017 Climate Change Scoping Plan Emissions Reductions Gap

Modeling Scenario	2030 GHG Emissions $MMTCO_2e$
Reference Scenario (Business-as-Usual)	389
With Known Commitments	320
2030 GHG Target	**260**
Gap to 2030 Target	**60**

Source: CARB 2017c.

Table 10 provides estimated GHG emissions by sector, compared to 1990 levels, and the range of GHG emissions for each sector estimated for 2030.

Table 10 2017 Climate Change Scoping Plan Emissions Change by Sector

Scoping Plan Sector	1990 $MMTCO_2e$	2030 Proposed Plan Ranges $MMTCO_2e$	% Change from 1990
Agricultural	26	24-25	-8% to -4%
Residential and Commercial	44	38-40	-14% to -9%
Electric Power	108	30-53	-72% to -51%
High GWP	3	8-11	267% to 367%
Industrial	98	83-90	-15% to -8%
Recycling and Waste	7	8-9	14% to 29%
Transportation (including TCU)	152	103-111	-32% to -27%
Net Sink[1]	-7	TBD	TBD
Sub Total	431	294-339	-32% to -21%
Cap-and-Trade Program	NA	24-79	NA
Total	**431**	**260**	**-40%**

Source: CARB 2017c.
Notes: TCU = Transportation, Communications, and Utilities; TBD: To Be Determined.
[1] Work is underway through 2017 to estimate the range of potential sequestration benefits from the natural and working lands sector.

Senate Bill 1383

On September 19, 2016, the Governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and CH_4. Black carbon is the light-absorbing component of fine particulate matter produced during incomplete combustion of fuels. SB 1383 requires the state board, no later than January 1, 2018, to approve and begin implementing that comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030, as specified. The bill also establishes targets for reducing organic waste in landfill. On March 14, 2017, CARB adopted the "Final Proposed Short-Lived Climate Pollutant Reduction Strategy," which identifies the state's approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s despite the tripling of diesel fuel use (CARB 2017b). In-use on-road rules are expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020. South Coast AQMD is one of the air districts that requires air pollution control technologies for chain-driven broilers, which reduces particulate emissions from these charbroilers by over 80 percent (CARB 2017b). Additionally, South Coast AQMD Rule 445 limits installation of new fireplaces in the SoCAB.

Senate Bill 375

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle

trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Southern California Association of Governments (SCAG) is the MPO for the Southern California region, which includes the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial.

Pursuant to the recommendations of the Regional Transportation Advisory Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target. SCAG's targets are an 8 percent per capita reduction from 2005 GHG emission levels by 2020 and a 13 percent per capita reduction from 2005 GHG emission levels by 2035 (CARB 2010). The 2020 targets are smaller than the 2035 targets because a significant portion of the built environment in 2020 has been defined by decisions that have already been made. In general, the 2020 scenarios reflect that more time is needed for large land use and transportation infrastructure changes. Most of the reductions in the interim are anticipated to come from improving the efficiency of the region's transportation network. The targets would result in 3 $MMTCO_2e$ of reductions by 2020 and 15 $MMTCO_2e$ of reductions by 2035. Based on these reductions, the passenger vehicle target in CARB's Scoping Plan (for AB 32) would be met (CARB 2010).

2017 Update to the SB 375 Targets

CARB is required to update the targets for the MPOs every eight years. In June 2017, CARB released updated targets and technical methodology and recently released another update in February 2018. The updated targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update, while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated SB 375 targets are in units of percent per capita reduction in GHG emissions from automobiles and light trucks relative to 2005. This excludes reductions anticipated from implementation of state technology and fuels strategies and any potential future state strategies such as statewide road user pricing. The proposed targets call for greater per capita GHG emission reductions from SB 375 than are currently in place, which for 2035, translate into proposed targets that either match or exceed the emission reduction levels in the MPOs' currently adopted SCSs. As proposed, CARB staff's proposed targets would result in an additional reduction of over 8 $MMTCO_2e$ in 2035 compared to the current targets. For the next round of SCS updates, CARB's updated targets for the SCAG region are an 8 percent per capita GHG reduction in 2020 from 2005 levels (unchanged from the 2010 target) and a 19 percent per capita GHG reduction in 2035 from 2005 levels (compared to the 2010 target of 13 percent) (CARB 2018). CARB adopted the updated targets and methodology on March 22, 2018. All SCSs adopted after October 1, 2018 are subject to these new targets.

SCAG's Regional Transportation Plan / Sustainable Communities Strategy

SB 375 requires each MPO to prepare a sustainable communities strategy in its regional transportation plan. For the SCAG region, the draft 2020-2045 RTP/SCS (Connect SoCal) was adopted on May 7, 2020 for the limited purpose of transportation conformity (SCAG 2020). The Connect SoCal Plan was fully adopted in September 2020. In general, the SCS outlines a development pattern for the region that, when integrated with the transportation network and other transportation measures and policies, would reduce vehicle miles traveled from automobiles and light duty trucks and thereby reduce GHG emissions from these sources.

Connect SoCal focuses on the continued efforts of the previous RTP/SCSs to integrate transportation and land use strategies in development of the SCAG region through horizon year 2045 (SCAG 2020). Connect SoCal forecasts that the SCAG region will meet its GHG per capita reduction targets of 8 percent by 2020 and 19 percent by 2035. Additionally, Connect SoCal also forecasts that implementation of the plan will reduce VMT per capita in year 2045 by 4.1 percent compared to baseline conditions for that year. Connect SoCal includes a "Core Vision" that centers on maintaining and better managing the transportation network for moving people and goods while expanding mobility choices by locating housing, jobs, and transit closer together and increasing investments in transit and complete streets.

Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and was anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model year 2017 through 2025 light-duty vehicles (see also the discussion on the update to the Corporate Average Fuel Economy standards under *Federal Laws*, above). In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

Executive Order S-01-07

On January 18, 2007, the state set a new LCFS for transportation fuels sold in the state. Executive Order S-01-07 sets a declining standard for GHG emissions measured in carbon dioxide equivalent gram per unit of fuel energy sold in California. The LCFS requires a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods.

Senate Bills 1078, 107, X1-2, and Executive Order S-14-08

A major component of California's Renewable Energy Program is the RPS established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08 was signed in November 2008, which expanded the state's Renewable Energy Standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects, because electricity production from renewable sources is generally considered carbon neutral.

Senate Bill 350

Senate Bill 350 (de Leon), was signed into law in September 2015. SB 350 establishes tiered increases to the RPS of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, which raises California's RPS requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 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.

Executive Order B-55-18

Executive Order B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." Executive Order B-55-18 directs CARB to work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Executive Order B-16-2012

On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate zero-emissions vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directs the number of zero-emission vehicles in California's state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are zero-emission by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions from the transportation sector 80 percent below 1990 levels.

Executive Order N-79-20

On September 23, 2020 Governor Newsom signed Executive Order N-79-20 which identifies a goal that 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035. Additionally, this Executive Order identified fleet goals for trucks of 100 percent of drayage trucks be zero emissions by 2035 and 100 percent of medium- and heavy-duty vehicles in the State be zero-emission by 2045, for all operations where feasible. Additionally, the Executive Order identifies a goal for the State to transition to 100 percent zero-emission off-road vehicles and equipment by 2035 where feasible.

California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2019 (Title 24, Part 6, of the California Code of Regulations [CCR]). 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. The 2019 Building Energy Efficiency Standards, which were adopted on May 9, 2018, went into effect on January 1, 2020.

The 2019 standards move towards cutting energy use in new homes by more than 50 percent and will require installation of solar photovoltaic systems for single-family homes and multi-family buildings of 3 stories and less. Four key areas the 2019 standards will focus on include 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements (CEC 2018a). Under the 2019 standards, nonresidential buildings and multifamily residential buildings of four stories or more will be 30 percent more energy efficient compared to the 2016 standards while single-family homes will be 7 percent more energy efficient (CEC 2018b). When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards (CEC 2018b).

California Building Code: CALGreen

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.[11] The mandatory provisions of CALGreen became effective January 1, 2011. The CEC adopted the voluntary standards of the 2019 CALGreen on October 3, 2018. The 2019 CALGreen standards become effective January 1, 2020.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (20 CCR §§ 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. Though these regulations are now often viewed as "business as usual," they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

Solid Waste Regulations

California's Integrated Waste Management Act of 1989 (AB 939; Public Resources Code §§ 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the act requires that each

[11] The green building standards became mandatory in the 2010 edition of the code.

city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses. Section 5.408 of the CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

The California Solid Waste Reuse and Recycling Access Act (AB 1327; Public Resources Code §§ 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

Section 5.408 of the 2019 CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

In October of 2014, Governor Brown signed AB 1826, requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste.

Water Efficiency Regulations

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed "SBX7-7." SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 requires urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

Thresholds of Significance

The CEQA Guidelines recommend that a lead agency consider the following when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase (or reduce) GHG emissions as compared to the existing environmental setting;

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;

3. The extent to which the project complies with regulations or requirements adopted to implement an adopted statewide, regional, or local plan for the reduction or mitigation of GHG emissions.[12]

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, South Coast AQMD has convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting (Meeting No. 15) held in September 2010, South Coast AQMD is proposing to adopt a tiered approach for evaluating GHG emissions for development projects where South Coast AQMD is not the lead agency (South Coast AQMD 2010):

- **Tier 1.** If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.

- **Tier 2.** If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.

- **Tier 3.** If GHG emissions are less than the screening-level threshold, project-level and cumulative GHG emissions are less than significant.

  For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, South Coast AQMD requires an assessment of GHG emissions. South Coast AQMD is proposing a screening-level threshold of 3,000 $MTCO_2e$ annually for all land use types or the following land-use-specific thresholds: 1,400 $MTCO_2e$ for commercial projects, 3,500 $MTCO_2e$ for residential projects, or 3,000 $MTCO_2e$ for mixed-use projects. These bright-line thresholds are based on a review of the Governor's Office of Planning and Research database of CEQA projects. Based on their review of 711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line thresholds identified above. Therefore, projects that do not exceed the bright-line threshold would have a nominal, and therefore, less than cumulatively considerable impact on GHG emissions:

[12] The Governor's Office of Planning and Research recommendations include a requirement that such a plan must be adopted through a public review process and include specific requirements that reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable, notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

- **Tier 4.** If emissions exceed the screening threshold, a more detailed review of the project's GHG emissions is warranted.

  The South Coast AQMD Working Group has identified an efficiency target for projects that exceed the screening threshold of 4.8 $MTCO_2e$ per year per service population ($MTCO_2e$/year/SP) for project-level analyses and 6.6 $MTCO_2e$/year/SP for plan level projects (e.g., program-level projects such as general plans) for the year 2020.[13] The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB's 2008 Scoping Plan.

For purposes of this analysis, because the proposed project has an anticipated opening year post-2020, the bright-line screening-level criterion of 3,000 $MTCO_2e$/yr is used as the significance threshold for this project. Therefore, if the project operation-phase emissions exceed the 3,000 $MTCO_2e$/yr threshold, GHG emissions would be considered potentially significant in the absence of mitigation measures.

[13] It should be noted that the Working Group also considered efficiency targets for 2035 for the first time in this Working Group meeting.

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Assumptions Worksheet

CalEEMod Inputs - The Mercury Project, Construction

Name:	The Mercury Project
Project Number:	OPL-01
Project Location:	8825 Washington Boulevard
County/Air Basin:	Los Angeles
Climate Zone:	9
Land Use Setting:	Urban
Operational Year:	2023
Utility Company:	Southern California Edison
Air Basin:	South Coast Air Basin
Air District:	SCAQMD
SRA:	5 - Southeast LA County

Proiect Site Acreage	2.85
Disturbed Site Acreage	2.85

Project Components	SQFT	Tons		
Demolition				
Asphalt Demolition	124,146	1,839		
New Construction	***Number of Units***	***SQFT***	***ACRES***	**Number of Floors**
Apartments	255	258,720	0.99	6
Ground-level Lobby/Leasing Space		1,500	0.00	
Rooftop Recreation and Pool Deck		17,010	0.00	
Total Residential Area		**277,230**	**0.99**	
Retail		5,730	0.00	
Total Non-Residential Area		**5,730**	**0.00**	
Parking Structure*		190,000	0.34	
Other Asphalt Surfaces		45,000	1.03	
Total Landscaping:		21,000	0.48	

* assigning remaining area to parking structure

CalEEMod Land Use Inputs

Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage*	Land Use Square Feet
Residential	Apartments (Mid-Rise)	255	DU	0.99	260,220
Recreational	Recreational Swimming Pool	17.010	1000 sqft	0.00	17,010
Retail	Regional Shopping Center	5.730	1000 sqft	0.00	5,730
Parking	Enclosed Parking Structure with Elevator	190.000	1000 sqft	0.34	190,000
Parking	Other Asphalt Surfaces	45.000	1000 sqft	1.03	45,000
Parking	Other Non-asphalt Surfaces	21.000	1000 sqft	0.48	21,000
				2.85	

Demolition

Component	Amount to be Demolished (Tons)	Haul Truck Capacity (Tons)[1]	Haul Distance (miles)[2]	Total Trip Ends	Duration (days)	Trip Ends/Day
Total Asphalt Demo	1,839	20	19	184	5	37
Total	1,839			184		

1 CalEEMod default truck capacity

2 Based on distance to Azusa Transfer Station provided by applicant

Soil Haul[1]

Construction Activities	Volume (CY)	Haul Truck Capacity (cy)[1]	Haul Distance (miles)[2]	Total Trip Ends	Total Days	Trip Ends/Day
Rough Grading (Export)	7,400	14	19	1058	12	88
Fine Grading (Export)	20,000	14	19	2858	20	143

1 CalEEMod default truck capacity

2 Based on distance to Azusa Transfer Station provided by applicant

Architectural Coating

Percentage of Proposed Buildings' Interior Painted: 100%

Percentage of Proposed Buildings' Exterior Painted: 100%

Rule 1113

Interior Paint VOC content: 50 grams per liter

Exterior Paint VOC content: 50 grams per liter

Structures	Land Use Square Feet	CalEEMod Factor[2]	Total Paintable Surface Area	Paintable Interior Area[1]	Paintable Exterior Area[1]
Total Residential Area[3]					
Apartments (Mid-Rise)	277,230	2.7	748,521	561,391	187,130
				561,391	**187,130**
Total Non-Residential					
Retail	5,730	2.0	11,460	8,595	2,865
Parking Structure	190,000	2.0	380,000	285,000	95,000
				293,595	**97,865**
Parking Structure	190,000	6%	11,400		11,400
			11,400		11,400

[1] CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively.

[2] The program assumes the total surface for painting equals 2.7 times the floor square footage for residential and 2 times that for nonresidential square footage defined by the user. Architectural coatings for the parking lot is based on CalEEMod methodology applied to a surface parking lot (i.e., striping), in which 6% of surface area is painted.

[3] Total Residential coating includes the swimming pool area and leasing office

Construction Mitigation

SCAQMD Rule 403

Replace Ground Cover	PM10:	5	% Reduction
Replace Ground Cover	PM2.5:	5	% Reduction
Water Exposed Area	Frequency:	2	per day
	PM10:	55	% Reduction
	PM25:	55	% Reduction
Unpaved Roads	Vehicle Speed:	15	mph
SCAQMD Rule 1186	Clean Paved Road	9	% PM Reduction

Construction Activities and Schedule Assumptions: The Mercury Project

based on durations provided by Applicant

Construction Schedule

Construction Activities	Phase Type	Start Date	End Date	CalEEMod Duration (Workday)
Asphalt Demolition	Demolition	1/1/2022	2/22/2022	37
Asphalt Demolition Debris Haul	Demolition	2/16/2022	2/22/2022	5
Site Preparation	Site Preparation	2/23/2022	3/2/2022	6
Rough Grading	Grading	3/3/2022	4/13/2022	30
Rough Grading Soil Haul	Grading	3/29/2022	4/13/2022	12
Utility Trenching	Trenching	4/14/2022	7/6/2022	60
Fine Grading	Grading	5/12/2022	6/8/2022	20
Fine Grading Soil Haul	Grading	5/12/2022	6/8/2022	20
Building Construction	Building Construction	5/12/2022	12/1/2023	407
Paving	Paving	10/11/2023	11/6/2023	19
Architectural Coating	Architectural Coating	11/7/2023	12/1/2023	19

Overlapping Construction Schedule

Construction Activities	Start Date	End Date	CalEEMod Duration (Workday)
Asphalt Demolition	1/1/2022	2/15/2022	32
Asphalt Demolition and Debris Haul	2/16/2022	2/22/2022	5
Site Preparation	2/23/2022	3/2/2022	6
Rough Grading	3/3/2022	3/28/2022	18
Rough Grading and Soil Haul	3/29/2022	4/13/2022	12
Utilities Trenching	4/14/2022	5/11/2022	20
Utilities Trenching, Fine Grading and Soil Haul, and Building Construction 2022	5/12/2022	6/8/2022	20
Utilities Trenching and Building Construction 2022	6/9/2022	7/6/2022	20
Building Construction 2022	7/7/2022	12/31/2022	127
Building Construction 2023	1/1/2023	10/10/2023	202
Building Construction 2023 and Paving	10/11/2023	11/6/2023	19
Building Construction 2023 and Architectural Coating	11/7/2023	12/1/2023	19

CalEEMod Construction Off-Road Equipment Inputs

**Based on equipment mix provided by the Applicant.*

General Construction Hours: btwn 7:00 AM to 4:00 PM (with 1 hr break), Mon-Fri

Construction Equipment Details						
Equipment	**Model Type**	**# of Equipment**	**hr/day**	**hp**	**load factor***	**total trips/Day**
Asphalt Demolition						
Concrete/Industrial Saws		1	8	81	0.73	
Rubber Tired Dozers		1	8	247	0.4	
Tractors/Loaders/Backhoes		3	8	97	0.37	
Worker Trips						13
Vendor Trips						0
Hauling Trips (TOTAL TRIPS)						0
Water Trucks						2
Asphalt Demolition Debris Haul						
no additional equipment required for Asphalt Demolition Haul						
Worker Trips						0
Vendor Trips						0
Hauling Trips						184
Site Preparation						
Graders		1	8	187	0.41	
Scrapers		1	8	367	0.48	
Tractors/Loaders/Backhoes	CAT 966 Loader	1	7	276	0.37	
Worker Trips						8
Vendor Trips						0
Hauling Trips (TOTAL TRIPS)						0
Water Trucks						2
Rough Grading						
Excavators	Deere 350	1	8	270	0.38	
Graders		1	8	187	0.41	
Rollers		1	8	134	0.38	
Rubber Tired Dozers		1	8	247	0.4	
Scrapers		1	8	367	0.48	
Tractors/Loaders/Backhoes		2	7	97	0.37	
Worker Trips						18
Vendor Trips						0
Hauling Trips (TOTAL TRIPS)						0
Water Trucks						2
Rough Grading Soil Haul						
no additional equipment required for Grading Soil Haul						
Worker Trips						0
Vendor Trips						0
Hauling Trips (TOTAL TRIPS)						1,058

**10 dump trucks provided by applicant accounted for in hauling trips*

Utility Trenching						
Excavators	Hitachi 300 Excavator	1	6	249	0.38	
Plate Compactors		5	8	7	0.43	
Tractors/Loaders/Backhoes	Cat 950 Loader	1	8	225	0.37	
Trenchers		1	8	50	0.5	
Worker Trips						20
Vendor Trips						4
Hauling Trips (TOTAL TRIPS)						0

**2 dump trucks included as vendor trips, assumes 2 vendor trips per dump truck*

Fine Grading						
Tractors/Loaders/Backhoes		1	8	225	0.37	
Hand Compactors		5	8	6.8	0.43	
Worker Trips						15
Vendor Trips						4
Hauling Trips (TOTAL TRIPS)						0
Water Trucks						2

**2 dump trucks included as vendor trips, assumes 2 vendor trips per dump truck*

Fine Grading Soil Haul						
no additional equipment required for Grading Soil Haul						
Worker Trips						0
Vendor Trips						0
Hauling Trips (TOTAL TRIPS)						2,858

**10 dump trucks provided by applicant accounted for in hauling trips*

Building Construction						
Cranes		1	8	231	0.29	
Forklifts		2	7	89	0.2	
Generator Sets		1	8	84	0.74	
Tractors/Loaders/Backhoes		1	6	97	0.37	
Welders		3	8	46	0.45	
Worker Trips						60
Vendor Trips						3
Hauling Trips (TOTAL TRIPS)						0

** 60 worker and 3 vendor trips provided by Applicant*

Paving						
Cement and Mortar Mixers		1	8	9	0.56	
Pavers		1	8	130	0.42	
Paving Equipment		1	8	132	0.36	
Rollers		2	8	80	0.38	
Tractors/Loaders/Backhoes		1	8	97	0.37	
Worker Trips						15
Vendor Trips						0
Hauling Trips (TOTAL TRIPS)						0

Architectural Coating*						
Air Compressors		1	6	78	0.48	
Worker Trips						12
Vendor Trips						0
Hauling Trips (TOTAL TRIPS)						0

** Architectural coating worker trips is assumed to be 20% of building construction worker trips based on CalEEMod Appendix A calculations.*

CalEEMod Inputs - The Mercury Project, Operations

Name:	The Mercury Project, Operations
Project Number:	OPL-01
Project Location:	8825 Washington Boulevard
County/Air Basin:	Los Angeles
Climate Zone:	9
Land Use Setting:	Urban
Operational Year:	2023
Utility Company:	Southern California Edison
Air Basin:	South Coast Air Basin
Air District:	SCAQMD
SRA:	5 - Southeast LA County

Proiect Site Acreage	2.85
Disturbed Site Acreage	2.85

CalEEMod Land Use Inputs

Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Land Use Square Feet
Residential	Apartments (Mid-Rise)	255	DU	0.99	260,220
Recreational	Recreational Swimming Pool	17.50	1000 sqft	0.00	17,500
Retail	Regional Shopping Center	2.87	1000 sqft	0.00	2,865
Recreational	High Turn-Over (Sit Down Restaurant)	2.87	1000 sqft	0.00	2,865
Parking	Enclosed Parking Structure with Elevator	190.00	1000 sqft	0.34	190,000
Parking	Other Asphalt Surfaces	45.00	1000 sqft	1.03	45,000
Parking	Other Non-asphalt Surfaces	21.00	1000 sqft	0.48	21,000
				2.85	

Trips

Land Use Type	Average Daily Trips	CalEEMod Trip Rate	Saturday Trips[1]	CalEEMod Trip Rate	Sunday Trips[1]	CalEEMod Trip
Apartments (Mid-Rise)	1,165	**4.57**	1,165	**4.57**	1,165	**4.57**
Regional Shopping Center	113	**39.27**	113	**39.27**	113	**39.27**
Restaurant	317	**110.47**	317	**110.47**	317	**110.47**
Total	**1,594**		**1,594**		**1,594**	

[1] *assumes that Saturday and Sunday trips are the same as weekday trips*

Number of Residents	962
VMT per Capita[1]	12.21
Apartments Daily Weekday VMT	11,746

[1] *includes TDM measures*

Trips	Average Trip Length (mi/trip)	Annual Vehicle Miles Traveled[2]
Apartment	**10.08**	**4,275,551**
Regional Shopping Center[1]	**9.45**	**387,043**
Restaurant[1]	**8.81**	**1,015,195**
Total		**5,677,790**

Source: LLG. 2021, June.

[1] *CalEEMod defaults*

[2] *Annual VMT is calculated based on weekday VMT x 364 days per year.*

	Trip Type Percentages		
	Primary	Diverted	Passby
Apartments (Mid-Rise)	86%	11%	3%
Restaurant	37%	20%	43%
Regional Shopping Center	54%	35%	11%
Adjusted Trip Type Percentages	**100%**	**0%**	**0%**

Water Use (CalEEMod Defaults)

Land Use	Indoor	Outdoor	Total
Apartments Mid Rise	16,614,277	10,474,218	27,088,494
Enclosed Parking with Elevator	0	0	0
High Turnover (Sit Down Restaurant)	834,718	53,280	887,998
Other Asphalt Surfaces	0	0	0
Other Non-Asphalt Surfaces	0	0	0
Recreational Swimming Pool	798,432	489,362	1,287,794
Regional Shopping Center	203,699	124,848	328,547

*Assumes 100% aerobic treatment.

Solid Waste (CalEEMod Defaults)

Land Use	(tons/year)
Apartments Mid Rise	117.30
Enclosed Parking with Elevator	0.00
High Turnover (Sit Down Restaurant)	32.73
Other Asphalt Surfaces	0.00
Other Non-Asphalt Surfaces	0.00
Recreational Swimming Pool	76.95
Regional Shopping Center	2.89

Architectural Coating

Percentage of Proposed Buildings' Interior Painted: 100%

Percentage of Proposed Buildings' Exterior Painted: 100%

Rule 1113

Interior Paint VOC content: 50 grams per liter

Exterior Paint VOC content: 50 grams per liter

Structures	Land Use Square Feet	CalEEMod Factor[2]	Total Paintable Surface Area	Paintable Interior Area[1]	Paintable Exterior Area[1]
Total Residential Area[3]					
Apartments (Mid-Rise)	277,720	2.7	749,844	562,383	187,461
				562,383	**187,461**
Total Non-Residential[4]					
Retail	5,730	2.0	11,460	8,595	2,865
Parking Structure	190,000	2.0	380,000	285,000	95,000
				293,595	**97,865**
Parking Structure	190,000	6%	11,400		11,400
			11,400		11,400

[1]CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively.

[2] The program assumes the total surface for painting equals 2.7 times the floor square footage for residential and 2 times that for nonresidential square footage defined by the user. Architectural coatings for the parking lot is based on CalEEMod methodology applied to a surface parking lot (i.e., striping), in which 6% of surface area is painted.

[3] Total Residential coating includes the swimming pool area and leasing office

[4] Total Non-Residential does not include interior and exterior painting of the parking structure.

Fireplaces

**assuming no woodstoves*

Land Use	# Wood	# Gas	# Propane	# No Fireplace	Hours/Day	Days/Year[1]	BTU/hr/fireplace	KBTU
Grill[2]	0	3	0	252	3	104	60,000.00	56,160.00
Average Use	**0**	**3**	**0**	**252**	**3**	**104**	**60,000**	**56,160**

1 *assumes weekend use only*

2 *assumes grills and firepits will consume 60,000 BTU/hr (CalEEMod default BTU for fireplace)*

Electricity (Buildings)

Based on the Electricity and Natural Gas Energy Intensity default information from CalEEMod, which complies with 2019 Building Energy Efficiency Standards

Pico Rivera Innovative Municipal Energy

CO2:[1]	683.98	pounds per megawatt hour
CH4:[1]	0.033	pound per megawatt hour
N2O:1	0.004	pound per megawatt hour

[1] CalEEMod default values.

Global Warming Potentials (GWP)		
	AR4	**AR5**
CO_2	1	1
CH_4	25	28
N_2O	298	265

Based on Intergovernmental Panel on Climate Change Fourth Assessment Report global warming potentials for CH4 and N2O; Intergovernmental Panel on Climate Change (IPCC).

Changes to the CalEEMod Defaults - Fleet Mix 2023

Weekday Trips 1,577

Default	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
FleetMix (Model Default)	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374	100%
Trips	859	99	296	201	36	10	17	13	1	1	38	1	5	1,577
Percent	82%			13%	5%									100%
without buses/MH	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0	0	0.024394	0.000698	0.003374	100%
Percent	82%			13%	5%									100%
Adjusted without buses/MH	0.544785	0.062844	0.187478	0.127235	0.023775	0.006264	0.010786	0.008250	0.000000	0.000000	0.025118	0.000719	0.003474	
Percent adjusted	82%			13%	5%									100%
Assumed Mix	97.0%			2.00%	1.00%									100%
adjusted with Assumed	**0.644264**	**0.074319**	**0.221712**	**0.020000**	**0.004463**	**0.001176**	**0.002025**	**0.001549**	**0.000000**	**0.000000**	**0.029705**	**0.000135**	**0.000652**	**100%**
Percent Check:	97%			2%	1%									
Trips	1,016	117	350	32	7	2	3	2	0	0	47	0	1	1,577
	1,530			*32*	*15*									

Fleet mix for the project is modified to reflect a higher proportion of passenger vehicles that the regional VMT. Assumes a mix of approximately 97% passenger vehicles, 2% medium duty trucks, and 1% heavy duty trucks and buses.

Construction Trips Worksheet

Phase Name	Worker Trip Ends Per Day	Vendor Trip Ends Per Day	Haul Truck Trip Ends Per Day	Total Haul Truck Trip Ends	Start Date	End Date	Workdays
Asphalt Demolition	13	2	0	0	1/1/2022	2/22/2022	37
Asphalt Demolition Debris Haul	0	0	37	184	2/16/2022	2/22/2022	5
Site Preparation	8	2	0	0	2/23/2022	3/2/2022	6
Rough Grading	18	2	0	0	3/3/2022	4/13/2022	30
Rough Grading Soil Haul	0	0	89	1,058	3/29/2022	4/13/2022	12
Utility Trenching	20	4	0	0	4/14/2022	7/6/2022	60
Building Construction	60	3	0	0	5/12/2022	12/1/2023	407
Fine Grading	15	6	0	0	10/31/2023	11/6/2023	5
Fine Grading Soil Haul	0	0	2,858	2,858	11/6/2023	11/6/2023	1
Paving	15	0	0	0	10/11/2023	11/6/2023	19
Architectural Coating	12	0	0	0	11/7/2023	12/1/2023	19

Construction Activity (Overlapping)	Worker Trip Ends Per Day	Vendor Trip Ends Per Day	Haul Truck Trip Ends Per Day	Total Trip Ends Per Day	Start Date	End Date	Workdays
Asphalt Demolition	13	2	0	15	1/1/2022	2/15/2022	32
Asphalt Demolition and Debris Haul	13	2	37		2/16/2022	2/22/2022	5
Site Preparation	8	2	0		2/23/2022	3/2/2022	6
Rough Grading	18	2	0		3/3/2022	3/28/2022	18
Rough Grading and Soil Haul	18	2	89		3/29/2022	4/13/2022	12
Utilities Trenching	20	4	0		4/14/2022	5/11/2022	20
Utilities Trenching and Building Construction 2022	80	7	0		5/12/2022	7/6/2022	40
Building Construction 2022	60	3	0		7/7/2022	12/31/2022	127
Building Construction 2023	60	3	0	63	1/1/2023	10/10/2023	202
Building Construction 2023 and Paving	75	3	0	78	10/11/2023	10/30/2023	14
Building Construction 2023, Paving, and Fine Grading	90	9	0	99	10/31/2023	11/5/2023	4
Building Construction 2023, Fine Grading and Soil Haul, and Paving	90	9	2,858	2957	11/6/2023	11/6/2023	1
Building Construction 2023 and Architectural Coating	72	3	0	75	11/7/2023	12/1/2023	19
Maximum Daily Trips	**90**	**9**	**2858**	**2957**			

Demo Haul Trip Calculation

*Conversion factors**

0.046	ton/SF
1.2641662	tons/cy
20	tons
15.82070459	CY
0.791035229	CY/ton

Building	BSF Demo	Tons/SF	Tons	Haul Truck (CY)	Haul Truck (Ton)	Round Trips	Total Trip Ends
Combined Building Demo	0	0.046	0	16	20.00	0	0

*CalEEMod User's Guide Version 2016.3.2, Appendix A

Pavement Volume to Weight Conversion

Component	Total SF of Area[1]	Assumed Thickness (foot)[2]	Debris Volume (cu. ft)	Weight of Crushed Asphalt (lbs/cf)[3]	AC Mass (lbs)	AC Mass (tons)
Asphalt	124,146	0.333	41,382	89	3,678,400	1839.20
Total	124,146					1839.20

[1] Based on information provided by applicant.

[2] Pavements and Surface Materials. Nonpoint Education for Municipal Officials, Technical Paper Number 8. University of Connecticut Cooperative Extension System, 1999.

[3] https://www.calrecycle.ca.gov/swfacilities/cdi/Tools/Calculations

Emissions Worksheet

Regional Construction Emissions Worksheet:

Asphalt Demolition		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2022 Summer**						
	Off-Road	1.69	16.62	13.96	0.02	0.84	0.78
	Total	**1.69**	**16.62**	**13.96**	**0.02**	**0.84**	**0.78**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.00	0.10	0.03	0.00	0.01	0.00
	Worker	0.05	0.03	0.51	0.00	0.13	0.04
	Total	**0.05**	**0.13**	**0.55**	**0.00**	**0.15**	**0.04**
TOTAL		***1.74***	***16.75***	***14.51***	***0.03***	***0.99***	***0.82***
Onsite	**2022 Winter**						
	Off-Road	1.69	16.62	13.96	0.02	0.84	0.78
	Total	**1.69**	**16.62**	**13.96**	**0.02**	**0.84**	**0.78**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.00	0.10	0.03	0.00	0.01	0.00
	Worker	0.05	0.04	0.47	0.00	0.13	0.04
	Total	**0.05**	**0.14**	**0.50**	**0.00**	**0.15**	**0.04**
TOTAL		***1.74***	***16.76***	***14.47***	***0.03***	***0.99***	***0.82***
Onsite	**2022**						
	Off-Road	1.69	16.62	13.96	0.02	0.84	0.78
	Total	**1.69**	**16.62**	**13.96**	**0.02**	**0.84**	**0.78**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.00	0.10	0.03	0.00	0.01	0.00
	Worker	0.05	0.04	0.51	0.00	0.13	0.04
	Total	**0.05**	**0.14**	**0.55**	**0.00**	**0.15**	**0.04**
TOTAL		***1.74***	***16.76***	***14.51***	***0.03***	***0.99***	***0.82***

Asphalt Demolition Debris Haul		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2022** Summer						
	Fugitive Dust					3.36	0.51
	Off-Road	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.00**	**0.00**	**0.00**	**0.00**	**3.36**	**0.51**
Offsite							
	Hauling	0.16	5.91	1.39	0.02	0.61	0.20
	Vendor	0.00	0.00	0.00	0.00	0.00	0.00
	Worker	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.16**	**5.91**	**1.39**	**0.02**	**0.61**	**0.20**
TOTAL		***0.16***	***5.91***	***1.39***	***0.02***	***3.98***	***0.71***
Onsite	**2022** Winter						
	Fugitive Dust					3.36	0.51
	Off-Road	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.00**	**0.00**	**0.00**	**0.00**	**3.36**	**0.51**
Offsite							
	Hauling	0.16	6.15	1.42	0.02	0.61	0.20
	Vendor	0.00	0.00	0.00	0.00	0.00	0.00
	Worker	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.16**	**6.15**	**1.42**	**0.02**	**0.61**	**0.20**
TOTAL		***0.16***	***6.15***	***1.42***	***0.02***	***3.98***	***0.71***
Onsite	**2022**						
	Fugitive Dust	0.00	0.00	0.00	0.00	3.36	0.51
	Off-Road	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.00**	**0.00**	**0.00**	**0.00**	**3.36**	**0.51**
Offsite							
	Hauling	0.16	6.15	1.42	0.02	0.61	0.20
	Vendor	0.00	0.00	0.00	0.00	0.00	0.00
	Worker	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.16**	**6.15**	**1.42**	**0.02**	**0.61**	**0.20**
TOTAL		***0.16***	***6.15***	***1.42***	***0.02***	***3.98***	***0.71***

Site Preparation

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2022** Summer						
	Fugitive Dust						0.68	0.07
	Off-Road		1.49	16.47	10.12	0.03	0.60	0.55
	Total		**1.49**	**16.47**	**10.12**	**0.03**	**1.28**	**0.63**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.10	0.03	0.00	0.01	0.00
	Worker		0.03	0.02	0.31	0.00	0.08	0.02
	Total		**0.03**	**0.12**	**0.35**	**0.00**	**0.10**	**0.03**
TOTAL			***1.52***	***16.58***	***10.46***	***0.03***	***1.38***	***0.65***
Onsite		**2022** Winter						
	Fugitive Dust						0.68	0.07
	Off-Road		1.49	16.47	10.12	0.03	0.60	0.55
	Total		**1.49**	**16.47**	**10.12**	**0.03**	**1.28**	**0.63**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.10	0.03	0.00	0.01	0.00
	Worker		0.03	0.02	0.29	0.00	0.08	0.02
	Total		**0.03**	**0.12**	**0.32**	**0.00**	**0.10**	**0.03**
TOTAL			***1.52***	***16.59***	***10.44***	***0.03***	***1.38***	***0.65***
Onsite		**2022**						
	Fugitive Dust		0.00	0.00	0.00	0.00	0.68	0.07
	Off-Road		1.49	16.47	10.12	0.03	0.60	0.55
	Total		**1.49**	**16.47**	**10.12**	**0.03**	**1.28**	**0.63**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.10	0.03	0.00	0.01	0.00
	Worker		0.03	0.02	0.31	0.00	0.08	0.02
	Total		**0.03**	**0.12**	**0.35**	**0.00**	**0.10**	**0.03**
TOTAL			***1.52***	***16.59***	***10.46***	***0.03***	***1.38***	***0.65***

Rough Grading

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2022** Summer						
	Fugitive Dust						3.48	1.51
	Off-Road		2.74	29.35	20.13	0.05	1.23	1.13
	Total		**2.74**	**29.35**	**20.13**	**0.05**	**4.71**	**2.64**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.10	0.03	0.00	0.01	0.00
	Worker		0.06	0.05	0.71	0.00	0.19	0.05
	Total		**0.07**	**0.14**	**0.74**	**0.00**	**0.20**	**0.06**
TOTAL			***2.80***	***29.49***	***20.87***	***0.05***	***4.91***	***2.70***
Onsite		**2022** Winter						
	Fugitive Dust						3.48	1.51
	Off-Road		2.74	29.35	20.13	0.05	1.23	1.13
	Total		**2.74**	**29.35**	**20.13**	**0.05**	**4.71**	**2.64**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.10	0.03	0.00	0.01	0.00
	Worker		0.07	0.05	0.65	0.00	0.19	0.05
	Total		**0.07**	**0.15**	**0.69**	**0.00**	**0.20**	**0.06**
TOTAL			***2.81***	***29.50***	***20.82***	***0.05***	***4.91***	***2.70***
Onsite		**2022**						
	Fugitive Dust		0.00	0.00	0.00	0.00	3.48	1.51
	Off-Road		2.74	29.35	20.13	0.05	1.23	1.13
	Total		**2.74**	**29.35**	**20.13**	**0.05**	**4.71**	**2.64**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.10	0.03	0.00	0.01	0.00
	Worker		0.07	0.05	0.71	0.00	0.19	0.05
	Total		**0.07**	**0.15**	**0.74**	**0.00**	**0.20**	**0.06**
TOTAL			***2.81***	***29.50***	***20.87***	***0.05***	***4.91***	***2.70***

Rough Grading Soil Haul

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2022** Summer						
	Fugitive Dust					0.03	0.00
	Off-Road	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.03**	**0.00**
Offsite							
	Hauling	0.40	14.15	3.34	0.05	1.47	0.48
	Vendor	0.00	0.00	0.00	0.00	0.00	0.00
	Worker	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.40**	**14.15**	**3.34**	**0.05**	**1.47**	**0.48**
TOTAL		***0.40***	***14.15***	***3.34***	***0.05***	***1.50***	***0.48***
Onsite	**2022** Winter						
	Fugitive Dust					0.03	0.00
	Off-Road	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.03**	**0.00**
Offsite							
	Hauling	0.39	14.73	3.40	0.05	1.47	0.48
	Vendor	0.00	0.00	0.00	0.00	0.00	0.00
	Worker	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.39**	**14.73**	**3.40**	**0.05**	**1.47**	**0.48**
TOTAL		***0.39***	***14.73***	***3.40***	***0.05***	***1.50***	***0.48***
Onsite	**2022**						
	Fugitive Dust	0.00	0.00	0.00	0.00	0.03	0.00
	Off-Road	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.03**	**0.00**
Offsite							
	Hauling	0.40	14.73	3.40	0.05	1.47	0.48
	Vendor	0.00	0.00	0.00	0.00	0.00	0.00
	Worker	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.40**	**14.73**	**3.40**	**0.05**	**1.47**	**0.48**
TOTAL		***0.40***	***14.73***	***3.40***	***0.05***	***1.50***	***0.48***

Utilities Trenching

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2022 Summer**						
	Off-Road	0.95	7.57	5.99	0.02	0.32	0.30
	Total	**0.95**	**7.57**	**5.99**	**0.02**	**0.32**	**0.30**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.01	0.20	0.07	0.00	0.03	0.01
	Worker	0.07	0.05	0.79	0.00	0.21	0.06
	Total	**0.08**	**0.25**	**0.85**	**0.00**	**0.23**	**0.07**
TOTAL		***1.03***	***7.82***	***6.84***	***0.02***	***0.55***	***0.36***
Onsite	**2022 Winter**						
	Off-Road	0.95	7.57	5.99	0.02	0.32	0.30
	Total	**0.95**	**7.57**	**5.99**	**0.02**	**0.32**	**0.30**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.01	0.20	0.07	0.00	0.03	0.01
	Worker	0.07	0.06	0.72	0.00	0.21	0.06
	Total	**0.08**	**0.26**	**0.79**	**0.00**	**0.23**	**0.07**
TOTAL		***1.04***	***7.83***	***6.78***	***0.02***	***0.55***	***0.36***
Onsite	**2022**						
	Off-Road	0.95	7.57	5.99	0.02	0.32	0.30
	Total	**0.95**	**7.57**	**5.99**	**0.02**	**0.32**	**0.30**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.01	0.20	0.07	0.00	0.03	0.01
	Worker	0.07	0.06	0.79	0.00	0.21	0.06
	Total	**0.08**	**0.26**	**0.85**	**0.00**	**0.23**	**0.07**
TOTAL		***1.04***	***7.83***	***6.84***	***0.02***	***0.55***	***0.36***

Fine Grading

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2022** Summer						
	Fugitive Dust						0.00	0.00
	Off-Road		0.45	3.95	2.63	0.01	0.14	0.13
	Total		**0.45**	**3.95**	**2.63**	**0.01**	**0.14**	**0.13**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.01	0.29	0.10	0.00	0.04	0.01
	Worker		0.05	0.04	0.59	0.00	0.16	0.04
	Total		**0.06**	**0.33**	**0.69**	**0.00**	**0.19**	**0.06**
TOTAL			***0.51***	***4.28***	***3.32***	***0.01***	***0.34***	***0.19***
Onsite		**2022** Winter						
	Fugitive Dust						0.00	0.00
	Off-Road		0.45	3.95	2.63	0.01	0.14	0.13
	Total		**0.45**	**3.95**	**2.63**	**0.01**	**0.14**	**0.13**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.01	0.31	0.10	0.00	0.04	0.01
	Worker		0.06	0.04	0.54	0.00	0.16	0.04
	Total		**0.07**	**0.35**	**0.65**	**0.00**	**0.19**	**0.06**
TOTAL			***0.52***	***4.30***	***3.27***	***0.01***	***0.34***	***0.19***
Onsite		**2022**						
	Fugitive Dust		0.00	0.00	0.00	0.00	0.00	0.00
	Off-Road		0.45	3.95	2.63	0.01	0.14	0.13
	Total		**0.45**	**3.95**	**2.63**	**0.01**	**0.14**	**0.13**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.01	0.31	0.10	0.00	0.04	0.01
	Worker		0.06	0.04	0.59	0.00	0.16	0.04
	Total		**0.07**	**0.35**	**0.69**	**0.00**	**0.19**	**0.06**
TOTAL			***0.52***	***4.30***	***3.32***	***0.01***	***0.34***	***0.19***

Fine Grading Soil Haul

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2022** Summer						
	Fugitive Dust						0.05	0.01
	Off-Road		0.00	0.00	0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**0.00**	**0.00**	**0.05**	**0.01**
Offsite								
	Hauling		0.64	22.94	5.41	0.08	2.38	0.77
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00	0.00	0.00
	Total		**0.64**	**22.94**	**5.41**	**0.08**	**2.38**	**0.77**
TOTAL			***0.64***	***22.94***	***5.41***	***0.08***	***2.43***	***0.78***
Onsite		**2022** Winter						
	Fugitive Dust						0.05	0.01
	Off-Road		0.00	0.00	0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**0.00**	**0.00**	**0.05**	**0.01**
Offsite								
	Hauling		0.62	23.87	5.51	0.08	2.38	0.77
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00	0.00	0.00
	Total		**0.62**	**23.87**	**5.51**	**0.08**	**2.38**	**0.77**
TOTAL			***0.62***	***23.87***	***5.51***	***0.08***	***2.43***	***0.78***
Onsite		**2022**						
	Fugitive Dust		0.00	0.00	0.00	0.00	0.05	0.01
	Off-Road		0.00	0.00	0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**0.00**	**0.00**	**0.05**	**0.01**
Offsite								
	Hauling		0.64	23.87	5.51	0.08	2.38	0.77
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00	0.00	0.00
	Total		**0.64**	**23.87**	**5.51**	**0.08**	**2.38**	**0.77**
TOTAL			***0.64***	***23.87***	***5.51***	***0.08***	***2.43***	***0.78***

Building Construction 2022

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2022 Summer**						
	Off-Road		1.71	13.62	14.21	0.03	0.61	0.59
	Total		**1.71**	**13.62**	**14.21**	**0.03**	**0.61**	**0.59**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.12	0.04	0.00	0.02	0.01
	Worker		0.19	0.13	2.17	0.01	0.62	0.17
	Total		**0.20**	**0.25**	**2.21**	**0.01**	**0.64**	**0.17**
TOTAL			***1.91***	***13.87***	***16.43***	***0.03***	***1.25***	***0.76***
Onsite		**2022 Winter**						
	Off-Road		1.86	14.60	14.35	0.03	0.70	0.67
	Total		**1.86**	**14.60**	**14.35**	**0.03**	**0.70**	**0.67**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.01	0.15	0.05	0.00	0.02	0.01
	Worker		0.22	0.17	2.17	0.01	0.62	0.17
	Total		**0.23**	**0.32**	**2.22**	**0.01**	**0.64**	**0.18**
TOTAL			***2.08***	***14.92***	***16.57***	***0.03***	***1.34***	***0.85***
Onsite		**2022**						
	Off-Road		1.86	14.60	14.35	0.03	0.70	0.67
	Total		**1.86**	**14.60**	**14.35**	**0.03**	**0.70**	**0.67**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.01	0.15	0.05	0.00	0.02	0.01
	Worker		0.22	0.17	2.17	0.01	0.62	0.17
	Total		**0.23**	**0.32**	**2.22**	**0.01**	**0.64**	**0.18**
TOTAL			***2.08***	***14.92***	***16.57***	***0.03***	***1.34***	***0.85***

Building Construction 2023

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2023 Summer**						
	Off-Road		1.71	13.62	14.21	0.03	0.61	0.59
	Total		**1.71**	**13.62**	**14.21**	**0.03**	**0.61**	**0.59**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.12	0.04	0.00	0.02	0.01
	Worker		0.19	0.13	2.17	0.01	0.62	0.17
	Total		**0.20**	**0.25**	**2.21**	**0.01**	**0.64**	**0.17**
TOTAL			***1.91***	***13.87***	***16.43***	***0.03***	***1.25***	***0.76***
Onsite		**2023 Winter**						
	Off-Road		1.71	13.62	14.21	0.03	0.61	0.59
	Total		**1.71**	**13.62**	**14.21**	**0.03**	**0.61**	**0.59**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.12	0.05	0.00	0.02	0.01
	Worker		0.21	0.15	1.99	0.01	0.62	0.17
	Total		**0.21**	**0.27**	**2.04**	**0.01**	**0.64**	**0.17**
TOTAL			***1.92***	***13.89***	***16.25***	***0.03***	***1.25***	***0.76***
Onsite		**2023**						
	Off-Road		1.71	13.62	14.21	0.03	0.61	0.59
	Total		**1.71**	**13.62**	**14.21**	**0.03**	**0.61**	**0.59**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.12	0.05	0.00	0.02	0.01
	Worker		0.21	0.15	2.17	0.01	0.62	0.17
	Total		**0.21**	**0.27**	**2.21**	**0.01**	**0.64**	**0.17**
TOTAL			***1.92***	***13.89***	***16.43***	***0.03***	***1.25***	***0.76***

Paving 2023

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2023** Summer						
	Off-Road		0.88	8.61	11.68	0.02	0.43	0.40
	Paving		0.14				0.00	0.00
	Total		**1.02**	**8.61**	**11.68**	**0.02**	**0.43**	**0.40**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.05	0.03	0.54	0.00	0.16	0.04
	Total		**0.05**	**0.03**	**0.54**	**0.00**	**0.16**	**0.04**
TOTAL			***1.07***	***8.64***	***12.23***	***0.02***	***0.59***	***0.44***
Onsite		**2023** Winter						
	Off-Road		0.88	8.61	11.68	0.02	0.43	0.40
	Paving		0.14				0.00	0.00
	Total		**1.02**	**8.61**	**11.68**	**0.02**	**0.43**	**0.40**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.05	0.04	0.50	0.00	0.16	0.04
	Total		**0.05**	**0.04**	**0.50**	**0.00**	**0.16**	**0.04**
TOTAL			***1.07***	***8.65***	***12.18***	***0.02***	***0.59***	***0.44***
Onsite		**2023**						
	Off-Road		0.88	8.61	11.68	0.02	0.43	0.40
	Paving		0.14	0.00	0.00	0.00	0.00	0.00
	Total		**1.02**	**8.61**	**11.68**	**0.02**	**0.43**	**0.40**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.05	0.04	0.54	0.00	0.16	0.04
	Total		**0.05**	**0.04**	**0.54**	**0.00**	**0.16**	**0.04**
TOTAL			***1.07***	***8.65***	***12.23***	***0.02***	***0.59***	***0.44***

Architectural Coating

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2023** Summer						
	Archit. Coating		137.36				0.00	0.00
	Off-Road		0.19	1.30	1.81	0.00	0.07	0.07
	Total		**137.55**	**1.30**	**1.81**	**0.00**	**0.07**	**0.07**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.04	0.03	0.43	0.00	0.12	0.03
	Total		**0.04**	**0.03**	**0.43**	**0.00**	**0.12**	**0.03**
TOTAL			***137.59***	***1.33***	***2.24***	***0.00***	***0.20***	***0.10***
Onsite		**2023** Winter						
	Archit. Coating		141.81				0.00	0.00
	Off-Road		0.19	1.30	1.81	0.00	0.07	0.07
	Total		**142.01**	**1.30**	**1.81**	**0.00**	**0.07**	**0.07**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.04	0.03	0.40	0.00	0.12	0.03
	Total		**0.04**	**0.03**	**0.40**	**0.00**	**0.12**	**0.03**
TOTAL			***142.05***	***1.33***	***2.21***	***0.00***	***0.20***	***0.10***
Onsite		**2023**						
	Archit. Coating		141.81	0.00	0.00	0.00	0.00	0.00
	Off-Road		0.19	1.30	1.81	0.00	0.07	0.07
	Total		**142.01**	**1.30**	**1.81**	**0.00**	**0.07**	**0.07**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.04	0.03	0.43	0.00	0.12	0.03
	Total		**0.04**	**0.03**	**0.43**	**0.00**	**0.12**	**0.03**
TOTAL			***142.05***	***1.33***	***2.24***	***0.00***	***0.20***	***0.10***

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Asphalt Demolition	*2*	*17*	*15*	*0*	*1*	*1*
Asphalt Demolition and Debris Haul	*2*	*23*	*16*	*0*	*5*	*2*
Site Preparation	*2*	*17*	*10*	*0*	*1*	*1*
Rough Grading	*3*	*30*	*21*	*0*	*5*	*3*
Rough Grading and Soil Haul	*3*	*44*	*24*	*0*	*6*	*3*
Utilities Trenching	*1*	*8*	*7*	*0*	*1*	*0*
Utilities Trenching, Fine Grading and Soil Haul, and Building Construction 2022	*4*	*51*	*32*	*0*	*5*	*2*
Utilities Trenching and Building Construction 2022	*3*	*23*	*23*	*0*	*2*	*1*
Building Construction 2022	*2*	*15*	*17*	*0*	*1*	*1*
Building Construction 2023	*2*	*14*	*16*	*0*	*1*	*1*
Building Construction 2023 and Paving	*3*	*23*	*29*	*0*	*2*	*1*
Building Construction 2023 and Architectural Coating	*144*	*15*	*19*	*0*	*1*	*1*
MAX DAILY	**144**	**51**	**32**	**0**	**6**	**3**
Regional Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	**Yes**	No	No	No	No	No

Regional Construction Emissions Worksheet (Mitigated):

Asphalt Demolition		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2022 Summer**						
	Off-Road	1.69	16.62	13.96	0.02	0.84	0.78
	Total	**1.69**	**16.62**	**13.96**	**0.02**	**0.84**	**0.78**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.00	0.10	0.03	0.00	0.01	0.00
	Worker	0.05	0.03	0.51	0.00	0.13	0.04
	Total	**0.05**	**0.13**	**0.55**	**0.00**	**0.15**	**0.04**
TOTAL		***1.74***	***16.75***	***14.51***	***0.03***	***0.99***	***0.82***
Onsite	**2022 Winter**						
	Off-Road	1.69	16.62	13.96	0.02	0.84	0.78
	Total	**1.69**	**16.62**	**13.96**	**0.02**	**0.84**	**0.78**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.00	0.10	0.03	0.00	0.01	0.00
	Worker	0.05	0.04	0.47	0.00	0.13	0.04
	Total	**0.05**	**0.14**	**0.50**	**0.00**	**0.15**	**0.04**
TOTAL		***1.74***	***16.76***	***14.47***	***0.03***	***0.99***	***0.82***
Onsite	**2022**						
	Off-Road	1.69	16.62	13.96	0.02	0.84	0.78
	Total	**1.69**	**16.62**	**13.96**	**0.02**	**0.84**	**0.78**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.00	0.10	0.03	0.00	0.01	0.00
	Worker	0.05	0.04	0.51	0.00	0.13	0.04
	Total	**0.05**	**0.14**	**0.55**	**0.00**	**0.15**	**0.04**
TOTAL		***1.74***	***16.76***	***14.51***	***0.03***	***0.99***	***0.82***

Asphalt Demolition Debris Haul		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2022** Summer						
	Fugitive Dust					3.36	0.51
	Off-Road	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.00**	**0.00**	**0.00**	**0.00**	**3.36**	**0.51**
Offsite							
	Hauling	0.16	5.91	1.39	0.02	0.61	0.20
	Vendor	0.00	0.00	0.00	0.00	0.00	0.00
	Worker	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.16**	**5.91**	**1.39**	**0.02**	**0.61**	**0.20**
TOTAL		***0.16***	***5.91***	***1.39***	***0.02***	***3.98***	***0.71***
Onsite	**2022** Winter						
	Fugitive Dust					3.36	0.51
	Off-Road	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.00**	**0.00**	**0.00**	**0.00**	**3.36**	**0.51**
Offsite							
	Hauling	0.16	6.15	1.42	0.02	0.61	0.20
	Vendor	0.00	0.00	0.00	0.00	0.00	0.00
	Worker	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.16**	**6.15**	**1.42**	**0.02**	**0.61**	**0.20**
TOTAL		***0.16***	***6.15***	***1.42***	***0.02***	***3.98***	***0.71***
Onsite	**2022**						
	Fugitive Dust	0.00	0.00	0.00	0.00	3.36	0.51
	Off-Road	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.00**	**0.00**	**0.00**	**0.00**	**3.36**	**0.51**
Offsite							
	Hauling	0.16	6.15	1.42	0.02	0.61	0.20
	Vendor	0.00	0.00	0.00	0.00	0.00	0.00
	Worker	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.16**	**6.15**	**1.42**	**0.02**	**0.61**	**0.20**
TOTAL		***0.16***	***6.15***	***1.42***	***0.02***	***3.98***	***0.71***

Site Preparation

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2022** Summer						
	Fugitive Dust						0.68	0.07
	Off-Road		1.49	16.47	10.12	0.03	0.60	0.55
	Total		**1.49**	**16.47**	**10.12**	**0.03**	**1.28**	**0.63**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.10	0.03	0.00	0.01	0.00
	Worker		0.03	0.02	0.31	0.00	0.08	0.02
	Total		**0.03**	**0.12**	**0.35**	**0.00**	**0.10**	**0.03**
TOTAL			***1.52***	***16.58***	***10.46***	***0.03***	***1.38***	***0.65***
Onsite		**2022** Winter						
	Fugitive Dust						0.68	0.07
	Off-Road		1.49	16.47	10.12	0.03	0.60	0.55
	Total		**1.49**	**16.47**	**10.12**	**0.03**	**1.28**	**0.63**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.10	0.03	0.00	0.01	0.00
	Worker		0.03	0.02	0.29	0.00	0.08	0.02
	Total		**0.03**	**0.12**	**0.32**	**0.00**	**0.10**	**0.03**
TOTAL			***1.52***	***16.59***	***10.44***	***0.03***	***1.38***	***0.65***
Onsite		**2022**						
	Fugitive Dust		0.00	0.00	0.00	0.00	0.68	0.07
	Off-Road		1.49	16.47	10.12	0.03	0.60	0.55
	Total		**1.49**	**16.47**	**10.12**	**0.03**	**1.28**	**0.63**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.10	0.03	0.00	0.01	0.00
	Worker		0.03	0.02	0.31	0.00	0.08	0.02
	Total		**0.03**	**0.12**	**0.35**	**0.00**	**0.10**	**0.03**
TOTAL			***1.52***	***16.59***	***10.46***	***0.03***	***1.38***	***0.65***

Rough Grading

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2022** Summer						
	Fugitive Dust						3.48	1.51
	Off-Road		2.74	29.35	20.13	0.05	1.23	1.13
	Total		**2.74**	**29.35**	**20.13**	**0.05**	**4.71**	**2.64**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.10	0.03	0.00	0.01	0.00
	Worker		0.06	0.05	0.71	0.00	0.19	0.05
	Total		**0.07**	**0.14**	**0.74**	**0.00**	**0.20**	**0.06**
TOTAL			***2.80***	***29.49***	***20.87***	***0.05***	***4.91***	***2.70***
Onsite		**2022** Winter						
	Fugitive Dust						3.48	1.51
	Off-Road		2.74	29.35	20.13	0.05	1.23	1.13
	Total		**2.74**	**29.35**	**20.13**	**0.05**	**4.71**	**2.64**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.10	0.03	0.00	0.01	0.00
	Worker		0.07	0.05	0.65	0.00	0.19	0.05
	Total		**0.07**	**0.15**	**0.69**	**0.00**	**0.20**	**0.06**
TOTAL			***2.81***	***29.50***	***20.82***	***0.05***	***4.91***	***2.70***
Onsite		**2022**						
	Fugitive Dust		0.00	0.00	0.00	0.00	3.48	1.51
	Off-Road		2.74	29.35	20.13	0.05	1.23	1.13
	Total		**2.74**	**29.35**	**20.13**	**0.05**	**4.71**	**2.64**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.10	0.03	0.00	0.01	0.00
	Worker		0.07	0.05	0.71	0.00	0.19	0.05
	Total		**0.07**	**0.15**	**0.74**	**0.00**	**0.20**	**0.06**
TOTAL			***2.81***	***29.50***	***20.87***	***0.05***	***4.91***	***2.70***

Rough Grading Soil Haul

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2022** Summer						
	Fugitive Dust					0.03	0.00
	Off-Road	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.03**	**0.00**
Offsite							
	Hauling	0.40	14.15	3.34	0.05	1.47	0.48
	Vendor	0.00	0.00	0.00	0.00	0.00	0.00
	Worker	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.40**	**14.15**	**3.34**	**0.05**	**1.47**	**0.48**
TOTAL		***0.40***	***14.15***	***3.34***	***0.05***	***1.50***	***0.48***
Onsite	**2022** Winter						
	Fugitive Dust					0.03	0.00
	Off-Road	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.03**	**0.00**
Offsite							
	Hauling	0.39	14.73	3.40	0.05	1.47	0.48
	Vendor	0.00	0.00	0.00	0.00	0.00	0.00
	Worker	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.39**	**14.73**	**3.40**	**0.05**	**1.47**	**0.48**
TOTAL		***0.39***	***14.73***	***3.40***	***0.05***	***1.50***	***0.48***
Onsite	**2022**						
	Fugitive Dust	0.00	0.00	0.00	0.00	0.03	0.00
	Off-Road	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.03**	**0.00**
Offsite							
	Hauling	0.40	14.73	3.40	0.05	1.47	0.48
	Vendor	0.00	0.00	0.00	0.00	0.00	0.00
	Worker	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.40**	**14.73**	**3.40**	**0.05**	**1.47**	**0.48**
TOTAL		***0.40***	***14.73***	***3.40***	***0.05***	***1.50***	***0.48***

Utilities Trenching

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2022 Summer**						
	Off-Road	0.95	7.57	5.99	0.02	0.32	0.30
	Total	**0.95**	**7.57**	**5.99**	**0.02**	**0.32**	**0.30**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.01	0.20	0.07	0.00	0.03	0.01
	Worker	0.07	0.05	0.79	0.00	0.21	0.06
	Total	**0.08**	**0.25**	**0.85**	**0.00**	**0.23**	**0.07**
TOTAL		***1.03***	***7.82***	***6.84***	***0.02***	***0.55***	***0.36***
Onsite	**2022 Winter**						
	Off-Road	0.95	7.57	5.99	0.02	0.32	0.30
	Total	**0.95**	**7.57**	**5.99**	**0.02**	**0.32**	**0.30**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.01	0.20	0.07	0.00	0.03	0.01
	Worker	0.07	0.06	0.72	0.00	0.21	0.06
	Total	**0.08**	**0.26**	**0.79**	**0.00**	**0.23**	**0.07**
TOTAL		***1.04***	***7.83***	***6.78***	***0.02***	***0.55***	***0.36***
Onsite	**2022**						
	Off-Road	0.95	7.57	5.99	0.02	0.32	0.30
	Total	**0.95**	**7.57**	**5.99**	**0.02**	**0.32**	**0.30**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.01	0.20	0.07	0.00	0.03	0.01
	Worker	0.07	0.06	0.79	0.00	0.21	0.06
	Total	**0.08**	**0.26**	**0.85**	**0.00**	**0.23**	**0.07**
TOTAL		***1.04***	***7.83***	***6.84***	***0.02***	***0.55***	***0.36***

Fine Grading

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2022** Summer						
	Fugitive Dust						0.00	0.00
	Off-Road		0.45	3.95	2.63	0.01	0.14	0.13
	Total		**0.45**	**3.95**	**2.63**	**0.01**	**0.14**	**0.13**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.01	0.29	0.10	0.00	0.04	0.01
	Worker		0.05	0.04	0.59	0.00	0.16	0.04
	Total		**0.06**	**0.33**	**0.69**	**0.00**	**0.19**	**0.06**
TOTAL			***0.51***	***4.28***	***3.32***	***0.01***	***0.34***	***0.19***
Onsite		**2022** Winter						
	Fugitive Dust						0.00	0.00
	Off-Road		0.45	3.95	2.63	0.01	0.14	0.13
	Total		**0.45**	**3.95**	**2.63**	**0.01**	**0.14**	**0.13**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.01	0.31	0.10	0.00	0.04	0.01
	Worker		0.06	0.04	0.54	0.00	0.16	0.04
	Total		**0.07**	**0.35**	**0.65**	**0.00**	**0.19**	**0.06**
TOTAL			***0.52***	***4.30***	***3.27***	***0.01***	***0.34***	***0.19***
Onsite		**2022**						
	Fugitive Dust		0.00	0.00	0.00	0.00	0.00	0.00
	Off-Road		0.45	3.95	2.63	0.01	0.14	0.13
	Total		**0.45**	**3.95**	**2.63**	**0.01**	**0.14**	**0.13**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.01	0.31	0.10	0.00	0.04	0.01
	Worker		0.06	0.04	0.59	0.00	0.16	0.04
	Total		**0.07**	**0.35**	**0.69**	**0.00**	**0.19**	**0.06**
TOTAL			***0.52***	***4.30***	***3.32***	***0.01***	***0.34***	***0.19***

Fine Grading Soil Haul

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2022** Summer						
	Fugitive Dust						0.05	0.01
	Off-Road		0.00	0.00	0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**0.00**	**0.00**	**0.05**	**0.01**
Offsite								
	Hauling		0.64	22.94	5.41	0.08	2.38	0.77
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00	0.00	0.00
	Total		**0.64**	**22.94**	**5.41**	**0.08**	**2.38**	**0.77**
TOTAL			***0.64***	***22.94***	***5.41***	***0.08***	***2.43***	***0.78***
Onsite		**2022** Winter						
	Fugitive Dust						0.05	0.01
	Off-Road		0.00	0.00	0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**0.00**	**0.00**	**0.05**	**0.01**
Offsite								
	Hauling		0.62	23.87	5.51	0.08	2.38	0.77
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00	0.00	0.00
	Total		**0.62**	**23.87**	**5.51**	**0.08**	**2.38**	**0.77**
TOTAL			***0.62***	***23.87***	***5.51***	***0.08***	***2.43***	***0.78***
Onsite		**2022**						
	Fugitive Dust		0.00	0.00	0.00	0.00	0.05	0.01
	Off-Road		0.00	0.00	0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**0.00**	**0.00**	**0.05**	**0.01**
Offsite								
	Hauling		0.64	23.87	5.51	0.08	2.38	0.77
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00	0.00	0.00
	Total		**0.64**	**23.87**	**5.51**	**0.08**	**2.38**	**0.77**
TOTAL			***0.64***	***23.87***	***5.51***	***0.08***	***2.43***	***0.78***

Building Construction 2022

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2022 Summer**						
	Off-Road		1.86	14.60	14.35	0.03	0.70	0.67
	Total		**1.86**	**14.60**	**14.35**	**0.03**	**0.70**	**0.67**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.01	0.15	0.05	0.00	0.02	0.01
	Worker		0.21	0.15	2.36	0.01	0.62	0.17
	Total		**0.21**	**0.30**	**2.41**	**0.01**	**0.64**	**0.18**
TOTAL			***2.07***	***14.90***	***16.77***	***0.03***	***1.34***	***0.85***
Onsite		**2022 Winter**						
	Off-Road		1.86	14.60	14.35	0.03	0.70	0.67
	Total		**1.86**	**14.60**	**14.35**	**0.03**	**0.70**	**0.67**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.01	0.15	0.05	0.00	0.02	0.01
	Worker		0.22	0.17	2.17	0.01	0.62	0.17
	Total		**0.23**	**0.32**	**2.22**	**0.01**	**0.64**	**0.18**
TOTAL			***2.08***	***14.92***	***16.57***	***0.03***	***1.34***	***0.85***
Onsite		**2022**						
	Off-Road		1.86	14.60	14.35	0.03	0.70	0.67
	Total		**1.86**	**14.60**	**14.35**	**0.03**	**0.70**	**0.67**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.01	0.15	0.05	0.00	0.02	0.01
	Worker		0.22	0.17	2.36	0.01	0.62	0.17
	Total		**0.23**	**0.32**	**2.41**	**0.01**	**0.64**	**0.18**
TOTAL			***2.08***	***14.92***	***16.77***	***0.03***	***1.34***	***0.85***

Building Construction 2023

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2023 Summer**						
	Off-Road		1.71	13.62	14.21	0.03	0.61	0.59
	Total		**1.71**	**13.62**	**14.21**	**0.03**	**0.61**	**0.59**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.12	0.04	0.00	0.02	0.01
	Worker		0.19	0.13	2.17	0.01	0.62	0.17
	Total		**0.20**	**0.25**	**2.21**	**0.01**	**0.64**	**0.17**
TOTAL			***1.91***	***13.87***	***16.43***	***0.03***	***1.25***	***0.76***
Onsite		**2023 Winter**						
	Off-Road		1.71	13.62	14.21	0.03	0.61	0.59
	Total		**1.71**	**13.62**	**14.21**	**0.03**	**0.61**	**0.59**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.12	0.05	0.00	0.02	0.01
	Worker		0.21	0.15	1.99	0.01	0.62	0.17
	Total		**0.21**	**0.27**	**2.04**	**0.01**	**0.64**	**0.17**
TOTAL			***1.92***	***13.89***	***16.25***	***0.03***	***1.25***	***0.76***
Onsite		**2023**						
	Off-Road		1.71	13.62	14.21	0.03	0.61	0.59
	Total		**1.71**	**13.62**	**14.21**	**0.03**	**0.61**	**0.59**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.12	0.05	0.00	0.02	0.01
	Worker		0.21	0.15	2.17	0.01	0.62	0.17
	Total		**0.21**	**0.27**	**2.21**	**0.01**	**0.64**	**0.17**
TOTAL			***1.92***	***13.89***	***16.43***	***0.03***	***1.25***	***0.76***

Paving 2023

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2023** Summer						
	Off-Road		0.88	8.61	11.68	0.02	0.43	0.40
	Paving		0.14				0.00	0.00
	Total		**1.02**	**8.61**	**11.68**	**0.02**	**0.43**	**0.40**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.05	0.03	0.54	0.00	0.16	0.04
	Total		**0.05**	**0.03**	**0.54**	**0.00**	**0.16**	**0.04**
TOTAL			***1.07***	***8.64***	***12.23***	***0.02***	***0.59***	***0.44***
Onsite		**2023** Winter						
	Off-Road		0.88	8.61	11.68	0.02	0.43	0.40
	Paving		0.14				0.00	0.00
	Total		**1.02**	**8.61**	**11.68**	**0.02**	**0.43**	**0.40**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.05	0.04	0.50	0.00	0.16	0.04
	Total		**0.05**	**0.04**	**0.50**	**0.00**	**0.16**	**0.04**
TOTAL			***1.07***	***8.65***	***12.18***	***0.02***	***0.59***	***0.44***
Onsite		**2023**						
	Off-Road		0.88	8.61	11.68	0.02	0.43	0.40
	Paving		0.14	0.00	0.00	0.00	0.00	0.00
	Total		**1.02**	**8.61**	**11.68**	**0.02**	**0.43**	**0.40**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.05	0.04	0.54	0.00	0.16	0.04
	Total		**0.05**	**0.04**	**0.54**	**0.00**	**0.16**	**0.04**
TOTAL			***1.07***	***8.65***	***12.23***	***0.02***	***0.59***	***0.44***

Architectural Coating

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2023** Summer						
	Archit. Coating		36.43				0.00	0.00
	Off-Road		0.19	1.30	1.81	0.00	0.07	0.07
	Total		**36.62**	**1.30**	**1.81**	**0.00**	**0.07**	**0.07**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.04	0.03	0.43	0.00	0.12	0.03
	Total		**0.04**	**0.03**	**0.43**	**0.00**	**0.12**	**0.03**
TOTAL			***36.66***	***1.33***	***2.24***	***0.00***	***0.20***	***0.10***
Onsite		**2023** Winter						
	Archit. Coating		37.54				0.00	0.00
	Off-Road		0.19	1.30	1.81	0.00	0.07	0.07
	Total		**37.73**	**1.30**	**1.81**	**0.00**	**0.07**	**0.07**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.04	0.03	0.40	0.00	0.12	0.03
	Total		**0.04**	**0.03**	**0.40**	**0.00**	**0.12**	**0.03**
TOTAL			***37.78***	***1.33***	***2.21***	***0.00***	***0.20***	***0.10***
Onsite		**2023**						
	Archit. Coating		37.54	0.00	0.00	0.00	0.00	0.00
	Off-Road		0.19	1.30	1.81	0.00	0.07	0.07
	Total		**37.73**	**1.30**	**1.81**	**0.00**	**0.07**	**0.07**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00	0.00	0.00
	Worker		0.04	0.03	0.43	0.00	0.12	0.03
	Total		**0.04**	**0.03**	**0.43**	**0.00**	**0.12**	**0.03**
TOTAL			***37.78***	***1.33***	***2.24***	***0.00***	***0.20***	***0.10***

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Asphalt Demolition	***2***	***17***	***15***	***0***	***1***	***1***
Asphalt Demolition and Debris Haul	***2***	***23***	***16***	***0***	***5***	***2***
Site Preparation	***2***	***17***	***10***	***0***	***1***	***1***
Rough Grading	***3***	***30***	***21***	***0***	***5***	***3***
Rough Grading and Soil Haul	***3***	***44***	***24***	***0***	***6***	***3***
Utilities Trenching	***1***	***8***	***7***	***0***	***1***	***0***
Utilities Trenching, Fine Grading and Soil Haul, and Building Construction 2022	***4***	***51***	***32***	***0***	***5***	***2***
Utilities Trenching and Building Construction 2022	***3***	***23***	***24***	***0***	***2***	***1***
Building Construction 2022	***2***	***15***	***17***	***0***	***1***	***1***
Building Construction 2023	***2***	***14***	***16***	***0***	***1***	***1***
Building Construction 2023 and Paving	***3***	***23***	***29***	***0***	***2***	***1***
Building Construction 2023 and Architectural Coating	***40***	***15***	***19***	***0***	***1***	***1***
MAX DAILY	**40**	**51**	**32**	**0**	**6**	**3**
Regional Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	**No**	No	No	No	No	No

Construction LST Worksheet:

Asphalt Demolition						
			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2022**				
	Off-Road		16.62	13.96	0.84	0.78
	Total		**16.62**	**13.96**	**0.84**	**0.78**
TOTAL			***16.62***	***13.96***	***0.84***	***0.78***
Onsite		**2022**				
	Off-Road		16.62	13.96	0.84	0.78
	Total		**16.62**	**13.96**	**0.84**	**0.78**
TOTAL			***16.62***	***13.96***	***0.84***	***0.78***
Onsite		**2022**				
	Off-Road		16.62	13.96	0.84	0.78
	Total		**16.62**	**13.96**	**0.84**	**0.78**
TOTAL			***16.62***	***13.96***	***0.84***	***0.78***

Asphalt Demolition Debris Haul						
			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2022**				
	Fugitive Dust				3.36	0.51
	Off-Road		0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**3.36**	**0.51**
TOTAL			***0.00***	***0.00***	***3.36***	***0.51***
Onsite		**2022**				
	Fugitive Dust				3.36	0.51
	Off-Road		0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**3.36**	**0.51**
Offsite						
	Hauling		6.15	1.42	0.61	0.20
	Vendor		0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00
	Total		**6.15**	**1.42**	**0.61**	**0.20**
TOTAL			***6.15***	***1.42***	***3.98***	***0.71***
Onsite		**2022**				
	Fugitive Dust		0.00	0.00	3.36	0.51
	Off-Road		0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**3.36**	**0.51**
TOTAL			***6.15***	***1.42***	***3.98***	***0.71***

Site Preparation

			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2022**				
	Fugitive Dust				0.68	0.07
	Off-Road		16.47	10.12	0.60	0.55
	Total		**16.47**	**10.12**	**1.28**	**0.63**
TOTAL			***16.47***	***10.12***	***1.28***	***0.63***
Onsite		**2022**				
	Fugitive Dust				0.68	0.07
	Off-Road		16.47	10.12	0.60	0.55
	Total		**16.47**	**10.12**	**1.28**	**0.63**
TOTAL			***16.47***	***10.12***	***1.28***	***0.63***
Onsite		**2022**				
	Fugitive Dust		0.00	0.00	0.68	0.07
	Off-Road		16.47	10.12	0.60	0.55
	Total		**16.47**	**10.12**	**1.28**	**0.63**
TOTAL			***16.47***	***10.12***	***1.28***	***0.63***

Rough Grading

			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2022**				
	Fugitive Dust				3.48	1.51
	Off-Road		29.35	20.13	1.23	1.13
	Total		**29.35**	**20.13**	**4.71**	**2.64**
TOTAL			***29.35***	***20.13***	***4.71***	***2.64***
Onsite		**2022**				
	Fugitive Dust				3.48	1.51
	Off-Road		29.35	20.13	1.23	1.13
	Total		**29.35**	**20.13**	**4.71**	**2.64**
TOTAL			***29.35***	***20.13***	***4.71***	***2.64***
Onsite		**2022**				
	Fugitive Dust		0.00	0.00	3.48	1.51
	Off-Road		29.35	20.13	1.23	1.13
	Total		**29.35**	**20.13**	**4.71**	**2.64**
TOTAL			***29.35***	***20.13***	***4.71***	***2.64***

Rough Grading Soil Haul

			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2022**				
	Fugitive Dust				0.03	0.00
	Off-Road		0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**0.03**	**0.00**
TOTAL			***0.00***	***0.00***	***0.03***	***0.00***
Onsite		**2022**				
	Fugitive Dust				0.03	0.00
	Off-Road		0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**0.03**	**0.00**
TOTAL			***0.00***	***0.00***	***0.03***	***0.00***
Onsite		**2022**				
	Fugitive Dust		0.00	0.00	0.03	0.00
	Off-Road		0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**0.03**	**0.00**
TOTAL			***0.00***	***0.00***	***0.03***	***0.00***

Utilities Trenching

			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2022**				
	Off-Road		7.57	5.99	0.32	0.30
	Total		**7.57**	**5.99**	**0.32**	**0.30**
TOTAL			***7.57***	***5.99***	***0.32***	***0.30***
Onsite		**2022**				
	Off-Road		7.57	5.99	0.32	0.30
	Total		**7.57**	**5.99**	**0.32**	**0.30**
TOTAL			***7.57***	***5.99***	***0.32***	***0.30***
Onsite		**2022**				
	Off-Road		7.57	5.99	0.32	0.30
	Total		**7.57**	**5.99**	**0.32**	**0.30**
TOTAL			***7.57***	***5.99***	***0.32***	***0.30***

Fine Grading

			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2022**				
	Fugitive Dust				0.00	0.00
	Off-Road		3.95	2.63	0.14	0.13
	Total		**3.95**	**2.63**	**0.14**	**0.13**
TOTAL			***3.95***	***2.63***	***0.14***	***0.13***
Onsite		**2022**				
	Fugitive Dust				0.00	0.00
	Off-Road		3.95	2.63	0.14	0.13
	Total		**3.95**	**2.63**	**0.14**	**0.13**
TOTAL			***3.95***	***2.63***	***0.14***	***0.13***
Onsite		**2022**				
	Fugitive Dust		0.00	0.00	0.00	0.00
	Off-Road		3.95	2.63	0.14	0.13
	Total		**3.95**	**2.63**	**0.14**	**0.13**
TOTAL			***3.95***	***2.63***	***0.14***	***0.13***

Fine Grading Soil Haul

			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2022**				
	Fugitive Dust				0.05	0.01
	Off-Road		0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**0.05**	**0.01**
TOTAL			***0.00***	***0.00***	***0.05***	***0.01***
Onsite		**2022**				
	Fugitive Dust				0.05	0.01
	Off-Road		0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**0.05**	**0.01**
TOTAL			***0.00***	***0.00***	***0.05***	***0.01***
Onsite		**2022**				
	Fugitive Dust		0.00	0.00	0.05	0.01
	Off-Road		0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**0.05**	**0.01**
TOTAL			***0.00***	***0.00***	***0.05***	***0.01***

Building Construction 2022

			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2022**				
	Off-Road		13.62	14.21	0.61	0.59
	Total		**13.62**	**14.21**	**0.61**	**0.59**
TOTAL			***13.62***	***14.21***	***0.61***	***0.59***
Onsite		**2022**				
	Off-Road		14.60	14.35	0.70	0.67
	Total		**14.60**	**14.35**	**0.70**	**0.67**
TOTAL			***14.60***	***14.35***	***0.70***	***0.67***
Onsite		**2022**				
	Off-Road		14.60	14.35	0.70	0.67
	Total		**14.60**	**14.35**	**0.70**	**0.67**
TOTAL			***14.60***	***14.35***	***0.70***	***0.67***

Building Construction 2023

			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2023**				
	Off-Road		13.62	14.21	0.61	0.59
	Total		**13.62**	**14.21**	**0.61**	**0.59**
TOTAL			***13.62***	***14.21***	***0.61***	***0.59***
Onsite		**2023**				
	Off-Road		13.62	14.21	0.61	0.59
	Total		**13.62**	**14.21**	**0.61**	**0.59**
TOTAL			***13.62***	***14.21***	***0.61***	***0.59***
Onsite		**2023**				
	Off-Road		13.62	14.21	0.61	0.59
	Total		**13.62**	**14.21**	**0.61**	**0.59**
TOTAL			***13.62***	***14.21***	***0.61***	***0.59***

Paving 2023

			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2023**				
	Off-Road		8.61	11.68	0.43	0.40
	Paving				0.00	0.00
	Total		**8.61**	**11.68**	**0.43**	**0.40**
TOTAL			***8.61***	***11.68***	***0.43***	***0.40***
Onsite		**2023**				
	Off-Road		8.61	11.68	0.43	0.40
	Paving				0.00	0.00
	Total		**8.61**	**11.68**	**0.43**	**0.40**
TOTAL			***8.61***	***11.68***	***0.43***	***0.40***
Onsite		**2023**				
	Off-Road		8.61	11.68	0.43	0.40
	Paving		0.00	0.00	0.00	0.00
	Total		**8.61**	**11.68**	**0.43**	**0.40**
TOTAL			***8.61***	***11.68***	***0.43***	***0.40***

Architectural Coating					
		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2023**				
Archit. Coating				0.00	0.00
Off-Road		1.30	1.81	0.07	0.07
Total		**1.30**	**1.81**	**0.07**	**0.07**
TOTAL		***1.30***	***1.81***	***0.07***	***0.07***
Onsite	**2023**				
Archit. Coating				0.00	0.00
Off-Road		1.30	1.81	0.07	0.07
Total		**1.30**	**1.81**	**0.07**	**0.07**
TOTAL		***1.30***	***1.81***	***0.07***	***0.07***
Onsite	**2023**				
Archit. Coating		0.00	0.00	0.00	0.00
Off-Road		1.30	1.81	0.07	0.07
Total		**1.30**	**1.81**	**0.07**	**0.07**
TOTAL		***1.30***	***1.81***	***0.07***	***0.07***

	NOx	**CO**	**PM10 Total**	**PM2.5 Total**
Asphalt Demolition	***17***	***14***	***0.84***	***0.78***
2.00 Acre LST	***114***	***861***	***7.00***	***4.00***
Exceeds LST?	***no***	***no***	***no***	***no***
Asphalt Demolition and Debris Haul	***23***	***15***	***4.82***	***1.49***
2.00 Acre LST	***114***	***861***	***7.00***	***4.00***
Exceeds LST?	***no***	***no***	***no***	***no***
Site Preparation	***16***	***10***	***1.28***	***0.63***
1.94 Acre LST	***112***	***843***	***6.81***	***3.94***
Exceeds LST?	***no***	***no***	***no***	***no***
Rough Grading	***29***	***20***	***4.71***	***2.64***
2.85 Acre LST	***130***	***1,036***	***8.98***	***4.85***
Exceeds LST?	***no***	***no***	***no***	***no***
Rough Grading and Soil Haul	***29***	***20***	***4.74***	***2.64***
2.85 Acre LST	***130***	***1,036***	***8.98***	***4.85***
Exceeds LST?	***no***	***no***	***no***	***no***
Utilities Trenching	***8***	***6***	***0.32***	***0.30***
<1.00 Acre LST	***80***	***571***	***4.00***	***3.00***
Exceeds LST?	***no***	***no***	***no***	***no***
Utilities Trenching, Fine Grading and Soil Haul, and Building Construction 2022	***26***	***23***	***1.21***	***1.11***
1.38 Acre LST	***93***	***680***	***5.12***	***3.37***
Exceeds LST?	***no***	***no***	***no***	***no***

Utilities Trenching and Building Construction 2022	*22*	*20*	*1.02*	*0.97*
<1.00 Acre LST	*80*	*571*	*4.00*	*3.00*
Exceeds LST?	*no*	*no*	*no*	*no*
Building Construction 2022	*15*	*14*	*0.70*	*0.67*
<1.00 Acre LST	*80*	*571*	*4.00*	*3.00*
Exceeds LST?	*no*	*no*	*no*	*no*
Building Construction 2023	*14*	*14*	*0.61*	*0.59*
<1.00 Acre LST	*80*	*571*	*4.00*	*3.00*
Exceeds LST?	*no*	*no*	*no*	*no*
Building Construction 2023 and Paving	*22*	*26*	*1.05*	*0.99*
<1.00 Acre LST	*80*	*571*	*4.00*	*3.00*
Exceeds LST?	*no*	*no*	*no*	*no*
Building Construction 2023 and Architectural Coating	*15*	*16*	*0.68*	*0.66*
<1.00 Acre LST	*80*	*571*	*4.00*	*3.00*
Exceeds LST?	*no*	*no*	*no*	*no*

Regional Operation Emissions Worksheet: Buildout Year 2023[1]

[1] CalEEMod, Version 2020.4

Proposed Project

Summer

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	7.33	0.29	21.09	0.00	0.12	0.12
Energy	0.12	1.02	0.51	0.01	0.08	0.08
Mobile	5.37	4.02	54.38	0.11	11.95	3.22
Total	**12.83**	**5.33**	**75.98**	**0.12**	**12.15**	**3.42**

Winter

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	7.33	0.29	21.09	0.00	0.12	0.12
Energy	0.12	1.02	0.51	0.01	0.08	0.08
Mobile	5.29	4.40	53.10	0.10	11.95	3.22
Total	**12.75**	**5.71**	**74.70**	**0.11**	**12.15**	**3.42**

Max Daily

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	7.33	0.29	21.09	0.00	0.12	0.12
Energy	0.12	1.02	0.51	0.01	0.08	0.08
Mobile	5.37	4.40	54.38	0.11	11.95	3.22
Total	**12.83**	**5.71**	**75.98**	**0.12**	**12.15**	**3.42**

Regional Thresholds (lb/day)	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	No	No	No	No	No	No

GHG Emissions Inventory

Source: CalEEMod, Version 2020.4

$MTCO_2e$=metric tons of carbon dioxide equivalent.

Construction

	$MTCO_2e$
2022	533
2023	340
Total Construction	**873**
30-Year Amortization[1]	**29**

Operation	$MTCO_2e$	Percent of Emissions
Area	7	0.3%
Energy	927	31%
Mobile	1,774	60%
Solid Waste	116	4%
Water	105	4%
30-Yr Amortized Construction Emissions[1]	29	1%
Total	**2,958**	**100%**
South Coast AQMD Working Group Threshold	3,000	
Exceed Threshold?	**No**	

Notes

1 Total construction emissions are amortized over 30 years per South Coast AQMD Working Group methodology; SCAQMD. 2009, November 19. Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group Meeting 14. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-14/ghg-meeting-14-main-presentation.pdf?sfvrsn=2.

2 Energy use is adjusted by 4 percent to reflect a slightly larger building square footage to align with the project description

CalEEMod Construction Model

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Washington and Rosemead Mixed-Use Project Construction Run

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	190.00	1000sqft	0.34	190,000.00	0
Other Asphalt Surfaces	45.00	1000sqft	1.03	45,000.00	0
Other Non-Asphalt Surfaces	21.00	1000sqft	0.48	21,000.00	0
Recreational Swimming Pool	17.01	1000sqft	0.00	17,010.00	0
Apartments Mid Rise	255.00	Dwelling Unit	0.99	260,220.00	729
Regional Shopping Center	5.73	1000sqft	0.00	5,730.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2023
Utility Company	Pico Rivera Innovative Municipal Energy				
CO2 Intensity (lb/MWhr)	683.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - based on PRIME power mix

Land Use - based on info from applicant

Construction Phase - based on info confirmed by applicant

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - no additional equipment required for Asphalt Demolition Haul

Off-road Equipment -

Date: 7/5/2022 2:08 PM

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment - based on info from applicant

Off-road Equipment - no additional equipment required for Grading Soil Haul

Off-road Equipment -

Off-road Equipment - based on info provided by applicant

Off-road Equipment - no additional equipment required for Grading Soil Haul

Off-road Equipment - loader HP based on CAT 966 Loader provided by applicant

Off-road Equipment - based on info from applicant

Trips and VMT - assumes 2 trips/water truck/day. See assumptions file for calculations on dump trucks and hauling trips

Demolition -

Grading -

Architectural Coating - based on info from applicant, residential includes area for pool, nonresidential includes area for int/ext parking structure, parking only includes parking

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 and 1186

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	11,370.00	97,750.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	34,110.00	293,595.00
tblArchitecturalCoating	ConstArea_Parking	15,360.00	11,400.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	175,649.00	187,130.00
tblArchitecturalCoating	ConstArea_Residential_Interior	526,946.00	561,391.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblAreaCoating	Area_Nonresidential_Exterior	11370	9500
tblAreaCoating	Area_Nonresidential_Interior	34110	28500
tblAreaCoating	Area_Residential_Exterior	175649	168973

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblAreaCoating	Area_Residential_Interior	526946	506918
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	19.00
tblConstructionPhase	NumDays	220.00	407.00
tblConstructionPhase	NumDays	20.00	37.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	6.00	30.00
tblConstructionPhase	NumDays	6.00	12.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	10.00	19.00
tblConstructionPhase	NumDays	3.00	6.00
tblGrading	MaterialExported	0.00	7,400.00
tblGrading	MaterialExported	0.00	20,000.00
tblLandUse	LandUseSquareFeet	255,000.00	260,220.00
tblLandUse	LotAcreage	4.36	0.34
tblLandUse	LotAcreage	0.39	0.00
tblLandUse	LotAcreage	6.71	0.99
tblLandUse	LotAcreage	0.13	0.00
tblOffRoadEquipment	HorsePower	97.00	225.00
tblOffRoadEquipment	HorsePower	97.00	276.00
tblOffRoadEquipment	HorsePower	158.00	270.00
tblOffRoadEquipment	HorsePower	158.00	249.00
tblOffRoadEquipment	HorsePower	8.00	7.00
tblOffRoadEquipment	HorsePower	8.00	7.00
tblOffRoadEquipment	HorsePower	80.00	134.00
tblOffRoadEquipment	HorsePower	97.00	225.00
tblOffRoadEquipment	HorsePower	78.00	50.00

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	96.96	76.95
tblSolidWaste	SolidWasteGenerationRate	6.02	5.78
tblTripsAndVMT	HaulingTripLength	20.00	19.00
tblTripsAndVMT	HaulingTripLength	20.00	19.00
tblTripsAndVMT	HaulingTripLength	20.00	19.00
tblTripsAndVMT	HaulingTripNumber	182.00	184.00
tblTripsAndVMT	HaulingTripNumber	925.00	1,058.00
tblTripsAndVMT	HaulingTripNumber	2,500.00	2,858.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	73.00	3.00
tblTripsAndVMT	WorkerTripNumber	60.00	12.00
tblTripsAndVMT	WorkerTripNumber	300.00	60.00

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblWater	IndoorWaterUseRate	1,006,024.88	798,432.44
tblWater	IndoorWaterUseRate	424,435.55	407,398.87
tblWater	OutdoorWaterUseRate	616,595.89	489,361.82
tblWater	OutdoorWaterUseRate	260,137.92	249,696.08

2.0 Emissions Summary

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	0.2965	2.6735	2.3152	5.9100e-003	0.2538	0.1084	0.3622	0.0853	0.1024	0.1877	0.0000	524.4940	524.4940	0.0910	0.0221	533.3454
2023	1.5885	1.7623	2.0934	3.9800e-003	0.0840	0.0790	0.1630	0.0224	0.0756	0.0979	0.0000	337.9897	337.9897	0.0539	2.6300e-003	340.1224
Maximum	**1.5885**	**2.6735**	**2.3152**	**5.9100e-003**	**0.2538**	**0.1084**	**0.3622**	**0.0853**	**0.1024**	**0.1877**	**0.0000**	**524.4940**	**524.4940**	**0.0910**	**0.0221**	**533.3454**

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	0.2965	2.6735	2.3152	5.9100e-003	0.1611	0.1084	0.2695	0.0508	0.1024	0.1532	0.0000	524.4936	524.4936	0.0910	0.0221	533.3450
2023	1.5885	1.7623	2.0934	3.9800e-003	0.0775	0.0790	0.1565	0.0208	0.0756	0.0963	0.0000	337.9894	337.9894	0.0539	2.6300e-003	340.1221
Maximum	**1.5885**	**2.6735**	**2.3152**	**5.9100e-003**	**0.1611**	**0.1084**	**0.2695**	**0.0508**	**0.1024**	**0.1532**	**0.0000**	**524.4936**	**524.4936**	**0.0910**	**0.0221**	**533.3450**

	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**	**29.36**	**0.00**	**18.89**	**33.51**	**0.00**	**12.62**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2022	3-31-2022	1.0444	1.0444
2	4-1-2022	6-30-2022	1.3540	1.3540
3	7-1-2022	9-30-2022	0.5766	0.5766
4	10-1-2022	12-31-2022	0.5588	0.5588
5	1-1-2023	3-31-2023	0.5084	0.5084
6	4-1-2023	6-30-2023	0.5129	0.5129
7	7-1-2023	9-30-2023	0.5186	0.5186
		Highest	1.3540	1.3540

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Demolition	Demolition	1/1/2022	2/22/2022	5	37	a
2	Asphalt Demolition Debris Haul	Demolition	2/16/2022	2/22/2022	5	5	b
3	Site Preparation	Site Preparation	2/23/2022	3/2/2022	5	6	c
4	Rough Grading	Grading	3/3/2022	4/13/2022	5	30	d
5	Rough Grading Soil Haul	Grading	3/29/2022	4/13/2022	5	12	e
6	Utility Trenching	Trenching	4/14/2022	7/6/2022	5	60	f
7	Fine Grading	Grading	5/12/2022	6/8/2022	5	20	g
8	Fine Grading Soil Haul	Grading	5/12/2022	6/8/2022	5	20	h
9	Building Construction	Building Construction	5/12/2022	12/1/2023	5	407	i
10	Paving	Paving	10/11/2023	11/6/2023	5	19	j
11	Architectural Coating	Architectural Coating	11/7/2023	12/1/2023	5	19	k

Acres of Grading (Site Preparation Phase): 9

Acres of Grading (Grading Phase): 60

Acres of Paving: 1.85

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Residential Indoor: 561,391; Residential Outdoor: 187,130; Non-Residential Indoor: 293,595; Non-Residential Outdoor: 97,750; Striped Parking Area: 11,40(

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Asphalt Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Asphalt Demolition Debris Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demolition Debris Haul	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Demolition Debris Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	276	0.37
Rough Grading	Excavators	1	8.00	270	0.38
Rough Grading	Graders	1	8.00	187	0.41
Rough Grading	Rollers	1	8.00	134	0.38
Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
Rough Grading	Scrapers	1	8.00	367	0.48
Rough Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Rough Grading Soil Haul	Graders	0	8.00	187	0.41
Rough Grading Soil Haul	Rubber Tired Dozers	0	8.00	247	0.40
Rough Grading Soil Haul	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Utility Trenching	Excavators	1	6.00	249	0.38
Utility Trenching	Plate Compactors	5	8.00	7	0.43
Utility Trenching	Tractors/Loaders/Backhoes	1	8.00	225	0.37
Utility Trenching	Trenchers	1	8.00	50	0.50
Fine Grading	Graders	0	8.00	187	0.41
Fine Grading	Plate Compactors	5	8.00	7	0.43
Fine Grading	Rubber Tired Dozers	0	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	1	8.00	225	0.37

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Fine Grading Soil Haul	Graders	0	8.00	187	0.41
Fine Grading Soil Haul	Rubber Tired Dozers	0	8.00	247	0.40
Fine Grading Soil Haul	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	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
Asphalt Demolition	5	13.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demolition Debris Haul	0	0.00	0.00	184.00	14.70	6.90	19.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	7	18.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading Soil Haul	0	0.00	0.00	1,058.00	14.70	6.90	19.00	LD_Mix	HDT_Mix	HHDT
Utility Trenching	8	20.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading Soil Haul	0	0.00	0.00	2,858.00	14.70	6.90	19.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	60.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Asphalt 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					
Off-Road	0.0313	0.3075	0.2583	4.5000e-004		0.0155	0.0155		0.0145	0.0145	0.0000	38.9937	38.9937	9.9400e-003	0.0000	39.2421
Total	**0.0313**	**0.3075**	**0.2583**	**4.5000e-004**		**0.0155**	**0.0155**		**0.0145**	**0.0145**	**0.0000**	**38.9937**	**38.9937**	**9.9400e-003**	**0.0000**	**39.2421**

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	7.0000e-005	1.9000e-003	6.3000e-004	1.0000e-005	2.3000e-004	2.0000e-005	2.5000e-004	7.0000e-005	2.0000e-005	8.0000e-005	0.0000	0.7065	0.7065	2.0000e-005	1.0000e-004	0.7375
Worker	8.2000e-004	6.9000e-004	8.9200e-003	2.0000e-005	2.6400e-003	2.0000e-005	2.6500e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.1675	2.1675	6.0000e-005	6.0000e-005	2.1867
Total	**8.9000e-004**	**2.5900e-003**	**9.5500e-003**	**3.0000e-005**	**2.8700e-003**	**4.0000e-005**	**2.9000e-003**	**7.7000e-004**	**4.0000e-005**	**8.0000e-004**	**0.0000**	**2.8740**	**2.8740**	**8.0000e-005**	**1.6000e-004**	**2.9242**

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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	0.0313	0.3075	0.2583	4.5000e-004		0.0155	0.0155		0.0145	0.0145	0.0000	38.9937	38.9937	9.9400e-003	0.0000	39.2421
Total	**0.0313**	**0.3075**	**0.2583**	**4.5000e-004**		**0.0155**	**0.0155**		**0.0145**	**0.0145**	**0.0000**	**38.9937**	**38.9937**	**9.9400e-003**	**0.0000**	**39.2421**

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	7.0000e-005	1.9000e-003	6.3000e-004	1.0000e-005	2.2000e-004	2.0000e-005	2.4000e-004	6.0000e-005	2.0000e-005	8.0000e-005	0.0000	0.7065	0.7065	2.0000e-005	1.0000e-004	0.7375
Worker	8.2000e-004	6.9000e-004	8.9200e-003	2.0000e-005	2.4300e-003	2.0000e-005	2.4500e-003	6.5000e-004	2.0000e-005	6.7000e-004	0.0000	2.1675	2.1675	6.0000e-005	6.0000e-005	2.1867
Total	**8.9000e-004**	**2.5900e-003**	**9.5500e-003**	**3.0000e-005**	**2.6500e-003**	**4.0000e-005**	**2.6900e-003**	**7.1000e-004**	**4.0000e-005**	**7.5000e-004**	**0.0000**	**2.8740**	**2.8740**	**8.0000e-005**	**1.6000e-004**	**2.9242**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Asphalt Demolition Debris Haul - 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					0.0197	0.0000	0.0197	2.9800e-003	0.0000	2.9800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	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**	**0.0197**	**0.0000**	**0.0197**	**2.9800e-003**	**0.0000**	**2.9800e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	4.1000e-004	0.0156	3.5100e-003	5.0000e-005	1.5000e-003	1.1000e-004	1.6100e-003	4.1000e-004	1.0000e-004	5.2000e-004	0.0000	5.4107	5.4107	2.9000e-004	8.6000e-004	5.6737
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	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
Total	**4.1000e-004**	**0.0156**	**3.5100e-003**	**5.0000e-005**	**1.5000e-003**	**1.1000e-004**	**1.6100e-003**	**4.1000e-004**	**1.0000e-004**	**5.2000e-004**	**0.0000**	**5.4107**	**5.4107**	**2.9000e-004**	**8.6000e-004**	**5.6737**

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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					8.4100e-003	0.0000	8.4100e-003	1.2700e-003	0.0000	1.2700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	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**	**8.4100e-003**	**0.0000**	**8.4100e-003**	**1.2700e-003**	**0.0000**	**1.2700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	4.1000e-004	0.0156	3.5100e-003	5.0000e-005	1.4000e-003	1.1000e-004	1.5100e-003	3.9000e-004	1.0000e-004	4.9000e-004	0.0000	5.4107	5.4107	2.9000e-004	8.6000e-004	5.6737
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	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
Total	**4.1000e-004**	**0.0156**	**3.5100e-003**	**5.0000e-005**	**1.4000e-003**	**1.1000e-004**	**1.5100e-003**	**3.9000e-004**	**1.0000e-004**	**4.9000e-004**	**0.0000**	**5.4107**	**5.4107**	**2.9000e-004**	**8.6000e-004**	**5.6737**

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3.4 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					4.7700e-003	0.0000	4.7700e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.4600e-003	0.0494	0.0304	9.0000e-005		1.8000e-003	1.8000e-003		1.6600e-003	1.6600e-003	0.0000	7.7594	7.7594	2.5100e-003	0.0000	7.8222
Total	**4.4600e-003**	**0.0494**	**0.0304**	**9.0000e-005**	**4.7700e-003**	**1.8000e-003**	**6.5700e-003**	**5.2000e-004**	**1.6600e-003**	**2.1800e-003**	**0.0000**	**7.7594**	**7.7594**	**2.5100e-003**	**0.0000**	**7.8222**

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	1.0000e-005	3.1000e-004	1.0000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1146	0.1146	0.0000	2.0000e-005	0.1196
Worker	8.0000e-005	7.0000e-005	8.9000e-004	0.0000	2.6000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2163	0.2163	1.0000e-005	1.0000e-005	0.2182
Total	**9.0000e-005**	**3.8000e-004**	**9.9000e-004**	**0.0000**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.3309**	**0.3309**	**1.0000e-005**	**3.0000e-005**	**0.3378**

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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					2.0400e-003	0.0000	2.0400e-003	2.2000e-004	0.0000	2.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.4600e-003	0.0494	0.0304	9.0000e-005		1.8000e-003	1.8000e-003		1.6600e-003	1.6600e-003	0.0000	7.7594	7.7594	2.5100e-003	0.0000	7.8222
Total	**4.4600e-003**	**0.0494**	**0.0304**	**9.0000e-005**	**2.0400e-003**	**1.8000e-003**	**3.8400e-003**	**2.2000e-004**	**1.6600e-003**	**1.8800e-003**	**0.0000**	**7.7594**	**7.7594**	**2.5100e-003**	**0.0000**	**7.8222**

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	1.0000e-005	3.1000e-004	1.0000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1146	0.1146	0.0000	2.0000e-005	0.1196
Worker	8.0000e-005	7.0000e-005	8.9000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2163	0.2163	1.0000e-005	1.0000e-005	0.2182
Total	**9.0000e-005**	**3.8000e-004**	**9.9000e-004**	**0.0000**	**2.8000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.3309**	**0.3309**	**1.0000e-005**	**3.0000e-005**	**0.3378**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Rough 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					0.1222	0.0000	0.1222	0.0531	0.0000	0.0531	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0411	0.4402	0.3020	7.3000e-004		0.0184	0.0184		0.0169	0.0169	0.0000	64.4952	64.4952	0.0209	0.0000	65.0167
Total	**0.0411**	**0.4402**	**0.3020**	**7.3000e-004**	**0.1222**	**0.0184**	**0.1405**	**0.0531**	**0.0169**	**0.0700**	**0.0000**	**64.4952**	**64.4952**	**0.0209**	**0.0000**	**65.0167**

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	6.0000e-005	1.5400e-003	5.1000e-004	1.0000e-005	1.9000e-004	1.0000e-005	2.0000e-004	5.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.5729	0.5729	2.0000e-005	8.0000e-005	0.5980
Worker	9.2000e-004	7.7000e-004	0.0100	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.4334	2.4334	7.0000e-005	7.0000e-005	2.4549
Total	**9.8000e-004**	**2.3100e-003**	**0.0105**	**4.0000e-005**	**3.1500e-003**	**3.0000e-005**	**3.1800e-003**	**8.4000e-004**	**3.0000e-005**	**8.7000e-004**	**0.0000**	**3.0062**	**3.0062**	**9.0000e-005**	**1.5000e-004**	**3.0529**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.0522	0.0000	0.0522	0.0227	0.0000	0.0227	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0411	0.4402	0.3020	7.3000e-004		0.0184	0.0184		0.0169	0.0169	0.0000	64.4951	64.4951	0.0209	0.0000	65.0166
Total	**0.0411**	**0.4402**	**0.3020**	**7.3000e-004**	**0.0522**	**0.0184**	**0.0706**	**0.0227**	**0.0169**	**0.0396**	**0.0000**	**64.4951**	**64.4951**	**0.0209**	**0.0000**	**65.0166**

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	6.0000e-005	1.5400e-003	5.1000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.5729	0.5729	2.0000e-005	8.0000e-005	0.5980
Worker	9.2000e-004	7.7000e-004	0.0100	3.0000e-005	2.7300e-003	2.0000e-005	2.7500e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.4334	2.4334	7.0000e-005	7.0000e-005	2.4549
Total	**9.8000e-004**	**2.3100e-003**	**0.0105**	**4.0000e-005**	**2.9100e-003**	**3.0000e-005**	**2.9400e-003**	**7.8000e-004**	**3.0000e-005**	**8.2000e-004**	**0.0000**	**3.0062**	**3.0062**	**9.0000e-005**	**1.5000e-004**	**3.0529**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Rough Grading Soil Haul - 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					4.2000e-004	0.0000	4.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	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**	**4.2000e-004**	**0.0000**	**4.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	2.3400e-003	0.0894	0.0202	3.1000e-004	8.6500e-003	6.3000e-004	9.2700e-003	2.3800e-003	6.0000e-004	2.9800e-003	0.0000	31.1114	31.1114	1.6500e-003	4.9400e-003	32.6236
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	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
Total	**2.3400e-003**	**0.0894**	**0.0202**	**3.1000e-004**	**8.6500e-003**	**6.3000e-004**	**9.2700e-003**	**2.3800e-003**	**6.0000e-004**	**2.9800e-003**	**0.0000**	**31.1114**	**31.1114**	**1.6500e-003**	**4.9400e-003**	**32.6236**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					1.8000e-004	0.0000	1.8000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	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**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	2.3400e-003	0.0894	0.0202	3.1000e-004	8.0600e-003	6.3000e-004	8.6900e-003	2.2300e-003	6.0000e-004	2.8300e-003	0.0000	31.1114	31.1114	1.6500e-003	4.9400e-003	32.6236
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	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
Total	**2.3400e-003**	**0.0894**	**0.0202**	**3.1000e-004**	**8.0600e-003**	**6.3000e-004**	**8.6900e-003**	**2.2300e-003**	**6.0000e-004**	**2.8300e-003**	**0.0000**	**31.1114**	**31.1114**	**1.6500e-003**	**4.9400e-003**	**32.6236**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Utility Trenching - 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	0.0286	0.2271	0.1796	5.3000e-004		9.5100e-003	9.5100e-003		8.8500e-003	8.8500e-003	0.0000	45.2951	45.2951	0.0138	0.0000	45.6388
Total	**0.0286**	**0.2271**	**0.1796**	**5.3000e-004**		**9.5100e-003**	**9.5100e-003**		**8.8500e-003**	**8.8500e-003**	**0.0000**	**45.2951**	**45.2951**	**0.0138**	**0.0000**	**45.6388**

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	2.3000e-004	6.1700e-003	2.0500e-003	2.0000e-005	7.6000e-004	6.0000e-005	8.1000e-004	2.2000e-004	5.0000e-005	2.7000e-004	0.0000	2.2915	2.2915	8.0000e-005	3.3000e-004	2.3919
Worker	2.0600e-003	1.7100e-003	0.0222	6.0000e-005	6.5700e-003	4.0000e-005	6.6200e-003	1.7500e-003	4.0000e-005	1.7900e-003	0.0000	5.4075	5.4075	1.6000e-004	1.5000e-004	5.4554
Total	**2.2900e-003**	**7.8800e-003**	**0.0243**	**8.0000e-005**	**7.3300e-003**	**1.0000e-004**	**7.4300e-003**	**1.9700e-003**	**9.0000e-005**	**2.0600e-003**	**0.0000**	**7.6990**	**7.6990**	**2.4000e-004**	**4.8000e-004**	**7.8473**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0286	0.2271	0.1796	5.3000e-004		9.5100e-003	9.5100e-003		8.8500e-003	8.8500e-003	0.0000	45.2950	45.2950	0.0138	0.0000	45.6387
Total	**0.0286**	**0.2271**	**0.1796**	**5.3000e-004**		**9.5100e-003**	**9.5100e-003**		**8.8500e-003**	**8.8500e-003**	**0.0000**	**45.2950**	**45.2950**	**0.0138**	**0.0000**	**45.6387**

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	2.3000e-004	6.1700e-003	2.0500e-003	2.0000e-005	7.1000e-004	6.0000e-005	7.6000e-004	2.1000e-004	5.0000e-005	2.6000e-004	0.0000	2.2915	2.2915	8.0000e-005	3.3000e-004	2.3919
Worker	2.0600e-003	1.7100e-003	0.0222	6.0000e-005	6.0600e-003	4.0000e-005	6.1000e-003	1.6200e-003	4.0000e-005	1.6600e-003	0.0000	5.4075	5.4075	1.6000e-004	1.5000e-004	5.4554
Total	**2.2900e-003**	**7.8800e-003**	**0.0243**	**8.0000e-005**	**6.7700e-003**	**1.0000e-004**	**6.8600e-003**	**1.8300e-003**	**9.0000e-005**	**1.9200e-003**	**0.0000**	**7.6990**	**7.6990**	**2.4000e-004**	**4.8000e-004**	**7.8473**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.8 Fine 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5000e-003	0.0395	0.0263	9.0000e-005		1.4100e-003	1.4100e-003		1.3300e-003	1.3300e-003	0.0000	7.6305	7.6305	2.1700e-003	0.0000	7.6847
Total	**4.5000e-003**	**0.0395**	**0.0263**	**9.0000e-005**	**0.0000**	**1.4100e-003**	**1.4100e-003**	**0.0000**	**1.3300e-003**	**1.3300e-003**	**0.0000**	**7.6305**	**7.6305**	**2.1700e-003**	**0.0000**	**7.6847**

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	1.2000e-004	3.0900e-003	1.0200e-003	1.0000e-005	3.8000e-004	3.0000e-005	4.1000e-004	1.1000e-004	3.0000e-005	1.4000e-004	0.0000	1.1458	1.1458	4.0000e-005	1.7000e-004	1.1960
Worker	5.1000e-004	4.3000e-004	5.5600e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3519	1.3519	4.0000e-005	4.0000e-005	1.3638
Total	**6.3000e-004**	**3.5200e-003**	**6.5800e-003**	**2.0000e-005**	**2.0200e-003**	**4.0000e-005**	**2.0600e-003**	**5.5000e-004**	**4.0000e-005**	**5.9000e-004**	**0.0000**	**2.4976**	**2.4976**	**8.0000e-005**	**2.1000e-004**	**2.5598**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5000e-003	0.0395	0.0263	9.0000e-005		1.4100e-003	1.4100e-003		1.3300e-003	1.3300e-003	0.0000	7.6305	7.6305	2.1700e-003	0.0000	7.6847
Total	**4.5000e-003**	**0.0395**	**0.0263**	**9.0000e-005**	**0.0000**	**1.4100e-003**	**1.4100e-003**	**0.0000**	**1.3300e-003**	**1.3300e-003**	**0.0000**	**7.6305**	**7.6305**	**2.1700e-003**	**0.0000**	**7.6847**

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	1.2000e-004	3.0900e-003	1.0200e-003	1.0000e-005	3.5000e-004	3.0000e-005	3.8000e-004	1.0000e-004	3.0000e-005	1.3000e-004	0.0000	1.1458	1.1458	4.0000e-005	1.7000e-004	1.1960
Worker	5.1000e-004	4.3000e-004	5.5600e-003	1.0000e-005	1.5200e-003	1.0000e-005	1.5300e-003	4.1000e-004	1.0000e-005	4.1000e-004	0.0000	1.3519	1.3519	4.0000e-005	4.0000e-005	1.3638
Total	**6.3000e-004**	**3.5200e-003**	**6.5800e-003**	**2.0000e-005**	**1.8700e-003**	**4.0000e-005**	**1.9100e-003**	**5.1000e-004**	**4.0000e-005**	**5.4000e-004**	**0.0000**	**2.4976**	**2.4976**	**8.0000e-005**	**2.1000e-004**	**2.5598**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.9 Fine Grading Soil Haul - 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					1.1300e-003	0.0000	1.1300e-003	1.7000e-004	0.0000	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	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**	**1.1300e-003**	**0.0000**	**1.1300e-003**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	6.3300e-003	0.2415	0.0545	8.5000e-004	0.0234	1.7000e-003	0.0251	6.4200e-003	1.6200e-003	8.0400e-003	0.0000	84.0418	84.0418	4.4500e-003	0.0133	88.1270
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	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
Total	**6.3300e-003**	**0.2415**	**0.0545**	**8.5000e-004**	**0.0234**	**1.7000e-003**	**0.0251**	**6.4200e-003**	**1.6200e-003**	**8.0400e-003**	**0.0000**	**84.0418**	**84.0418**	**4.4500e-003**	**0.0133**	**88.1270**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					4.8000e-004	0.0000	4.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	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**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	6.3300e-003	0.2415	0.0545	8.5000e-004	0.0218	1.7000e-003	0.0235	6.0300e-003	1.6200e-003	7.6500e-003	0.0000	84.0418	84.0418	4.4500e-003	0.0133	88.1270
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	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
Total	**6.3300e-003**	**0.2415**	**0.0545**	**8.5000e-004**	**0.0218**	**1.7000e-003**	**0.0235**	**6.0300e-003**	**1.6200e-003**	**7.6500e-003**	**0.0000**	**84.0418**	**84.0418**	**4.4500e-003**	**0.0133**	**88.1270**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.10 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	0.1549	1.2194	1.1985	2.0900e-003		0.0586	0.0586		0.0562	0.0562	0.0000	173.4129	173.4129	0.0335	0.0000	174.2493
Total	**0.1549**	**1.2194**	**1.1985**	**2.0900e-003**		**0.0586**	**0.0586**		**0.0562**	**0.0562**	**0.0000**	**173.4129**	**173.4129**	**0.0335**	**0.0000**	**174.2493**

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	4.9000e-004	0.0129	4.2700e-003	5.0000e-005	1.5800e-003	1.2000e-004	1.7000e-003	4.6000e-004	1.1000e-004	5.7000e-004	0.0000	4.7835	4.7835	1.6000e-004	6.9000e-004	4.9931
Worker	0.0172	0.0143	0.1857	4.9000e-004	0.0549	3.6000e-004	0.0553	0.0146	3.3000e-004	0.0149	0.0000	45.1522	45.1522	1.3000e-003	1.2300e-003	45.5523
Total	**0.0177**	**0.0272**	**0.1900**	**5.4000e-004**	**0.0565**	**4.8000e-004**	**0.0570**	**0.0150**	**4.4000e-004**	**0.0155**	**0.0000**	**49.9357**	**49.9357**	**1.4600e-003**	**1.9200e-003**	**50.5454**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.1549	1.2194	1.1985	2.0900e-003		0.0586	0.0586		0.0562	0.0562	0.0000	173.4127	173.4127	0.0335	0.0000	174.2491
Total	**0.1549**	**1.2194**	**1.1985**	**2.0900e-003**		**0.0586**	**0.0586**		**0.0562**	**0.0562**	**0.0000**	**173.4127**	**173.4127**	**0.0335**	**0.0000**	**174.2491**

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	4.9000e-004	0.0129	4.2700e-003	5.0000e-005	1.4800e-003	1.2000e-004	1.6000e-003	4.3000e-004	1.1000e-004	5.4000e-004	0.0000	4.7835	4.7835	1.6000e-004	6.9000e-004	4.9931
Worker	0.0172	0.0143	0.1857	4.9000e-004	0.0506	3.6000e-004	0.0510	0.0135	3.3000e-004	0.0139	0.0000	45.1522	45.1522	1.3000e-003	1.2300e-003	45.5523
Total	**0.0177**	**0.0272**	**0.1900**	**5.4000e-004**	**0.0521**	**4.8000e-004**	**0.0526**	**0.0140**	**4.4000e-004**	**0.0144**	**0.0000**	**49.9357**	**49.9357**	**1.4600e-003**	**1.9200e-003**	**50.5454**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.10 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	0.2056	1.6349	1.7057	3.0000e-003		0.0736	0.0736		0.0706	0.0706	0.0000	249.2425	249.2425	0.0471	0.0000	250.4209
Total	**0.2056**	**1.6349**	**1.7057**	**3.0000e-003**		**0.0736**	**0.0736**		**0.0706**	**0.0706**	**0.0000**	**249.2425**	**249.2425**	**0.0471**	**0.0000**	**250.4209**

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	4.1000e-004	0.0145	5.4300e-003	7.0000e-005	2.2700e-003	7.0000e-005	2.3400e-003	6.5000e-004	7.0000e-005	7.2000e-004	0.0000	6.5456	6.5456	2.2000e-004	9.4000e-004	6.8318
Worker	0.0228	0.0181	0.2453	6.8000e-004	0.0789	4.8000e-004	0.0794	0.0210	4.5000e-004	0.0214	0.0000	62.8016	62.8016	1.6700e-003	1.6300e-003	63.3305
Total	**0.0233**	**0.0327**	**0.2507**	**7.5000e-004**	**0.0812**	**5.5000e-004**	**0.0817**	**0.0216**	**5.2000e-004**	**0.0221**	**0.0000**	**69.3472**	**69.3472**	**1.8900e-003**	**2.5700e-003**	**70.1623**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.2056	1.6349	1.7057	3.0000e-003		0.0736	0.0736		0.0706	0.0706	0.0000	249.2422	249.2422	0.0471	0.0000	250.4206
Total	**0.2056**	**1.6349**	**1.7057**	**3.0000e-003**		**0.0736**	**0.0736**		**0.0706**	**0.0706**	**0.0000**	**249.2422**	**249.2422**	**0.0471**	**0.0000**	**250.4206**

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	4.1000e-004	0.0145	5.4300e-003	7.0000e-005	2.1200e-003	7.0000e-005	2.1900e-003	6.2000e-004	7.0000e-005	6.9000e-004	0.0000	6.5456	6.5456	2.2000e-004	9.4000e-004	6.8318
Worker	0.0228	0.0181	0.2453	6.8000e-004	0.0727	4.8000e-004	0.0732	0.0194	4.5000e-004	0.0199	0.0000	62.8016	62.8016	1.6700e-003	1.6300e-003	63.3305
Total	**0.0233**	**0.0327**	**0.2507**	**7.5000e-004**	**0.0749**	**5.5000e-004**	**0.0754**	**0.0201**	**5.2000e-004**	**0.0206**	**0.0000**	**69.3472**	**69.3472**	**1.8900e-003**	**2.5700e-003**	**70.1623**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.11 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	8.3600e-003	0.0818	0.1110	1.7000e-004		4.1200e-003	4.1200e-003		3.8000e-003	3.8000e-003	0.0000	14.7372	14.7372	4.6700e-003	0.0000	14.8539
Paving	1.3500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.7100e-003**	**0.0818**	**0.1110**	**1.7000e-004**		**4.1200e-003**	**4.1200e-003**		**3.8000e-003**	**3.8000e-003**	**0.0000**	**14.7372**	**14.7372**	**4.6700e-003**	**0.0000**	**14.8539**

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	4.5000e-004	3.6000e-004	4.8600e-003	1.0000e-005	1.5600e-003	1.0000e-005	1.5700e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.2430	1.2430	3.0000e-005	3.0000e-005	1.2534
Total	**4.5000e-004**	**3.6000e-004**	**4.8600e-003**	**1.0000e-005**	**1.5600e-003**	**1.0000e-005**	**1.5700e-003**	**4.1000e-004**	**1.0000e-005**	**4.2000e-004**	**0.0000**	**1.2430**	**1.2430**	**3.0000e-005**	**3.0000e-005**	**1.2534**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	8.3600e-003	0.0818	0.1110	1.7000e-004		4.1200e-003	4.1200e-003		3.8000e-003	3.8000e-003	0.0000	14.7371	14.7371	4.6700e-003	0.0000	14.8539
Paving	1.3500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.7100e-003**	**0.0818**	**0.1110**	**1.7000e-004**		**4.1200e-003**	**4.1200e-003**		**3.8000e-003**	**3.8000e-003**	**0.0000**	**14.7371**	**14.7371**	**4.6700e-003**	**0.0000**	**14.8539**

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	4.5000e-004	3.6000e-004	4.8600e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2430	1.2430	3.0000e-005	3.0000e-005	1.2534
Total	**4.5000e-004**	**3.6000e-004**	**4.8600e-003**	**1.0000e-005**	**1.4400e-003**	**1.0000e-005**	**1.4500e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.2430**	**1.2430**	**3.0000e-005**	**3.0000e-005**	**1.2534**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.12 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	1.3472					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8200e-003	0.0124	0.0172	3.0000e-005		6.7000e-004	6.7000e-004		6.7000e-004	6.7000e-004	0.0000	2.4256	2.4256	1.5000e-004	0.0000	2.4292
Total	**1.3491**	**0.0124**	**0.0172**	**3.0000e-005**		**6.7000e-004**	**6.7000e-004**		**6.7000e-004**	**6.7000e-004**	**0.0000**	**2.4256**	**2.4256**	**1.5000e-004**	**0.0000**	**2.4292**

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	3.6000e-004	2.9000e-004	3.8800e-003	1.0000e-005	1.2500e-003	1.0000e-005	1.2600e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	0.9944	0.9944	3.0000e-005	3.0000e-005	1.0027
Total	**3.6000e-004**	**2.9000e-004**	**3.8800e-003**	**1.0000e-005**	**1.2500e-003**	**1.0000e-005**	**1.2600e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**0.9944**	**0.9944**	**3.0000e-005**	**3.0000e-005**	**1.0027**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1.3472					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8200e-003	0.0124	0.0172	3.0000e-005		6.7000e-004	6.7000e-004		6.7000e-004	6.7000e-004	0.0000	2.4256	2.4256	1.5000e-004	0.0000	2.4292
Total	**1.3491**	**0.0124**	**0.0172**	**3.0000e-005**		**6.7000e-004**	**6.7000e-004**		**6.7000e-004**	**6.7000e-004**	**0.0000**	**2.4256**	**2.4256**	**1.5000e-004**	**0.0000**	**2.4292**

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	3.6000e-004	2.9000e-004	3.8800e-003	1.0000e-005	1.1500e-003	1.0000e-005	1.1600e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	0.9944	0.9944	3.0000e-005	3.0000e-005	1.0027
Total	**3.6000e-004**	**2.9000e-004**	**3.8800e-003**	**1.0000e-005**	**1.1500e-003**	**1.0000e-005**	**1.1600e-003**	**3.1000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**0.9944**	**0.9944**	**3.0000e-005**	**3.0000e-005**	**1.0027**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Washington and Rosemead Mixed-Use Project Construction Run

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	190.00	1000sqft	0.34	190,000.00	0
Other Asphalt Surfaces	45.00	1000sqft	1.03	45,000.00	0
Other Non-Asphalt Surfaces	21.00	1000sqft	0.48	21,000.00	0
Recreational Swimming Pool	17.01	1000sqft	0.00	17,010.00	0
Apartments Mid Rise	255.00	Dwelling Unit	0.99	260,220.00	729
Regional Shopping Center	5.73	1000sqft	0.00	5,730.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2023
Utility Company	Pico Rivera Innovative Municipal Energy				
CO2 Intensity (lb/MWhr)	683.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - based on PRIME power mix

Land Use - based on info from applicant

Construction Phase - based on info confirmed by applicant

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - no additional equipment required for Asphalt Demolition Haul

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment -

Off-road Equipment - based on info from applicant

Off-road Equipment - no additional equipment required for Grading Soil Haul

Off-road Equipment -

Off-road Equipment - based on info provided by applicant

Off-road Equipment - no additional equipment required for Grading Soil Haul

Off-road Equipment - loader HP based on CAT 966 Loader provided by applicant

Off-road Equipment - based on info from applicant

Trips and VMT - assumes 2 trips/water truck/day. See assumptions file for calculations on dump trucks and hauling trips

Demolition -

Grading -

Architectural Coating - based on info from applicant, residential includes area for pool, nonresidential includes area for int/ext parking structure, parking only includes

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 and 1186

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	11,370.00	97,750.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	34,110.00	293,595.00
tblArchitecturalCoating	ConstArea_Parking	15,360.00	11,400.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	175,649.00	187,130.00
tblArchitecturalCoating	ConstArea_Residential_Interior	526,946.00	561,391.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblAreaCoating	Area_Nonresidential_Exterior	11370	9500

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblAreaCoating	Area_Nonresidential_Interior	34110	28500
tblAreaCoating	Area_Residential_Exterior	175649	168973
tblAreaCoating	Area_Residential_Interior	526946	506918
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	19.00
tblConstructionPhase	NumDays	220.00	407.00
tblConstructionPhase	NumDays	20.00	37.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	6.00	30.00
tblConstructionPhase	NumDays	6.00	12.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	10.00	19.00
tblConstructionPhase	NumDays	3.00	6.00
tblGrading	MaterialExported	0.00	7,400.00
tblGrading	MaterialExported	0.00	20,000.00
tblLandUse	LandUseSquareFeet	255,000.00	260,220.00
tblLandUse	LotAcreage	4.36	0.34
tblLandUse	LotAcreage	0.39	0.00
tblLandUse	LotAcreage	6.71	0.99
tblLandUse	LotAcreage	0.13	0.00
tblOffRoadEquipment	HorsePower	97.00	225.00
tblOffRoadEquipment	HorsePower	97.00	276.00
tblOffRoadEquipment	HorsePower	158.00	270.00
tblOffRoadEquipment	HorsePower	158.00	249.00
tblOffRoadEquipment	HorsePower	8.00	7.00
tblOffRoadEquipment	HorsePower	8.00	7.00

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	80.00	134.00
tblOffRoadEquipment	HorsePower	97.00	225.00
tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	96.96	76.95
tblSolidWaste	SolidWasteGenerationRate	6.02	5.78
tblTripsAndVMT	HaulingTripLength	20.00	19.00
tblTripsAndVMT	HaulingTripLength	20.00	19.00
tblTripsAndVMT	HaulingTripLength	20.00	19.00
tblTripsAndVMT	HaulingTripNumber	182.00	184.00
tblTripsAndVMT	HaulingTripNumber	925.00	1,058.00
tblTripsAndVMT	HaulingTripNumber	2,500.00	2,858.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	73.00	3.00
tblTripsAndVMT	WorkerTripNumber	60.00	12.00
tblTripsAndVMT	WorkerTripNumber	300.00	60.00
tblWater	IndoorWaterUseRate	1,006,024.88	798,432.44
tblWater	IndoorWaterUseRate	424,435.55	407,398.87
tblWater	OutdoorWaterUseRate	616,595.89	489,361.82
tblWater	OutdoorWaterUseRate	260,137.92	249,696.08

2.0 Emissions Summary

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	4.2542	49.9364	32.3389	0.1489	9.8930	1.3427	11.2251	4.0089	1.2757	5.2382	0.0000	15,312.9108	15,312.9108	1.8426	1.5328	15,812.5270
2023	143.9538	22.5162	28.6536	0.0509	0.8575	1.0531	1.9106	0.2279	0.9935	1.2213	0.0000	4,809.6571	4,809.6571	0.9959	0.0260	4,842.2862
Maximum	**143.9538**	**49.9364**	**32.3389**	**0.1489**	**9.8930**	**1.3427**	**11.2251**	**4.0089**	**1.2757**	**5.2382**	**0.0000**	**15,312.9108**	**15,312.9108**	**1.8426**	**1.5328**	**15,812.5270**

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	4.2542	49.9364	32.3389	0.1489	5.0749	1.3427	6.4070	1.9480	1.2757	3.1774	0.0000	15,312.9108	15,312.9108	1.8426	1.5328	15,812.5270
2023	143.9538	22.5162	28.6536	0.0509	0.7907	1.0531	1.8438	0.2115	0.9935	1.2049	0.0000	4,809.6571	4,809.6571	0.9959	0.0260	4,842.2862
Maximum	**143.9538**	**49.9364**	**32.3389**	**0.1489**	**5.0749**	**1.3427**	**6.4070**	**1.9480**	**1.2757**	**3.1774**	**0.0000**	**15,312.9108**	**15,312.9108**	**1.8426**	**1.5328**	**15,812.5270**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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**	**45.44**	**0.00**	**37.19**	**49.03**	**0.00**	**32.16**	**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	Asphalt Demolition	Demolition	1/1/2022	2/22/2022	5	37	a
2	Asphalt Demolition Debris Haul	Demolition	2/16/2022	2/22/2022	5	5	b
3	Site Preparation	Site Preparation	2/23/2022	3/2/2022	5	6	c
4	Rough Grading	Grading	3/3/2022	4/13/2022	5	30	d
5	Rough Grading Soil Haul	Grading	3/29/2022	4/13/2022	5	12	e
6	Utility Trenching	Trenching	4/14/2022	7/6/2022	5	60	f
7	Fine Grading	Grading	5/12/2022	6/8/2022	5	20	g
8	Fine Grading Soil Haul	Grading	5/12/2022	6/8/2022	5	20	h
9	Building Construction	Building Construction	5/12/2022	12/1/2023	5	407	i
10	Paving	Paving	10/11/2023	11/6/2023	5	19	j
11	Architectural Coating	Architectural Coating	11/7/2023	12/1/2023	5	19	k

Acres of Grading (Site Preparation Phase): 9

Acres of Grading (Grading Phase): 60

Acres of Paving: 1.85

Residential Indoor: 561,391; Residential Outdoor: 187,130; Non-Residential Indoor: 293,595; Non-Residential Outdoor: 97,750; Striped Parking Area:

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Asphalt Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Asphalt Demolition Debris Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demolition Debris Haul	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Demolition Debris Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	276	0.37
Rough Grading	Excavators	1	8.00	270	0.38
Rough Grading	Graders	1	8.00	187	0.41
Rough Grading	Rollers	1	8.00	134	0.38
Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
Rough Grading	Scrapers	1	8.00	367	0.48
Rough Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Rough Grading Soil Haul	Graders	0	8.00	187	0.41
Rough Grading Soil Haul	Rubber Tired Dozers	0	8.00	247	0.40
Rough Grading Soil Haul	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Utility Trenching	Excavators	1	6.00	249	0.38
Utility Trenching	Plate Compactors	5	8.00	7	0.43
Utility Trenching	Tractors/Loaders/Backhoes	1	8.00	225	0.37
Utility Trenching	Trenchers	1	8.00	50	0.50
Fine Grading	Graders	0	8.00	187	0.41
Fine Grading	Plate Compactors	5	8.00	7	0.43
Fine Grading	Rubber Tired Dozers	0	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	1	8.00	225	0.37

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Fine Grading Soil Haul	Graders	0	8.00	187	0.41
Fine Grading Soil Haul	Rubber Tired Dozers	0	8.00	247	0.40
Fine Grading Soil Haul	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	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
Asphalt Demolition	5	13.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demolition Debris Haul	0	0.00	0.00	184.00	14.70	6.90	19.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	7	18.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading Soil Haul	0	0.00	0.00	1,058.00	14.70	6.90	19.00	LD_Mix	HDT_Mix	HHDT
Utility Trenching	8	20.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading Soil Haul	0	0.00	0.00	2,858.00	14.70	6.90	19.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	60.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Asphalt 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					
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**		**0.8379**	**0.8379**		**0.7829**	**0.7829**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

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	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0128	9.3000e-004	0.0137	3.6900e-003	8.9000e-004	4.5800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0450	0.0328	0.5117	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		134.3475	134.3475	3.6600e-003	3.2500e-003	135.4083
Total	**0.0489**	**0.1308**	**0.5453**	**1.7200e-003**	**0.1581**	**1.8600e-003**	**0.1600**	**0.0422**	**1.7500e-003**	**0.0440**		**176.4398**	**176.4398**	**5.0700e-003**	**9.3200e-003**	**179.3434**

Date: 7/5/2022 2:10 PM

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**		**0.8379**	**0.8379**		**0.7829**	**0.7829**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

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	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0120	9.3000e-004	0.0129	3.4900e-003	8.9000e-004	4.3800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0450	0.0328	0.5117	1.3300e-003	0.1339	9.3000e-004	0.1349	0.0358	8.6000e-004	0.0366		134.3475	134.3475	3.6600e-003	3.2500e-003	135.4083
Total	**0.0489**	**0.1308**	**0.5453**	**1.7200e-003**	**0.1459**	**1.8600e-003**	**0.1478**	**0.0392**	**1.7500e-003**	**0.0410**		**176.4398**	**176.4398**	**5.0700e-003**	**9.3200e-003**	**179.3434**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Asphalt Demolition Debris Haul - 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					7.8706	0.0000	7.8706	1.1917	0.0000	1.1917			0.0000			0.0000
Off-Road	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**	**7.8706**	**0.0000**	**7.8706**	**1.1917**	**0.0000**	**1.1917**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.1649	5.9064	1.3944	0.0218	0.6120	0.0437	0.6556	0.1678	0.0418	0.2095		2,385.3896	2,385.3896	0.1266	0.3785	2,501.3374
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	0.0000	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
Total	**0.1649**	**5.9064**	**1.3944**	**0.0218**	**0.6120**	**0.0437**	**0.6556**	**0.1678**	**0.0418**	**0.2095**		**2,385.3896**	**2,385.3896**	**0.1266**	**0.3785**	**2,501.3374**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					3.3647	0.0000	3.3647	0.5094	0.0000	0.5094			0.0000			0.0000
Off-Road	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**	**3.3647**	**0.0000**	**3.3647**	**0.5094**	**0.0000**	**0.5094**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.1649	5.9064	1.3944	0.0218	0.5704	0.0437	0.6140	0.1576	0.0418	0.1993		2,385.3896	2,385.3896	0.1266	0.3785	2,501.3374
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	0.0000	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
Total	**0.1649**	**5.9064**	**1.3944**	**0.0218**	**0.5704**	**0.0437**	**0.6140**	**0.1576**	**0.0418**	**0.1993**		**2,385.3896**	**2,385.3896**	**0.1266**	**0.3785**	**2,501.3374**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.4869	16.4656	10.1152	0.0295		0.5998	0.5998		0.5518	0.5518		2,851.0984	2,851.0984	0.9221		2,874.1509
Total	**1.4869**	**16.4656**	**10.1152**	**0.0295**	**1.5908**	**0.5998**	**2.1905**	**0.1718**	**0.5518**	**0.7236**		**2,851.0984**	**2,851.0984**	**0.9221**		**2,874.1509**

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	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0128	9.3000e-004	0.0137	3.6900e-003	8.9000e-004	4.5800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0277	0.0202	0.3149	8.2000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		82.6754	82.6754	2.2500e-003	2.0000e-003	83.3282
Total	**0.0316**	**0.1182**	**0.3485**	**1.2100e-003**	**0.1022**	**1.5000e-003**	**0.1037**	**0.0274**	**1.4200e-003**	**0.0288**		**124.7677**	**124.7677**	**3.6600e-003**	**8.0700e-003**	**127.2632**

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Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.6801	0.0000	0.6801	0.0734	0.0000	0.0734			0.0000			0.0000
Off-Road	1.4869	16.4656	10.1152	0.0295		0.5998	0.5998		0.5518	0.5518	0.0000	2,851.0984	2,851.0984	0.9221		2,874.1509
Total	**1.4869**	**16.4656**	**10.1152**	**0.0295**	**0.6801**	**0.5998**	**1.2798**	**0.0734**	**0.5518**	**0.6252**	**0.0000**	**2,851.0984**	**2,851.0984**	**0.9221**		**2,874.1509**

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	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0120	9.3000e-004	0.0129	3.4900e-003	8.9000e-004	4.3800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0277	0.0202	0.3149	8.2000e-004	0.0824	5.7000e-004	0.0830	0.0220	5.3000e-004	0.0225		82.6754	82.6754	2.2500e-003	2.0000e-003	83.3282
Total	**0.0316**	**0.1182**	**0.3485**	**1.2100e-003**	**0.0944**	**1.5000e-003**	**0.0959**	**0.0255**	**1.4200e-003**	**0.0269**		**124.7677**	**124.7677**	**3.6600e-003**	**8.0700e-003**	**127.2632**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Rough 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					8.1431	0.0000	8.1431	3.5393	0.0000	3.5393			0.0000			0.0000
Off-Road	2.7387	29.3482	20.1327	0.0490		1.2253	1.2253		1.1272	1.1272		4,739.5873	4,739.5873	1.5329		4,777.9092
Total	**2.7387**	**29.3482**	**20.1327**	**0.0490**	**8.1431**	**1.2253**	**9.3684**	**3.5393**	**1.1272**	**4.6665**		**4,739.5873**	**4,739.5873**	**1.5329**		**4,777.9092**

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	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0128	9.3000e-004	0.0137	3.6900e-003	8.9000e-004	4.5800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0623	0.0455	0.7085	1.8400e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0545		186.0196	186.0196	5.0700e-003	4.5000e-003	187.4885
Total	**0.0662**	**0.1434**	**0.7420**	**2.2300e-003**	**0.2140**	**2.2200e-003**	**0.2162**	**0.0571**	**2.0800e-003**	**0.0591**		**228.1119**	**228.1119**	**6.4800e-003**	**0.0106**	**231.4235**

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Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					3.4812	0.0000	3.4812	1.5130	0.0000	1.5130			0.0000			0.0000
Off-Road	2.7387	29.3482	20.1327	0.0490		1.2253	1.2253		1.1272	1.1272	0.0000	4,739.5873	4,739.5873	1.5329		4,777.9092
Total	**2.7387**	**29.3482**	**20.1327**	**0.0490**	**3.4812**	**1.2253**	**4.7064**	**1.5130**	**1.1272**	**2.6403**	**0.0000**	**4,739.5873**	**4,739.5873**	**1.5329**		**4,777.9092**

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	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0120	9.3000e-004	0.0129	3.4900e-003	8.9000e-004	4.3800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0623	0.0455	0.7085	1.8400e-003	0.1855	1.2900e-003	0.1867	0.0495	1.1900e-003	0.0507		186.0196	186.0196	5.0700e-003	4.5000e-003	187.4885
Total	**0.0662**	**0.1434**	**0.7420**	**2.2300e-003**	**0.1975**	**2.2200e-003**	**0.1997**	**0.0530**	**2.0800e-003**	**0.0551**		**228.1119**	**228.1119**	**6.4800e-003**	**0.0106**	**231.4235**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Rough Grading Soil Haul - 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					0.0697	0.0000	0.0697	0.0106	0.0000	0.0106			0.0000			0.0000
Off-Road	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**	**0.0697**	**0.0000**	**0.0697**	**0.0106**	**0.0000**	**0.0106**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.3950	14.1507	3.3407	0.0522	1.4662	0.1046	1.5707	0.4020	0.1001	0.5020		5,714.9959	5,714.9959	0.3032	0.9068	5,992.7874
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	0.0000	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
Total	**0.3950**	**14.1507**	**3.3407**	**0.0522**	**1.4662**	**0.1046**	**1.5707**	**0.4020**	**0.1001**	**0.5020**		**5,714.9959**	**5,714.9959**	**0.3032**	**0.9068**	**5,992.7874**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.0298	0.0000	0.0298	4.5100e-003	0.0000	4.5100e-003			0.0000			0.0000
Off-Road	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**	**0.0298**	**0.0000**	**0.0298**	**4.5100e-003**	**0.0000**	**4.5100e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.3950	14.1507	3.3407	0.0522	1.3665	0.1046	1.4711	0.3775	0.1001	0.4776		5,714.9959	5,714.9959	0.3032	0.9068	5,992.7874
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	0.0000	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
Total	**0.3950**	**14.1507**	**3.3407**	**0.0522**	**1.3665**	**0.1046**	**1.4711**	**0.3775**	**0.1001**	**0.4776**		**5,714.9959**	**5,714.9959**	**0.3032**	**0.9068**	**5,992.7874**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Utility Trenching - 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	0.9542	7.5687	5.9861	0.0178		0.3170	0.3170		0.2951	0.2951		1,664.3091	1,664.3091	0.5051		1,676.9377
Total	**0.9542**	**7.5687**	**5.9861**	**0.0178**		**0.3170**	**0.3170**		**0.2951**	**0.2951**		**1,664.3091**	**1,664.3091**	**0.5051**		**1,676.9377**

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	7.8700e-003	0.1959	0.0672	7.8000e-004	0.0256	1.8700e-003	0.0275	7.3800e-003	1.7900e-003	9.1600e-003		84.1846	84.1846	2.8100e-003	0.0121	87.8701
Worker	0.0692	0.0505	0.7872	2.0400e-003	0.2236	1.4300e-003	0.2250	0.0593	1.3200e-003	0.0606		206.6884	206.6884	5.6300e-003	5.0000e-003	208.3205
Total	**0.0771**	**0.2465**	**0.8543**	**2.8200e-003**	**0.2492**	**3.3000e-003**	**0.2525**	**0.0667**	**3.1100e-003**	**0.0698**		**290.8730**	**290.8730**	**8.4400e-003**	**0.0171**	**296.1906**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.9542	7.5687	5.9861	0.0178		0.3170	0.3170		0.2951	0.2951	0.0000	1,664.3091	1,664.3091	0.5051		1,676.9377
Total	**0.9542**	**7.5687**	**5.9861**	**0.0178**		**0.3170**	**0.3170**		**0.2951**	**0.2951**	**0.0000**	**1,664.3091**	**1,664.3091**	**0.5051**		**1,676.9377**

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	7.8700e-003	0.1959	0.0672	7.8000e-004	0.0240	1.8700e-003	0.0259	6.9700e-003	1.7900e-003	8.7600e-003		84.1846	84.1846	2.8100e-003	0.0121	87.8701
Worker	0.0692	0.0505	0.7872	2.0400e-003	0.2061	1.4300e-003	0.2075	0.0550	1.3200e-003	0.0563		206.6884	206.6884	5.6300e-003	5.0000e-003	208.3205
Total	**0.0771**	**0.2465**	**0.8543**	**2.8200e-003**	**0.2300**	**3.3000e-003**	**0.2333**	**0.0620**	**3.1100e-003**	**0.0651**		**290.8730**	**290.8730**	**8.4400e-003**	**0.0171**	**296.1906**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.8 Fine 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4500	3.9516	2.6276	9.2600e-003		0.1412	0.1412		0.1333	0.1333		841.1197	841.1197	0.2389		847.0925
Total	**0.4500**	**3.9516**	**2.6276**	**9.2600e-003**	**0.0000**	**0.1412**	**0.1412**	**0.0000**	**0.1333**	**0.1333**		**841.1197**	**841.1197**	**0.2389**		**847.0925**

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	0.0118	0.2939	0.1008	1.1800e-003	0.0384	2.8000e-003	0.0412	0.0111	2.6800e-003	0.0137		126.2770	126.2770	4.2200e-003	0.0182	131.8051
Worker	0.0519	0.0379	0.5904	1.5300e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		155.0163	155.0163	4.2200e-003	3.7500e-003	156.2404
Total	**0.0637**	**0.3318**	**0.6911**	**2.7100e-003**	**0.2061**	**3.8700e-003**	**0.2100**	**0.0555**	**3.6700e-003**	**0.0592**		**281.2933**	**281.2933**	**8.4400e-003**	**0.0220**	**288.0455**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4500	3.9516	2.6276	9.2600e-003		0.1412	0.1412		0.1333	0.1333	0.0000	841.1197	841.1197	0.2389		847.0925
Total	**0.4500**	**3.9516**	**2.6276**	**9.2600e-003**	**0.0000**	**0.1412**	**0.1412**	**0.0000**	**0.1333**	**0.1333**	**0.0000**	**841.1197**	**841.1197**	**0.2389**		**847.0925**

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	0.0118	0.2939	0.1008	1.1800e-003	0.0360	2.8000e-003	0.0388	0.0105	2.6800e-003	0.0131		126.2770	126.2770	4.2200e-003	0.0182	131.8051
Worker	0.0519	0.0379	0.5904	1.5300e-003	0.1546	1.0700e-003	0.1556	0.0413	9.9000e-004	0.0422		155.0163	155.0163	4.2200e-003	3.7500e-003	156.2404
Total	**0.0637**	**0.3318**	**0.6911**	**2.7100e-003**	**0.1905**	**3.8700e-003**	**0.1944**	**0.0517**	**3.6700e-003**	**0.0554**		**281.2933**	**281.2933**	**8.4400e-003**	**0.0220**	**288.0455**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.9 Fine Grading Soil Haul - 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					0.1131	0.0000	0.1131	0.0171	0.0000	0.0171			0.0000			0.0000
Off-Road	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**	**0.1131**	**0.0000**	**0.1131**	**0.0171**	**0.0000**	**0.0171**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.6402	22.9353	5.4145	0.0846	2.3764	0.1695	2.5459	0.6515	0.1622	0.8137		9,262.8308	9,262.8308	0.4914	1.4697	9,713.0736
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	0.0000	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
Total	**0.6402**	**22.9353**	**5.4145**	**0.0846**	**2.3764**	**0.1695**	**2.5459**	**0.6515**	**0.1622**	**0.8137**		**9,262.8308**	**9,262.8308**	**0.4914**	**1.4697**	**9,713.0736**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.0484	0.0000	0.0484	7.3200e-003	0.0000	7.3200e-003			0.0000			0.0000
Off-Road	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**	**0.0484**	**0.0000**	**0.0484**	**7.3200e-003**	**0.0000**	**7.3200e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.6402	22.9353	5.4145	0.0846	2.2148	0.1695	2.3843	0.6119	0.1622	0.7741		9,262.8308	9,262.8308	0.4914	1.4697	9,713.0736
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	0.0000	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
Total	**0.6402**	**22.9353**	**5.4145**	**0.0846**	**2.2148**	**0.1695**	**2.3843**	**0.6119**	**0.1622**	**0.7741**		**9,262.8308**	**9,262.8308**	**0.4914**	**1.4697**	**9,713.0736**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.10 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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**		**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

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	5.9000e-003	0.1470	0.0504	5.9000e-004	0.0192	1.4000e-003	0.0206	5.5300e-003	1.3400e-003	6.8700e-003		63.1385	63.1385	2.1100e-003	9.1000e-003	65.9025
Worker	0.2076	0.1516	2.3615	6.1300e-003	0.6707	4.2900e-003	0.6750	0.1779	3.9500e-003	0.1818		620.0652	620.0652	0.0169	0.0150	624.9616
Total	**0.2135**	**0.2985**	**2.4119**	**6.7200e-003**	**0.6899**	**5.6900e-003**	**0.6956**	**0.1834**	**5.2900e-003**	**0.1887**		**683.2036**	**683.2036**	**0.0190**	**0.0241**	**690.8641**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

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	5.9000e-003	0.1470	0.0504	5.9000e-004	0.0180	1.4000e-003	0.0194	5.2300e-003	1.3400e-003	6.5700e-003		63.1385	63.1385	2.1100e-003	9.1000e-003	65.9025
Worker	0.2076	0.1516	2.3615	6.1300e-003	0.6182	4.2900e-003	0.6225	0.1650	3.9500e-003	0.1689		620.0652	620.0652	0.0169	0.0150	624.9616
Total	**0.2135**	**0.2985**	**2.4119**	**6.7200e-003**	**0.6362**	**5.6900e-003**	**0.6419**	**0.1702**	**5.2900e-003**	**0.1755**		**683.2036**	**683.2036**	**0.0190**	**0.0241**	**690.8641**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.10 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	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**		**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

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	3.4500e-003	0.1152	0.0446	5.6000e-004	0.0192	5.8000e-004	0.0198	5.5300e-003	5.5000e-004	6.0900e-003		60.0847	60.0847	2.0100e-003	8.6400e-003	62.7093
Worker	0.1920	0.1339	2.1684	5.9400e-003	0.6707	4.0300e-003	0.6747	0.1779	3.7100e-003	0.1816		600.0452	600.0452	0.0151	0.0139	604.5501
Total	**0.1955**	**0.2490**	**2.2130**	**6.5000e-003**	**0.6899**	**4.6100e-003**	**0.6945**	**0.1834**	**4.2600e-003**	**0.1877**		**660.1300**	**660.1300**	**0.0171**	**0.0225**	**667.2594**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**	**0.0000**	**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

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	3.4500e-003	0.1152	0.0446	5.6000e-004	0.0180	5.8000e-004	0.0186	5.2300e-003	5.5000e-004	5.7800e-003		60.0847	60.0847	2.0100e-003	8.6400e-003	62.7093
Worker	0.1920	0.1339	2.1684	5.9400e-003	0.6182	4.0300e-003	0.6222	0.1650	3.7100e-003	0.1687		600.0452	600.0452	0.0151	0.0139	604.5501
Total	**0.1955**	**0.2490**	**2.2130**	**6.5000e-003**	**0.6362**	**4.6100e-003**	**0.6408**	**0.1702**	**4.2600e-003**	**0.1745**		**660.1300**	**660.1300**	**0.0171**	**0.0225**	**667.2594**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.11 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	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003		1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.1420					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0222**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**		**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

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	0.0480	0.0335	0.5421	1.4800e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		150.0113	150.0113	3.7800e-003	3.4600e-003	151.1375
Total	**0.0480**	**0.0335**	**0.5421**	**1.4800e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**150.0113**	**150.0113**	**3.7800e-003**	**3.4600e-003**	**151.1375**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003	0.0000	1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.1420					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0222**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**	**0.0000**	**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

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	0.0480	0.0335	0.5421	1.4800e-003	0.1546	1.0100e-003	0.1556	0.0413	9.3000e-004	0.0422		150.0113	150.0113	3.7800e-003	3.4600e-003	151.1375
Total	**0.0480**	**0.0335**	**0.5421**	**1.4800e-003**	**0.1546**	**1.0100e-003**	**0.1556**	**0.0413**	**9.3000e-004**	**0.0422**		**150.0113**	**150.0113**	**3.7800e-003**	**3.4600e-003**	**151.1375**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.12 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	141.8147					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	**142.0063**	**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	0.0384	0.0268	0.4337	1.1900e-003	0.1341	8.1000e-004	0.1349	0.0356	7.4000e-004	0.0363		120.0090	120.0090	3.0300e-003	2.7700e-003	120.9100
Total	**0.0384**	**0.0268**	**0.4337**	**1.1900e-003**	**0.1341**	**8.1000e-004**	**0.1349**	**0.0356**	**7.4000e-004**	**0.0363**		**120.0090**	**120.0090**	**3.0300e-003**	**2.7700e-003**	**120.9100**

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Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	141.8147					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	**142.0063**	**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	0.0384	0.0268	0.4337	1.1900e-003	0.1236	8.1000e-004	0.1244	0.0330	7.4000e-004	0.0337		120.0090	120.0090	3.0300e-003	2.7700e-003	120.9100
Total	**0.0384**	**0.0268**	**0.4337**	**1.1900e-003**	**0.1236**	**8.1000e-004**	**0.1244**	**0.0330**	**7.4000e-004**	**0.0337**		**120.0090**	**120.0090**	**3.0300e-003**	**2.7700e-003**	**120.9100**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Washington and Rosemead Mixed-Use Project Construction Run

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	190.00	1000sqft	0.34	190,000.00	0
Other Asphalt Surfaces	45.00	1000sqft	1.03	45,000.00	0
Other Non-Asphalt Surfaces	21.00	1000sqft	0.48	21,000.00	0
Recreational Swimming Pool	17.01	1000sqft	0.00	17,010.00	0
Apartments Mid Rise	255.00	Dwelling Unit	0.99	260,220.00	729
Regional Shopping Center	5.73	1000sqft	0.00	5,730.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2023
Utility Company	Pico Rivera Innovative Municipal Energy				
CO2 Intensity (lb/MWhr)	683.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - based on PRIME power mix

Land Use - based on info from applicant

Construction Phase - based on info confirmed by applicant

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - no additional equipment required for Asphalt Demolition Haul

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment -

Off-road Equipment - based on info from applicant

Off-road Equipment - no additional equipment required for Grading Soil Haul

Off-road Equipment -

Off-road Equipment - based on info provided by applicant

Off-road Equipment - no additional equipment required for Grading Soil Haul

Off-road Equipment - loader HP based on CAT 966 Loader provided by applicant

Off-road Equipment - based on info from applicant

Trips and VMT - assumes 2 trips/water truck/day. See assumptions file for calculations on dump trucks and hauling trips

Demolition -

Grading -

Architectural Coating - based on info from applicant, residential includes area for pool, nonresidential includes area for int/ext parking structure, parking only includes

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 and 1186

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	11,370.00	97,750.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	34,110.00	293,595.00
tblArchitecturalCoating	ConstArea_Parking	15,360.00	11,400.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	175,649.00	187,130.00
tblArchitecturalCoating	ConstArea_Residential_Interior	526,946.00	561,391.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblAreaCoating	Area_Nonresidential_Exterior	11370	9500

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblAreaCoating	Area_Nonresidential_Interior	34110	28500
tblAreaCoating	Area_Residential_Exterior	175649	168973
tblAreaCoating	Area_Residential_Interior	526946	506918
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	19.00
tblConstructionPhase	NumDays	220.00	407.00
tblConstructionPhase	NumDays	20.00	37.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	6.00	30.00
tblConstructionPhase	NumDays	6.00	12.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	10.00	19.00
tblConstructionPhase	NumDays	3.00	6.00
tblGrading	MaterialExported	0.00	7,400.00
tblGrading	MaterialExported	0.00	20,000.00
tblLandUse	LandUseSquareFeet	255,000.00	260,220.00
tblLandUse	LotAcreage	4.36	0.34
tblLandUse	LotAcreage	0.39	0.00
tblLandUse	LotAcreage	6.71	0.99
tblLandUse	LotAcreage	0.13	0.00
tblOffRoadEquipment	HorsePower	97.00	225.00
tblOffRoadEquipment	HorsePower	97.00	276.00
tblOffRoadEquipment	HorsePower	158.00	270.00
tblOffRoadEquipment	HorsePower	158.00	249.00
tblOffRoadEquipment	HorsePower	8.00	7.00
tblOffRoadEquipment	HorsePower	8.00	7.00

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	80.00	134.00
tblOffRoadEquipment	HorsePower	97.00	225.00
tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	96.96	76.95
tblSolidWaste	SolidWasteGenerationRate	6.02	5.78
tblTripsAndVMT	HaulingTripLength	20.00	19.00
tblTripsAndVMT	HaulingTripLength	20.00	19.00
tblTripsAndVMT	HaulingTripLength	20.00	19.00
tblTripsAndVMT	HaulingTripNumber	182.00	184.00
tblTripsAndVMT	HaulingTripNumber	925.00	1,058.00
tblTripsAndVMT	HaulingTripNumber	2,500.00	2,858.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	73.00	3.00
tblTripsAndVMT	WorkerTripNumber	60.00	12.00
tblTripsAndVMT	WorkerTripNumber	300.00	60.00
tblWater	IndoorWaterUseRate	1,006,024.88	798,432.44
tblWater	IndoorWaterUseRate	424,435.55	407,398.87
tblWater	OutdoorWaterUseRate	616,595.89	489,361.82
tblWater	OutdoorWaterUseRate	260,137.92	249,696.08

2.0 Emissions Summary

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	4.2611	50.9204	32.1392	0.1484	9.8930	1.3431	11.2253	4.0089	1.2761	5.2384	0.0000	15,263.9590	15,263.9590	1.8421	1.5350	15,764.2110
2023	143.9709	22.5391	28.4359	0.0505	0.8575	1.0531	1.9106	0.2279	0.9935	1.2213	0.0000	4,770.2172	4,770.2172	0.9961	0.0272	4,803.2109
Maximum	**143.9709**	**50.9204**	**32.1392**	**0.1484**	**9.8930**	**1.3431**	**11.2253**	**4.0089**	**1.2761**	**5.2384**	**0.0000**	**15,263.9590**	**15,263.9590**	**1.8421**	**1.5350**	**15,764.2110**

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	4.2611	50.9204	32.1392	0.1484	5.0749	1.3431	6.4072	1.9480	1.2761	3.1776	0.0000	15,263.9590	15,263.9590	1.8421	1.5350	15,764.2110
2023	143.9709	22.5391	28.4359	0.0505	0.7907	1.0531	1.8438	0.2115	0.9935	1.2049	0.0000	4,770.2172	4,770.2172	0.9961	0.0272	4,803.2109
Maximum	**143.9709**	**50.9204**	**32.1392**	**0.1484**	**5.0749**	**1.3431**	**6.4072**	**1.9480**	**1.2761**	**3.1776**	**0.0000**	**15,263.9590**	**15,263.9590**	**1.8421**	**1.5350**	**15,764.2110**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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**	**45.44**	**0.00**	**37.19**	**49.03**	**0.00**	**32.16**	**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	Asphalt Demolition	Demolition	1/1/2022	2/22/2022	5	37	a
2	Asphalt Demolition Debris Haul	Demolition	2/16/2022	2/22/2022	5	5	b
3	Site Preparation	Site Preparation	2/23/2022	3/2/2022	5	6	c
4	Rough Grading	Grading	3/3/2022	4/13/2022	5	30	d
5	Rough Grading Soil Haul	Grading	3/29/2022	4/13/2022	5	12	e
6	Utility Trenching	Trenching	4/14/2022	7/6/2022	5	60	f
7	Fine Grading	Grading	5/12/2022	6/8/2022	5	20	g
8	Fine Grading Soil Haul	Grading	5/12/2022	6/8/2022	5	20	h
9	Building Construction	Building Construction	5/12/2022	12/1/2023	5	407	i
10	Paving	Paving	10/11/2023	11/6/2023	5	19	j
11	Architectural Coating	Architectural Coating	11/7/2023	12/1/2023	5	19	k

Acres of Grading (Site Preparation Phase): 9

Acres of Grading (Grading Phase): 60

Acres of Paving: 1.85

Residential Indoor: 561,391; Residential Outdoor: 187,130; Non-Residential Indoor: 293,595; Non-Residential Outdoor: 97,750; Striped Parking Area:

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Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Asphalt Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Asphalt Demolition Debris Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demolition Debris Haul	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Demolition Debris Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	276	0.37
Rough Grading	Excavators	1	8.00	270	0.38
Rough Grading	Graders	1	8.00	187	0.41
Rough Grading	Rollers	1	8.00	134	0.38
Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
Rough Grading	Scrapers	1	8.00	367	0.48
Rough Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Rough Grading Soil Haul	Graders	0	8.00	187	0.41
Rough Grading Soil Haul	Rubber Tired Dozers	0	8.00	247	0.40
Rough Grading Soil Haul	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Utility Trenching	Excavators	1	6.00	249	0.38
Utility Trenching	Plate Compactors	5	8.00	7	0.43
Utility Trenching	Tractors/Loaders/Backhoes	1	8.00	225	0.37
Utility Trenching	Trenchers	1	8.00	50	0.50
Fine Grading	Graders	0	8.00	187	0.41
Fine Grading	Plate Compactors	5	8.00	7	0.43
Fine Grading	Rubber Tired Dozers	0	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	1	8.00	225	0.37

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Fine Grading Soil Haul	Graders	0	8.00	187	0.41
Fine Grading Soil Haul	Rubber Tired Dozers	0	8.00	247	0.40
Fine Grading Soil Haul	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	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
Asphalt Demolition	5	13.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demolition Debris Haul	0	0.00	0.00	184.00	14.70	6.90	19.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	7	18.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading Soil Haul	0	0.00	0.00	1,058.00	14.70	6.90	19.00	LD_Mix	HDT_Mix	HHDT
Utility Trenching	8	20.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading Soil Haul	0	0.00	0.00	2,858.00	14.70	6.90	19.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	60.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Asphalt 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					
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**		**0.8379**	**0.8379**		**0.7829**	**0.7829**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

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	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0128	9.4000e-004	0.0138	3.6900e-003	9.0000e-004	4.5800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0482	0.0363	0.4698	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		127.2444	127.2444	3.7000e-003	3.4800e-003	128.3729
Total	**0.0520**	**0.1383**	**0.5045**	**1.6500e-003**	**0.1581**	**1.8700e-003**	**0.1600**	**0.0422**	**1.7600e-003**	**0.0440**		**169.3525**	**169.3525**	**5.1000e-003**	**9.5500e-003**	**172.3259**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**		**0.8379**	**0.8379**		**0.7829**	**0.7829**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

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	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0120	9.4000e-004	0.0129	3.4900e-003	9.0000e-004	4.3800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0482	0.0363	0.4698	1.2600e-003	0.1339	9.3000e-004	0.1349	0.0358	8.6000e-004	0.0366		127.2444	127.2444	3.7000e-003	3.4800e-003	128.3729
Total	**0.0520**	**0.1383**	**0.5045**	**1.6500e-003**	**0.1459**	**1.8700e-003**	**0.1478**	**0.0392**	**1.7600e-003**	**0.0410**		**169.3525**	**169.3525**	**5.1000e-003**	**9.5500e-003**	**172.3259**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Asphalt Demolition Debris Haul - 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					7.8706	0.0000	7.8706	1.1917	0.0000	1.1917			0.0000			0.0000
Off-Road	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**	**7.8706**	**0.0000**	**7.8706**	**1.1917**	**0.0000**	**1.1917**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.1608	6.1465	1.4198	0.0218	0.6120	0.0437	0.6557	0.1678	0.0419	0.2096		2,386.1241	2,386.1241	0.1263	0.3786	2,502.1048
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	0.0000	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
Total	**0.1608**	**6.1465**	**1.4198**	**0.0218**	**0.6120**	**0.0437**	**0.6557**	**0.1678**	**0.0419**	**0.2096**		**2,386.1241**	**2,386.1241**	**0.1263**	**0.3786**	**2,502.1048**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					3.3647	0.0000	3.3647	0.5094	0.0000	0.5094			0.0000			0.0000
Off-Road	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**	**3.3647**	**0.0000**	**3.3647**	**0.5094**	**0.0000**	**0.5094**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.1608	6.1465	1.4198	0.0218	0.5704	0.0437	0.6141	0.1576	0.0419	0.1994		2,386.1241	2,386.1241	0.1263	0.3786	2,502.1048
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	0.0000	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
Total	**0.1608**	**6.1465**	**1.4198**	**0.0218**	**0.5704**	**0.0437**	**0.6141**	**0.1576**	**0.0419**	**0.1994**		**2,386.1241**	**2,386.1241**	**0.1263**	**0.3786**	**2,502.1048**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.4869	16.4656	10.1152	0.0295		0.5998	0.5998		0.5518	0.5518		2,851.0984	2,851.0984	0.9221		2,874.1509
Total	**1.4869**	**16.4656**	**10.1152**	**0.0295**	**1.5908**	**0.5998**	**2.1905**	**0.1718**	**0.5518**	**0.7236**		**2,851.0984**	**2,851.0984**	**0.9221**		**2,874.1509**

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	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0128	9.4000e-004	0.0138	3.6900e-003	9.0000e-004	4.5800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0296	0.0223	0.2891	7.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		78.3043	78.3043	2.2800e-003	2.1400e-003	78.9987
Total	**0.0335**	**0.1243**	**0.3238**	**1.1600e-003**	**0.1022**	**1.5100e-003**	**0.1037**	**0.0274**	**1.4300e-003**	**0.0288**		**120.4124**	**120.4124**	**3.6800e-003**	**8.2100e-003**	**122.9517**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.6801	0.0000	0.6801	0.0734	0.0000	0.0734			0.0000			0.0000
Off-Road	1.4869	16.4656	10.1152	0.0295		0.5998	0.5998		0.5518	0.5518	0.0000	2,851.0984	2,851.0984	0.9221		2,874.1509
Total	**1.4869**	**16.4656**	**10.1152**	**0.0295**	**0.6801**	**0.5998**	**1.2798**	**0.0734**	**0.5518**	**0.6252**	**0.0000**	**2,851.0984**	**2,851.0984**	**0.9221**		**2,874.1509**

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	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0120	9.4000e-004	0.0129	3.4900e-003	9.0000e-004	4.3800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0296	0.0223	0.2891	7.7000e-004	0.0824	5.7000e-004	0.0830	0.0220	5.3000e-004	0.0225		78.3043	78.3043	2.2800e-003	2.1400e-003	78.9987
Total	**0.0335**	**0.1243**	**0.3238**	**1.1600e-003**	**0.0944**	**1.5100e-003**	**0.0959**	**0.0255**	**1.4300e-003**	**0.0269**		**120.4124**	**120.4124**	**3.6800e-003**	**8.2100e-003**	**122.9517**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Rough 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					8.1431	0.0000	8.1431	3.5393	0.0000	3.5393			0.0000			0.0000
Off-Road	2.7387	29.3482	20.1327	0.0490		1.2253	1.2253		1.1272	1.1272		4,739.5873	4,739.5873	1.5329		4,777.9092
Total	**2.7387**	**29.3482**	**20.1327**	**0.0490**	**8.1431**	**1.2253**	**9.3684**	**3.5393**	**1.1272**	**4.6665**		**4,739.5873**	**4,739.5873**	**1.5329**		**4,777.9092**

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	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0128	9.4000e-004	0.0138	3.6900e-003	9.0000e-004	4.5800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0667	0.0502	0.6505	1.7400e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0545		176.1846	176.1846	5.1300e-003	4.8100e-003	177.7470
Total	**0.0706**	**0.1523**	**0.6852**	**2.1300e-003**	**0.2140**	**2.2300e-003**	**0.2162**	**0.0571**	**2.0900e-003**	**0.0591**		**218.2927**	**218.2927**	**6.5300e-003**	**0.0109**	**221.7001**

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Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					3.4812	0.0000	3.4812	1.5130	0.0000	1.5130			0.0000			0.0000
Off-Road	2.7387	29.3482	20.1327	0.0490		1.2253	1.2253		1.1272	1.1272	0.0000	4,739.5873	4,739.5873	1.5329		4,777.9092
Total	**2.7387**	**29.3482**	**20.1327**	**0.0490**	**3.4812**	**1.2253**	**4.7064**	**1.5130**	**1.1272**	**2.6403**	**0.0000**	**4,739.5873**	**4,739.5873**	**1.5329**		**4,777.9092**

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	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0120	9.4000e-004	0.0129	3.4900e-003	9.0000e-004	4.3800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0667	0.0502	0.6505	1.7400e-003	0.1855	1.2900e-003	0.1867	0.0495	1.1900e-003	0.0507		176.1846	176.1846	5.1300e-003	4.8100e-003	177.7470
Total	**0.0706**	**0.1523**	**0.6852**	**2.1300e-003**	**0.1975**	**2.2300e-003**	**0.1997**	**0.0530**	**2.0900e-003**	**0.0551**		**218.2927**	**218.2927**	**6.5300e-003**	**0.0109**	**221.7001**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Rough Grading Soil Haul - 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					0.0697	0.0000	0.0697	0.0106	0.0000	0.0106			0.0000			0.0000
Off-Road	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**	**0.0697**	**0.0000**	**0.0697**	**0.0106**	**0.0000**	**0.0106**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.3851	14.7260	3.4016	0.0522	1.4662	0.1048	1.5710	0.4020	0.1003	0.5023		5,716.7557	5,716.7557	0.3027	0.9071	5,994.6261
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	0.0000	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
Total	**0.3851**	**14.7260**	**3.4016**	**0.0522**	**1.4662**	**0.1048**	**1.5710**	**0.4020**	**0.1003**	**0.5023**		**5,716.7557**	**5,716.7557**	**0.3027**	**0.9071**	**5,994.6261**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.0298	0.0000	0.0298	4.5100e-003	0.0000	4.5100e-003			0.0000			0.0000
Off-Road	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**	**0.0298**	**0.0000**	**0.0298**	**4.5100e-003**	**0.0000**	**4.5100e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.3851	14.7260	3.4016	0.0522	1.3665	0.1048	1.4713	0.3775	0.1003	0.4778		5,716.7557	5,716.7557	0.3027	0.9071	5,994.6261
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	0.0000	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
Total	**0.3851**	**14.7260**	**3.4016**	**0.0522**	**1.3665**	**0.1048**	**1.4713**	**0.3775**	**0.1003**	**0.4778**		**5,716.7557**	**5,716.7557**	**0.3027**	**0.9071**	**5,994.6261**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Utility Trenching - 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	0.9542	7.5687	5.9861	0.0178		0.3170	0.3170		0.2951	0.2951		1,664.3091	1,664.3091	0.5051		1,676.9377
Total	**0.9542**	**7.5687**	**5.9861**	**0.0178**		**0.3170**	**0.3170**		**0.2951**	**0.2951**		**1,664.3091**	**1,664.3091**	**0.5051**		**1,676.9377**

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	7.7800e-003	0.2040	0.0695	7.8000e-004	0.0256	1.8700e-003	0.0275	7.3800e-003	1.7900e-003	9.1700e-003		84.2163	84.2163	2.8000e-003	0.0122	87.9061
Worker	0.0741	0.0558	0.7227	1.9400e-003	0.2236	1.4300e-003	0.2250	0.0593	1.3200e-003	0.0606		195.7606	195.7606	5.7000e-003	5.3500e-003	197.4967
Total	**0.0819**	**0.2598**	**0.7922**	**2.7200e-003**	**0.2492**	**3.3000e-003**	**0.2525**	**0.0667**	**3.1100e-003**	**0.0698**		**279.9769**	**279.9769**	**8.5000e-003**	**0.0175**	**285.4028**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.9542	7.5687	5.9861	0.0178		0.3170	0.3170		0.2951	0.2951	0.0000	1,664.3091	1,664.3091	0.5051		1,676.9377
Total	**0.9542**	**7.5687**	**5.9861**	**0.0178**		**0.3170**	**0.3170**		**0.2951**	**0.2951**	**0.0000**	**1,664.3091**	**1,664.3091**	**0.5051**		**1,676.9377**

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	7.7800e-003	0.2040	0.0695	7.8000e-004	0.0240	1.8700e-003	0.0259	6.9700e-003	1.7900e-003	8.7700e-003		84.2163	84.2163	2.8000e-003	0.0122	87.9061
Worker	0.0741	0.0558	0.7227	1.9400e-003	0.2061	1.4300e-003	0.2075	0.0550	1.3200e-003	0.0563		195.7606	195.7606	5.7000e-003	5.3500e-003	197.4967
Total	**0.0819**	**0.2598**	**0.7922**	**2.7200e-003**	**0.2300**	**3.3000e-003**	**0.2333**	**0.0620**	**3.1100e-003**	**0.0651**		**279.9769**	**279.9769**	**8.5000e-003**	**0.0175**	**285.4028**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.8 Fine 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4500	3.9516	2.6276	9.2600e-003		0.1412	0.1412		0.1333	0.1333		841.1197	841.1197	0.2389		847.0925
Total	**0.4500**	**3.9516**	**2.6276**	**9.2600e-003**	**0.0000**	**0.1412**	**0.1412**	**0.0000**	**0.1333**	**0.1333**		**841.1197**	**841.1197**	**0.2389**		**847.0925**

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	0.0117	0.3060	0.1043	1.1800e-003	0.0384	2.8100e-003	0.0412	0.0111	2.6900e-003	0.0138		126.3244	126.3244	4.2100e-003	0.0182	131.8592
Worker	0.0556	0.0419	0.5421	1.4500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		146.8205	146.8205	4.2700e-003	4.0100e-003	148.1225
Total	**0.0672**	**0.3479**	**0.6463**	**2.6300e-003**	**0.2061**	**3.8800e-003**	**0.2100**	**0.0555**	**3.6800e-003**	**0.0592**		**273.1449**	**273.1449**	**8.4800e-003**	**0.0222**	**279.9817**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4500	3.9516	2.6276	9.2600e-003		0.1412	0.1412		0.1333	0.1333	0.0000	841.1197	841.1197	0.2389		847.0925
Total	**0.4500**	**3.9516**	**2.6276**	**9.2600e-003**	**0.0000**	**0.1412**	**0.1412**	**0.0000**	**0.1333**	**0.1333**	**0.0000**	**841.1197**	**841.1197**	**0.2389**		**847.0925**

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	0.0117	0.3060	0.1043	1.1800e-003	0.0360	2.8100e-003	0.0388	0.0105	2.6900e-003	0.0132		126.3244	126.3244	4.2100e-003	0.0182	131.8592
Worker	0.0556	0.0419	0.5421	1.4500e-003	0.1546	1.0700e-003	0.1556	0.0413	9.9000e-004	0.0422		146.8205	146.8205	4.2700e-003	4.0100e-003	148.1225
Total	**0.0672**	**0.3479**	**0.6463**	**2.6300e-003**	**0.1905**	**3.8800e-003**	**0.1944**	**0.0517**	**3.6800e-003**	**0.0554**		**273.1449**	**273.1449**	**8.4800e-003**	**0.0222**	**279.9817**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.9 Fine Grading Soil Haul - 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					0.1131	0.0000	0.1131	0.0171	0.0000	0.0171			0.0000			0.0000
Off-Road	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**	**0.1131**	**0.0000**	**0.1131**	**0.0171**	**0.0000**	**0.0171**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.6242	23.8679	5.5133	0.0846	2.3764	0.1699	2.5462	0.6515	0.1625	0.8141		9,265.6831	9,265.6831	0.4906	1.4702	9,716.0537
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	0.0000	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
Total	**0.6242**	**23.8679**	**5.5133**	**0.0846**	**2.3764**	**0.1699**	**2.5462**	**0.6515**	**0.1625**	**0.8141**		**9,265.6831**	**9,265.6831**	**0.4906**	**1.4702**	**9,716.0537**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.0484	0.0000	0.0484	7.3200e-003	0.0000	7.3200e-003			0.0000			0.0000
Off-Road	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**	**0.0484**	**0.0000**	**0.0484**	**7.3200e-003**	**0.0000**	**7.3200e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.6242	23.8679	5.5133	0.0846	2.2148	0.1699	2.3847	0.6119	0.1625	0.7744		9,265.6831	9,265.6831	0.4906	1.4702	9,716.0537
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	0.0000	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
Total	**0.6242**	**23.8679**	**5.5133**	**0.0846**	**2.2148**	**0.1699**	**2.3847**	**0.6119**	**0.1625**	**0.7744**		**9,265.6831**	**9,265.6831**	**0.4906**	**1.4702**	**9,716.0537**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.10 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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**		**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

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	5.8300e-003	0.1530	0.0521	5.9000e-004	0.0192	1.4000e-003	0.0206	5.5300e-003	1.3400e-003	6.8800e-003		63.1622	63.1622	2.1000e-003	9.1100e-003	65.9296
Worker	0.2222	0.1675	2.1682	5.8100e-003	0.6707	4.2900e-003	0.6750	0.1779	3.9500e-003	0.1818		587.2819	587.2819	0.0171	0.0160	592.4901
Total	**0.2281**	**0.3205**	**2.2203**	**6.4000e-003**	**0.6899**	**5.6900e-003**	**0.6956**	**0.1834**	**5.2900e-003**	**0.1887**		**650.4441**	**650.4441**	**0.0192**	**0.0252**	**658.4197**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

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	5.8300e-003	0.1530	0.0521	5.9000e-004	0.0180	1.4000e-003	0.0194	5.2300e-003	1.3400e-003	6.5700e-003		63.1622	63.1622	2.1000e-003	9.1100e-003	65.9296
Worker	0.2222	0.1675	2.1682	5.8100e-003	0.6182	4.2900e-003	0.6225	0.1650	3.9500e-003	0.1689		587.2819	587.2819	0.0171	0.0160	592.4901
Total	**0.2281**	**0.3205**	**2.2203**	**6.4000e-003**	**0.6362**	**5.6900e-003**	**0.6419**	**0.1702**	**5.2900e-003**	**0.1755**		**650.4441**	**650.4441**	**0.0192**	**0.0252**	**658.4197**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.10 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	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**		**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

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	3.3400e-003	0.1206	0.0460	5.6000e-004	0.0192	5.8000e-004	0.0198	5.5300e-003	5.6000e-004	6.0900e-003		60.1861	60.1861	2.0000e-003	8.6600e-003	62.8173
Worker	0.2063	0.1479	1.9931	5.6200e-003	0.6707	4.0300e-003	0.6747	0.1779	3.7100e-003	0.1816		568.4122	568.4122	0.0153	0.0148	573.2034
Total	**0.2096**	**0.2684**	**2.0391**	**6.1800e-003**	**0.6899**	**4.6100e-003**	**0.6945**	**0.1834**	**4.2700e-003**	**0.1877**		**628.5983**	**628.5983**	**0.0173**	**0.0235**	**636.0208**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**	**0.0000**	**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

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	3.3400e-003	0.1206	0.0460	5.6000e-004	0.0180	5.8000e-004	0.0186	5.2300e-003	5.6000e-004	5.7900e-003		60.1861	60.1861	2.0000e-003	8.6600e-003	62.8173
Worker	0.2063	0.1479	1.9931	5.6200e-003	0.6182	4.0300e-003	0.6222	0.1650	3.7100e-003	0.1687		568.4122	568.4122	0.0153	0.0148	573.2034
Total	**0.2096**	**0.2684**	**2.0391**	**6.1800e-003**	**0.6362**	**4.6100e-003**	**0.6408**	**0.1702**	**4.2700e-003**	**0.1745**		**628.5983**	**628.5983**	**0.0173**	**0.0235**	**636.0208**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.11 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	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003		1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.1420					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0222**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**		**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

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	0.0516	0.0370	0.4983	1.4100e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		142.1030	142.1030	3.8300e-003	3.7000e-003	143.3009
Total	**0.0516**	**0.0370**	**0.4983**	**1.4100e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**142.1030**	**142.1030**	**3.8300e-003**	**3.7000e-003**	**143.3009**

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Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003	0.0000	1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.1420					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0222**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**	**0.0000**	**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

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	0.0516	0.0370	0.4983	1.4100e-003	0.1546	1.0100e-003	0.1556	0.0413	9.3000e-004	0.0422		142.1030	142.1030	3.8300e-003	3.7000e-003	143.3009
Total	**0.0516**	**0.0370**	**0.4983**	**1.4100e-003**	**0.1546**	**1.0100e-003**	**0.1556**	**0.0413**	**9.3000e-004**	**0.0422**		**142.1030**	**142.1030**	**3.8300e-003**	**3.7000e-003**	**143.3009**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.12 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	141.8147					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	**142.0063**	**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	0.0413	0.0296	0.3986	1.1200e-003	0.1341	8.1000e-004	0.1349	0.0356	7.4000e-004	0.0363		113.6824	113.6824	3.0700e-003	2.9600e-003	114.6407
Total	**0.0413**	**0.0296**	**0.3986**	**1.1200e-003**	**0.1341**	**8.1000e-004**	**0.1349**	**0.0356**	**7.4000e-004**	**0.0363**		**113.6824**	**113.6824**	**3.0700e-003**	**2.9600e-003**	**114.6407**

Washington and Rosemead Mixed-Use Project Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	141.8147					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	**142.0063**	**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	0.0413	0.0296	0.3986	1.1200e-003	0.1236	8.1000e-004	0.1244	0.0330	7.4000e-004	0.0337		113.6824	113.6824	3.0700e-003	2.9600e-003	114.6407
Total	**0.0413**	**0.0296**	**0.3986**	**1.1200e-003**	**0.1236**	**8.1000e-004**	**0.1244**	**0.0330**	**7.4000e-004**	**0.0337**		**113.6824**	**113.6824**	**3.0700e-003**	**2.9600e-003**	**114.6407**

CalEEMod Mitigated Construction Model

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Washington and Rosemead Mixed-Use Project Mitigated Construction Run

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	190.00	1000sqft	0.34	190,000.00	0
Other Asphalt Surfaces	45.00	1000sqft	1.03	45,000.00	0
Other Non-Asphalt Surfaces	21.00	1000sqft	0.48	21,000.00	0
Recreational Swimming Pool	17.01	1000sqft	0.00	17,010.00	0
Apartments Mid Rise	255.00	Dwelling Unit	0.99	260,220.00	729
Regional Shopping Center	5.73	1000sqft	0.00	5,730.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2023
Utility Company	Pico Rivera Innovative Municipal Energy				
CO2 Intensity (lb/MWhr)	683.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - based on PRIME power mix

Land Use - based on info from applicant

Construction Phase - based on info confirmed by applicant

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - no additional equipment required for Asphalt Demolition Haul

Off-road Equipment -

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment - based on info from applicant

Off-road Equipment - no additional equipment required for Grading Soil Haul

Off-road Equipment -

Off-road Equipment - based on info provided by applicant

Off-road Equipment - no additional equipment required for Grading Soil Haul

Off-road Equipment - loader HP based on CAT 966 Loader provided by applicant

Off-road Equipment - based on info from applicant

Trips and VMT - assumes 2 trips/water truck/day. See assumptions file for calculations on dump trucks and hauling trips

Demolition -

Grading -

Architectural Coating - based on info from applicant, residential includes area for pool, nonresidential includes area for int/ext parking structure, parking only includes parking

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 and 1186

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	11,370.00	97,865.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	34,110.00	293,595.00
tblArchitecturalCoating	ConstArea_Parking	15,360.00	11,400.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	175,649.00	187,130.00
tblArchitecturalCoating	ConstArea_Residential_Interior	526,946.00	561,391.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	0.00
tblAreaCoating	Area_Nonresidential_Exterior	11370	9500
tblAreaCoating	Area_Nonresidential_Interior	34110	28500

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblAreaCoating	Area_Residential_Exterior	175649	168973
tblAreaCoating	Area_Residential_Interior	526946	506918
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	19.00
tblConstructionPhase	NumDays	220.00	407.00
tblConstructionPhase	NumDays	20.00	37.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	6.00	30.00
tblConstructionPhase	NumDays	6.00	12.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	10.00	19.00
tblConstructionPhase	NumDays	3.00	6.00
tblGrading	MaterialExported	0.00	7,400.00
tblGrading	MaterialExported	0.00	20,000.00
tblLandUse	LandUseSquareFeet	255,000.00	260,220.00
tblLandUse	LotAcreage	4.36	0.34
tblLandUse	LotAcreage	1.03	1.03
tblLandUse	LotAcreage	0.48	0.48
tblLandUse	LotAcreage	0.39	0.00
tblLandUse	LotAcreage	6.71	0.99
tblLandUse	LotAcreage	0.13	0.00
tblOffRoadEquipment	HorsePower	97.00	276.00
tblOffRoadEquipment	HorsePower	158.00	270.00
tblOffRoadEquipment	HorsePower	80.00	134.00
tblOffRoadEquipment	HorsePower	158.00	249.00
tblOffRoadEquipment	HorsePower	8.00	7.00
tblOffRoadEquipment	HorsePower	97.00	225.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	8.00	7.00
tblOffRoadEquipment	HorsePower	97.00	225.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	96.96	76.95
tblSolidWaste	SolidWasteGenerationRate	6.02	5.78
tblTripsAndVMT	HaulingTripLength	20.00	19.00
tblTripsAndVMT	HaulingTripLength	20.00	19.00
tblTripsAndVMT	HaulingTripLength	20.00	19.00
tblTripsAndVMT	HaulingTripNumber	182.00	184.00
tblTripsAndVMT	HaulingTripNumber	925.00	1,058.00
tblTripsAndVMT	HaulingTripNumber	2,500.00	2,858.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	VendorTripNumber	73.00	3.00
tblTripsAndVMT	WorkerTripNumber	60.00	12.00
tblTripsAndVMT	WorkerTripNumber	300.00	60.00
tblWater	IndoorWaterUseRate	1,006,024.88	798,432.44
tblWater	IndoorWaterUseRate	424,435.55	407,398.87
tblWater	OutdoorWaterUseRate	616,595.89	489,361.82
tblWater	OutdoorWaterUseRate	260,137.92	249,696.08

2.0 Emissions Summary

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	0.2965	2.6735	2.3152	5.9100e-003	0.2538	0.1084	0.3622	0.0853	0.1024	0.1877	0.0000	524.4940	524.4940	0.0910	0.0221	533.3454
2023	0.5979	1.7623	2.0934	3.9800e-003	0.0840	0.0790	0.1630	0.0224	0.0756	0.0979	0.0000	337.9897	337.9897	0.0539	2.6300e-003	340.1224
Maximum	**0.5979**	**2.6735**	**2.3152**	**5.9100e-003**	**0.2538**	**0.1084**	**0.3622**	**0.0853**	**0.1024**	**0.1877**	**0.0000**	**524.4940**	**524.4940**	**0.0910**	**0.0221**	**533.3454**

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	0.2965	2.6735	2.3152	5.9100e-003	0.1611	0.1084	0.2695	0.0508	0.1024	0.1532	0.0000	524.4936	524.4936	0.0910	0.0221	533.3450
2023	0.5979	1.7623	2.0934	3.9800e-003	0.0775	0.0790	0.1565	0.0208	0.0756	0.0963	0.0000	337.9894	337.9894	0.0539	2.6300e-003	340.1221
Maximum	**0.5979**	**2.6735**	**2.3152**	**5.9100e-003**	**0.1611**	**0.1084**	**0.2695**	**0.0508**	**0.1024**	**0.1532**	**0.0000**	**524.4936**	**524.4936**	**0.0910**	**0.0221**	**533.3450**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	29.36	0.00	18.89	33.51	0.00	12.62	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	1-1-2022	3-31-2022	1.0444	1.0444
2	4-1-2022	6-30-2022	1.3540	1.3540
3	7-1-2022	9-30-2022	0.5766	0.5766
4	10-1-2022	12-31-2022	0.5588	0.5588
5	1-1-2023	3-31-2023	0.5084	0.5084
6	4-1-2023	6-30-2023	0.5129	0.5129
7	7-1-2023	9-30-2023	0.5186	0.5186
		Highest	1.3540	1.3540

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Demolition	Demolition	1/1/2022	2/22/2022	5	37	a
2	Asphalt Demolition Debris Haul	Demolition	2/16/2022	2/22/2022	5	5	b
3	Site Preparation	Site Preparation	2/23/2022	3/2/2022	5	6	c
4	Rough Grading	Grading	3/3/2022	4/13/2022	5	30	d
5	Rough Grading Soil Haul	Grading	3/29/2022	4/13/2022	5	12	e
6	Utility Trenching	Trenching	4/14/2022	7/6/2022	5	60	f
7	Fine Grading	Grading	5/12/2022	6/8/2022	5	20	g
8	Fine Grading Soil Haul	Grading	5/12/2022	6/8/2022	5	20	h
9	Building Construction	Building Construction	5/12/2022	12/1/2023	5	407	i
10	Paving	Paving	10/11/2023	11/6/2023	5	19	j
11	Architectural Coating	Architectural Coating	11/7/2023	12/1/2023	5	19	k

Acres of Grading (Site Preparation Phase): 9

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Grading (Grading Phase): 60

Acres of Paving: 1.86010101010101

Residential Indoor: 561,391; Residential Outdoor: 187,130; Non-Residential Indoor: 293,595; Non-Residential Outdoor: 97,865; Striped Parking Area: 11,40(

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Asphalt Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Asphalt Demolition Debris Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demolition Debris Haul	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Demolition Debris Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	276	0.37
Rough Grading	Excavators	1	8.00	270	0.38
Rough Grading	Graders	1	8.00	187	0.41
Rough Grading	Rollers	1	8.00	134	0.38
Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
Rough Grading	Scrapers	1	8.00	367	0.48
Rough Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Rough Grading Soil Haul	Graders	0	8.00	187	0.41
Rough Grading Soil Haul	Rubber Tired Dozers	0	8.00	247	0.40
Rough Grading Soil Haul	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Utility Trenching	Excavators	1	6.00	249	0.38
Utility Trenching	Plate Compactors	5	8.00	7	0.43
Utility Trenching	Tractors/Loaders/Backhoes	1	8.00	225	0.37
Utility Trenching	Trenchers	1	8.00	50	0.50
Fine Grading	Graders	0	8.00	187	0.41

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Fine Grading	Plate Compactors	5	8.00	7	0.43
Fine Grading	Rubber Tired Dozers	0	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	1	8.00	225	0.37
Fine Grading Soil Haul	Graders	0	8.00	187	0.41
Fine Grading Soil Haul	Rubber Tired Dozers	0	8.00	247	0.40
Fine Grading Soil Haul	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	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
Asphalt Demolition	5	13.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demolition Debris Haul	0	0.00	0.00	184.00	14.70	6.90	19.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	7	18.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading Soil Haul	0	0.00	0.00	1,058.00	14.70	6.90	19.00	LD_Mix	HDT_Mix	HHDT
Utility Trenching	8	20.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading Soil Haul	0	0.00	0.00	2,858.00	14.70	6.90	19.00	LD_Mix	HDT_Mix	HHDT

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	8	60.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Asphalt 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					
Off-Road	0.0313	0.3075	0.2583	4.5000e-004		0.0155	0.0155		0.0145	0.0145	0.0000	38.9937	38.9937	9.9400e-003	0.0000	39.2421
Total	**0.0313**	**0.3075**	**0.2583**	**4.5000e-004**		**0.0155**	**0.0155**		**0.0145**	**0.0145**	**0.0000**	**38.9937**	**38.9937**	**9.9400e-003**	**0.0000**	**39.2421**

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	7.0000e-005	1.9000e-003	6.3000e-004	1.0000e-005	2.3000e-004	2.0000e-005	2.5000e-004	7.0000e-005	2.0000e-005	8.0000e-005	0.0000	0.7065	0.7065	2.0000e-005	1.0000e-004	0.7375
Worker	8.2000e-004	6.9000e-004	8.9200e-003	2.0000e-005	2.6400e-003	2.0000e-005	2.6500e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.1675	2.1675	6.0000e-005	6.0000e-005	2.1867
Total	**8.9000e-004**	**2.5900e-003**	**9.5500e-003**	**3.0000e-005**	**2.8700e-003**	**4.0000e-005**	**2.9000e-003**	**7.7000e-004**	**4.0000e-005**	**8.0000e-004**	**0.0000**	**2.8740**	**2.8740**	**8.0000e-005**	**1.6000e-004**	**2.9242**

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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	0.0313	0.3075	0.2583	4.5000e-004		0.0155	0.0155		0.0145	0.0145	0.0000	38.9937	38.9937	9.9400e-003	0.0000	39.2421
Total	**0.0313**	**0.3075**	**0.2583**	**4.5000e-004**		**0.0155**	**0.0155**		**0.0145**	**0.0145**	**0.0000**	**38.9937**	**38.9937**	**9.9400e-003**	**0.0000**	**39.2421**

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	7.0000e-005	1.9000e-003	6.3000e-004	1.0000e-005	2.2000e-004	2.0000e-005	2.4000e-004	6.0000e-005	2.0000e-005	8.0000e-005	0.0000	0.7065	0.7065	2.0000e-005	1.0000e-004	0.7375
Worker	8.2000e-004	6.9000e-004	8.9200e-003	2.0000e-005	2.4300e-003	2.0000e-005	2.4500e-003	6.5000e-004	2.0000e-005	6.7000e-004	0.0000	2.1675	2.1675	6.0000e-005	6.0000e-005	2.1867
Total	**8.9000e-004**	**2.5900e-003**	**9.5500e-003**	**3.0000e-005**	**2.6500e-003**	**4.0000e-005**	**2.6900e-003**	**7.1000e-004**	**4.0000e-005**	**7.5000e-004**	**0.0000**	**2.8740**	**2.8740**	**8.0000e-005**	**1.6000e-004**	**2.9242**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Asphalt Demolition Debris Haul - 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					0.0197	0.0000	0.0197	2.9800e-003	0.0000	2.9800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	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**	**0.0197**	**0.0000**	**0.0197**	**2.9800e-003**	**0.0000**	**2.9800e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	4.1000e-004	0.0156	3.5100e-003	5.0000e-005	1.5000e-003	1.1000e-004	1.6100e-003	4.1000e-004	1.0000e-004	5.2000e-004	0.0000	5.4107	5.4107	2.9000e-004	8.6000e-004	5.6737
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	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
Total	**4.1000e-004**	**0.0156**	**3.5100e-003**	**5.0000e-005**	**1.5000e-003**	**1.1000e-004**	**1.6100e-003**	**4.1000e-004**	**1.0000e-004**	**5.2000e-004**	**0.0000**	**5.4107**	**5.4107**	**2.9000e-004**	**8.6000e-004**	**5.6737**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					8.4100e-003	0.0000	8.4100e-003	1.2700e-003	0.0000	1.2700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	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**	**8.4100e-003**	**0.0000**	**8.4100e-003**	**1.2700e-003**	**0.0000**	**1.2700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	4.1000e-004	0.0156	3.5100e-003	5.0000e-005	1.4000e-003	1.1000e-004	1.5100e-003	3.9000e-004	1.0000e-004	4.9000e-004	0.0000	5.4107	5.4107	2.9000e-004	8.6000e-004	5.6737
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	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
Total	**4.1000e-004**	**0.0156**	**3.5100e-003**	**5.0000e-005**	**1.4000e-003**	**1.1000e-004**	**1.5100e-003**	**3.9000e-004**	**1.0000e-004**	**4.9000e-004**	**0.0000**	**5.4107**	**5.4107**	**2.9000e-004**	**8.6000e-004**	**5.6737**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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					4.7700e-003	0.0000	4.7700e-003	5.2000e-004	0.0000	5.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.4600e-003	0.0494	0.0304	9.0000e-005		1.8000e-003	1.8000e-003		1.6600e-003	1.6600e-003	0.0000	7.7594	7.7594	2.5100e-003	0.0000	7.8222
Total	**4.4600e-003**	**0.0494**	**0.0304**	**9.0000e-005**	**4.7700e-003**	**1.8000e-003**	**6.5700e-003**	**5.2000e-004**	**1.6600e-003**	**2.1800e-003**	**0.0000**	**7.7594**	**7.7594**	**2.5100e-003**	**0.0000**	**7.8222**

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	1.0000e-005	3.1000e-004	1.0000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1146	0.1146	0.0000	2.0000e-005	0.1196
Worker	8.0000e-005	7.0000e-005	8.9000e-004	0.0000	2.6000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2163	0.2163	1.0000e-005	1.0000e-005	0.2182
Total	**9.0000e-005**	**3.8000e-004**	**9.9000e-004**	**0.0000**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.3309**	**0.3309**	**1.0000e-005**	**3.0000e-005**	**0.3378**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					2.0400e-003	0.0000	2.0400e-003	2.2000e-004	0.0000	2.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.4600e-003	0.0494	0.0304	9.0000e-005		1.8000e-003	1.8000e-003		1.6600e-003	1.6600e-003	0.0000	7.7594	7.7594	2.5100e-003	0.0000	7.8222
Total	**4.4600e-003**	**0.0494**	**0.0304**	**9.0000e-005**	**2.0400e-003**	**1.8000e-003**	**3.8400e-003**	**2.2000e-004**	**1.6600e-003**	**1.8800e-003**	**0.0000**	**7.7594**	**7.7594**	**2.5100e-003**	**0.0000**	**7.8222**

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	1.0000e-005	3.1000e-004	1.0000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1146	0.1146	0.0000	2.0000e-005	0.1196
Worker	8.0000e-005	7.0000e-005	8.9000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2163	0.2163	1.0000e-005	1.0000e-005	0.2182
Total	**9.0000e-005**	**3.8000e-004**	**9.9000e-004**	**0.0000**	**2.8000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.3309**	**0.3309**	**1.0000e-005**	**3.0000e-005**	**0.3378**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Rough 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					0.1222	0.0000	0.1222	0.0531	0.0000	0.0531	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0411	0.4402	0.3020	7.3000e-004		0.0184	0.0184		0.0169	0.0169	0.0000	64.4952	64.4952	0.0209	0.0000	65.0167
Total	**0.0411**	**0.4402**	**0.3020**	**7.3000e-004**	**0.1222**	**0.0184**	**0.1405**	**0.0531**	**0.0169**	**0.0700**	**0.0000**	**64.4952**	**64.4952**	**0.0209**	**0.0000**	**65.0167**

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	6.0000e-005	1.5400e-003	5.1000e-004	1.0000e-005	1.9000e-004	1.0000e-005	2.0000e-004	5.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.5729	0.5729	2.0000e-005	8.0000e-005	0.5980
Worker	9.2000e-004	7.7000e-004	0.0100	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.4334	2.4334	7.0000e-005	7.0000e-005	2.4549
Total	**9.8000e-004**	**2.3100e-003**	**0.0105**	**4.0000e-005**	**3.1500e-003**	**3.0000e-005**	**3.1800e-003**	**8.4000e-004**	**3.0000e-005**	**8.7000e-004**	**0.0000**	**3.0062**	**3.0062**	**9.0000e-005**	**1.5000e-004**	**3.0529**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.0522	0.0000	0.0522	0.0227	0.0000	0.0227	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0411	0.4402	0.3020	7.3000e-004		0.0184	0.0184		0.0169	0.0169	0.0000	64.4951	64.4951	0.0209	0.0000	65.0166
Total	**0.0411**	**0.4402**	**0.3020**	**7.3000e-004**	**0.0522**	**0.0184**	**0.0706**	**0.0227**	**0.0169**	**0.0396**	**0.0000**	**64.4951**	**64.4951**	**0.0209**	**0.0000**	**65.0166**

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	6.0000e-005	1.5400e-003	5.1000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.5729	0.5729	2.0000e-005	8.0000e-005	0.5980
Worker	9.2000e-004	7.7000e-004	0.0100	3.0000e-005	2.7300e-003	2.0000e-005	2.7500e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.4334	2.4334	7.0000e-005	7.0000e-005	2.4549
Total	**9.8000e-004**	**2.3100e-003**	**0.0105**	**4.0000e-005**	**2.9100e-003**	**3.0000e-005**	**2.9400e-003**	**7.8000e-004**	**3.0000e-005**	**8.2000e-004**	**0.0000**	**3.0062**	**3.0062**	**9.0000e-005**	**1.5000e-004**	**3.0529**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Rough Grading Soil Haul - 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					4.2000e-004	0.0000	4.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	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**	**4.2000e-004**	**0.0000**	**4.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	2.3400e-003	0.0894	0.0202	3.1000e-004	8.6500e-003	6.3000e-004	9.2700e-003	2.3800e-003	6.0000e-004	2.9800e-003	0.0000	31.1114	31.1114	1.6500e-003	4.9400e-003	32.6236
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	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
Total	**2.3400e-003**	**0.0894**	**0.0202**	**3.1000e-004**	**8.6500e-003**	**6.3000e-004**	**9.2700e-003**	**2.3800e-003**	**6.0000e-004**	**2.9800e-003**	**0.0000**	**31.1114**	**31.1114**	**1.6500e-003**	**4.9400e-003**	**32.6236**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					1.8000e-004	0.0000	1.8000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	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**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	2.3400e-003	0.0894	0.0202	3.1000e-004	8.0600e-003	6.3000e-004	8.6900e-003	2.2300e-003	6.0000e-004	2.8300e-003	0.0000	31.1114	31.1114	1.6500e-003	4.9400e-003	32.6236
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	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
Total	**2.3400e-003**	**0.0894**	**0.0202**	**3.1000e-004**	**8.0600e-003**	**6.3000e-004**	**8.6900e-003**	**2.2300e-003**	**6.0000e-004**	**2.8300e-003**	**0.0000**	**31.1114**	**31.1114**	**1.6500e-003**	**4.9400e-003**	**32.6236**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Utility Trenching - 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	0.0286	0.2271	0.1796	5.3000e-004		9.5100e-003	9.5100e-003		8.8500e-003	8.8500e-003	0.0000	45.2951	45.2951	0.0138	0.0000	45.6388
Total	**0.0286**	**0.2271**	**0.1796**	**5.3000e-004**		**9.5100e-003**	**9.5100e-003**		**8.8500e-003**	**8.8500e-003**	**0.0000**	**45.2951**	**45.2951**	**0.0138**	**0.0000**	**45.6388**

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	2.3000e-004	6.1700e-003	2.0500e-003	2.0000e-005	7.6000e-004	6.0000e-005	8.1000e-004	2.2000e-004	5.0000e-005	2.7000e-004	0.0000	2.2915	2.2915	8.0000e-005	3.3000e-004	2.3919
Worker	2.0600e-003	1.7100e-003	0.0222	6.0000e-005	6.5700e-003	4.0000e-005	6.6200e-003	1.7500e-003	4.0000e-005	1.7900e-003	0.0000	5.4075	5.4075	1.6000e-004	1.5000e-004	5.4554
Total	**2.2900e-003**	**7.8800e-003**	**0.0243**	**8.0000e-005**	**7.3300e-003**	**1.0000e-004**	**7.4300e-003**	**1.9700e-003**	**9.0000e-005**	**2.0600e-003**	**0.0000**	**7.6990**	**7.6990**	**2.4000e-004**	**4.8000e-004**	**7.8473**

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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	0.0286	0.2271	0.1796	5.3000e-004		9.5100e-003	9.5100e-003		8.8500e-003	8.8500e-003	0.0000	45.2950	45.2950	0.0138	0.0000	45.6387
Total	**0.0286**	**0.2271**	**0.1796**	**5.3000e-004**		**9.5100e-003**	**9.5100e-003**		**8.8500e-003**	**8.8500e-003**	**0.0000**	**45.2950**	**45.2950**	**0.0138**	**0.0000**	**45.6387**

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	2.3000e-004	6.1700e-003	2.0500e-003	2.0000e-005	7.1000e-004	6.0000e-005	7.6000e-004	2.1000e-004	5.0000e-005	2.6000e-004	0.0000	2.2915	2.2915	8.0000e-005	3.3000e-004	2.3919
Worker	2.0600e-003	1.7100e-003	0.0222	6.0000e-005	6.0600e-003	4.0000e-005	6.1000e-003	1.6200e-003	4.0000e-005	1.6600e-003	0.0000	5.4075	5.4075	1.6000e-004	1.5000e-004	5.4554
Total	**2.2900e-003**	**7.8800e-003**	**0.0243**	**8.0000e-005**	**6.7700e-003**	**1.0000e-004**	**6.8600e-003**	**1.8300e-003**	**9.0000e-005**	**1.9200e-003**	**0.0000**	**7.6990**	**7.6990**	**2.4000e-004**	**4.8000e-004**	**7.8473**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.8 Fine 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5000e-003	0.0395	0.0263	9.0000e-005		1.4100e-003	1.4100e-003		1.3300e-003	1.3300e-003	0.0000	7.6305	7.6305	2.1700e-003	0.0000	7.6847
Total	**4.5000e-003**	**0.0395**	**0.0263**	**9.0000e-005**	**0.0000**	**1.4100e-003**	**1.4100e-003**	**0.0000**	**1.3300e-003**	**1.3300e-003**	**0.0000**	**7.6305**	**7.6305**	**2.1700e-003**	**0.0000**	**7.6847**

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	1.2000e-004	3.0900e-003	1.0200e-003	1.0000e-005	3.8000e-004	3.0000e-005	4.1000e-004	1.1000e-004	3.0000e-005	1.4000e-004	0.0000	1.1458	1.1458	4.0000e-005	1.7000e-004	1.1960
Worker	5.1000e-004	4.3000e-004	5.5600e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3519	1.3519	4.0000e-005	4.0000e-005	1.3638
Total	**6.3000e-004**	**3.5200e-003**	**6.5800e-003**	**2.0000e-005**	**2.0200e-003**	**4.0000e-005**	**2.0600e-003**	**5.5000e-004**	**4.0000e-005**	**5.9000e-004**	**0.0000**	**2.4976**	**2.4976**	**8.0000e-005**	**2.1000e-004**	**2.5598**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5000e-003	0.0395	0.0263	9.0000e-005		1.4100e-003	1.4100e-003		1.3300e-003	1.3300e-003	0.0000	7.6305	7.6305	2.1700e-003	0.0000	7.6847
Total	**4.5000e-003**	**0.0395**	**0.0263**	**9.0000e-005**	**0.0000**	**1.4100e-003**	**1.4100e-003**	**0.0000**	**1.3300e-003**	**1.3300e-003**	**0.0000**	**7.6305**	**7.6305**	**2.1700e-003**	**0.0000**	**7.6847**

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	1.2000e-004	3.0900e-003	1.0200e-003	1.0000e-005	3.5000e-004	3.0000e-005	3.8000e-004	1.0000e-004	3.0000e-005	1.3000e-004	0.0000	1.1458	1.1458	4.0000e-005	1.7000e-004	1.1960
Worker	5.1000e-004	4.3000e-004	5.5600e-003	1.0000e-005	1.5200e-003	1.0000e-005	1.5300e-003	4.1000e-004	1.0000e-005	4.1000e-004	0.0000	1.3519	1.3519	4.0000e-005	4.0000e-005	1.3638
Total	**6.3000e-004**	**3.5200e-003**	**6.5800e-003**	**2.0000e-005**	**1.8700e-003**	**4.0000e-005**	**1.9100e-003**	**5.1000e-004**	**4.0000e-005**	**5.4000e-004**	**0.0000**	**2.4976**	**2.4976**	**8.0000e-005**	**2.1000e-004**	**2.5598**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.9 Fine Grading Soil Haul - 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					1.1300e-003	0.0000	1.1300e-003	1.7000e-004	0.0000	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	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**	**1.1300e-003**	**0.0000**	**1.1300e-003**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	6.3300e-003	0.2415	0.0545	8.5000e-004	0.0234	1.7000e-003	0.0251	6.4200e-003	1.6200e-003	8.0400e-003	0.0000	84.0418	84.0418	4.4500e-003	0.0133	88.1270
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	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
Total	**6.3300e-003**	**0.2415**	**0.0545**	**8.5000e-004**	**0.0234**	**1.7000e-003**	**0.0251**	**6.4200e-003**	**1.6200e-003**	**8.0400e-003**	**0.0000**	**84.0418**	**84.0418**	**4.4500e-003**	**0.0133**	**88.1270**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					4.8000e-004	0.0000	4.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	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**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	6.3300e-003	0.2415	0.0545	8.5000e-004	0.0218	1.7000e-003	0.0235	6.0300e-003	1.6200e-003	7.6500e-003	0.0000	84.0418	84.0418	4.4500e-003	0.0133	88.1270
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	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
Total	**6.3300e-003**	**0.2415**	**0.0545**	**8.5000e-004**	**0.0218**	**1.7000e-003**	**0.0235**	**6.0300e-003**	**1.6200e-003**	**7.6500e-003**	**0.0000**	**84.0418**	**84.0418**	**4.4500e-003**	**0.0133**	**88.1270**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.10 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	0.1549	1.2194	1.1985	2.0900e-003		0.0586	0.0586		0.0562	0.0562	0.0000	173.4129	173.4129	0.0335	0.0000	174.2493
Total	**0.1549**	**1.2194**	**1.1985**	**2.0900e-003**		**0.0586**	**0.0586**		**0.0562**	**0.0562**	**0.0000**	**173.4129**	**173.4129**	**0.0335**	**0.0000**	**174.2493**

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	4.9000e-004	0.0129	4.2700e-003	5.0000e-005	1.5800e-003	1.2000e-004	1.7000e-003	4.6000e-004	1.1000e-004	5.7000e-004	0.0000	4.7835	4.7835	1.6000e-004	6.9000e-004	4.9931
Worker	0.0172	0.0143	0.1857	4.9000e-004	0.0549	3.6000e-004	0.0553	0.0146	3.3000e-004	0.0149	0.0000	45.1522	45.1522	1.3000e-003	1.2300e-003	45.5523
Total	**0.0177**	**0.0272**	**0.1900**	**5.4000e-004**	**0.0565**	**4.8000e-004**	**0.0570**	**0.0150**	**4.4000e-004**	**0.0155**	**0.0000**	**49.9357**	**49.9357**	**1.4600e-003**	**1.9200e-003**	**50.5454**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.1549	1.2194	1.1985	2.0900e-003		0.0586	0.0586		0.0562	0.0562	0.0000	173.4127	173.4127	0.0335	0.0000	174.2491
Total	**0.1549**	**1.2194**	**1.1985**	**2.0900e-003**		**0.0586**	**0.0586**		**0.0562**	**0.0562**	**0.0000**	**173.4127**	**173.4127**	**0.0335**	**0.0000**	**174.2491**

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	4.9000e-004	0.0129	4.2700e-003	5.0000e-005	1.4800e-003	1.2000e-004	1.6000e-003	4.3000e-004	1.1000e-004	5.4000e-004	0.0000	4.7835	4.7835	1.6000e-004	6.9000e-004	4.9931
Worker	0.0172	0.0143	0.1857	4.9000e-004	0.0506	3.6000e-004	0.0510	0.0135	3.3000e-004	0.0139	0.0000	45.1522	45.1522	1.3000e-003	1.2300e-003	45.5523
Total	**0.0177**	**0.0272**	**0.1900**	**5.4000e-004**	**0.0521**	**4.8000e-004**	**0.0526**	**0.0140**	**4.4000e-004**	**0.0144**	**0.0000**	**49.9357**	**49.9357**	**1.4600e-003**	**1.9200e-003**	**50.5454**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.10 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	0.2056	1.6349	1.7057	3.0000e-003		0.0736	0.0736		0.0706	0.0706	0.0000	249.2425	249.2425	0.0471	0.0000	250.4209
Total	**0.2056**	**1.6349**	**1.7057**	**3.0000e-003**		**0.0736**	**0.0736**		**0.0706**	**0.0706**	**0.0000**	**249.2425**	**249.2425**	**0.0471**	**0.0000**	**250.4209**

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	4.1000e-004	0.0145	5.4300e-003	7.0000e-005	2.2700e-003	7.0000e-005	2.3400e-003	6.5000e-004	7.0000e-005	7.2000e-004	0.0000	6.5456	6.5456	2.2000e-004	9.4000e-004	6.8318
Worker	0.0228	0.0181	0.2453	6.8000e-004	0.0789	4.8000e-004	0.0794	0.0210	4.5000e-004	0.0214	0.0000	62.8016	62.8016	1.6700e-003	1.6300e-003	63.3305
Total	**0.0233**	**0.0327**	**0.2507**	**7.5000e-004**	**0.0812**	**5.5000e-004**	**0.0817**	**0.0216**	**5.2000e-004**	**0.0221**	**0.0000**	**69.3472**	**69.3472**	**1.8900e-003**	**2.5700e-003**	**70.1623**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.2056	1.6349	1.7057	3.0000e-003		0.0736	0.0736		0.0706	0.0706	0.0000	249.2422	249.2422	0.0471	0.0000	250.4206
Total	**0.2056**	**1.6349**	**1.7057**	**3.0000e-003**		**0.0736**	**0.0736**		**0.0706**	**0.0706**	**0.0000**	**249.2422**	**249.2422**	**0.0471**	**0.0000**	**250.4206**

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	4.1000e-004	0.0145	5.4300e-003	7.0000e-005	2.1200e-003	7.0000e-005	2.1900e-003	6.2000e-004	7.0000e-005	6.9000e-004	0.0000	6.5456	6.5456	2.2000e-004	9.4000e-004	6.8318
Worker	0.0228	0.0181	0.2453	6.8000e-004	0.0727	4.8000e-004	0.0732	0.0194	4.5000e-004	0.0199	0.0000	62.8016	62.8016	1.6700e-003	1.6300e-003	63.3305
Total	**0.0233**	**0.0327**	**0.2507**	**7.5000e-004**	**0.0749**	**5.5000e-004**	**0.0754**	**0.0201**	**5.2000e-004**	**0.0206**	**0.0000**	**69.3472**	**69.3472**	**1.8900e-003**	**2.5700e-003**	**70.1623**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.11 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	8.3600e-003	0.0818	0.1110	1.7000e-004		4.1200e-003	4.1200e-003		3.8000e-003	3.8000e-003	0.0000	14.7372	14.7372	4.6700e-003	0.0000	14.8539
Paving	1.3500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.7100e-003**	**0.0818**	**0.1110**	**1.7000e-004**		**4.1200e-003**	**4.1200e-003**		**3.8000e-003**	**3.8000e-003**	**0.0000**	**14.7372**	**14.7372**	**4.6700e-003**	**0.0000**	**14.8539**

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	4.5000e-004	3.6000e-004	4.8600e-003	1.0000e-005	1.5600e-003	1.0000e-005	1.5700e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.2430	1.2430	3.0000e-005	3.0000e-005	1.2534
Total	**4.5000e-004**	**3.6000e-004**	**4.8600e-003**	**1.0000e-005**	**1.5600e-003**	**1.0000e-005**	**1.5700e-003**	**4.1000e-004**	**1.0000e-005**	**4.2000e-004**	**0.0000**	**1.2430**	**1.2430**	**3.0000e-005**	**3.0000e-005**	**1.2534**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	8.3600e-003	0.0818	0.1110	1.7000e-004		4.1200e-003	4.1200e-003		3.8000e-003	3.8000e-003	0.0000	14.7371	14.7371	4.6700e-003	0.0000	14.8539
Paving	1.3500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.7100e-003**	**0.0818**	**0.1110**	**1.7000e-004**		**4.1200e-003**	**4.1200e-003**		**3.8000e-003**	**3.8000e-003**	**0.0000**	**14.7371**	**14.7371**	**4.6700e-003**	**0.0000**	**14.8539**

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	4.5000e-004	3.6000e-004	4.8600e-003	1.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2430	1.2430	3.0000e-005	3.0000e-005	1.2534
Total	**4.5000e-004**	**3.6000e-004**	**4.8600e-003**	**1.0000e-005**	**1.4400e-003**	**1.0000e-005**	**1.4500e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.2430**	**1.2430**	**3.0000e-005**	**3.0000e-005**	**1.2534**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.12 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	0.3567					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8200e-003	0.0124	0.0172	3.0000e-005		6.7000e-004	6.7000e-004		6.7000e-004	6.7000e-004	0.0000	2.4256	2.4256	1.5000e-004	0.0000	2.4292
Total	**0.3585**	**0.0124**	**0.0172**	**3.0000e-005**		**6.7000e-004**	**6.7000e-004**		**6.7000e-004**	**6.7000e-004**	**0.0000**	**2.4256**	**2.4256**	**1.5000e-004**	**0.0000**	**2.4292**

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	3.6000e-004	2.9000e-004	3.8800e-003	1.0000e-005	1.2500e-003	1.0000e-005	1.2600e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	0.9944	0.9944	3.0000e-005	3.0000e-005	1.0027
Total	**3.6000e-004**	**2.9000e-004**	**3.8800e-003**	**1.0000e-005**	**1.2500e-003**	**1.0000e-005**	**1.2600e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**0.9944**	**0.9944**	**3.0000e-005**	**3.0000e-005**	**1.0027**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.3567					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8200e-003	0.0124	0.0172	3.0000e-005		6.7000e-004	6.7000e-004		6.7000e-004	6.7000e-004	0.0000	2.4256	2.4256	1.5000e-004	0.0000	2.4292
Total	**0.3585**	**0.0124**	**0.0172**	**3.0000e-005**		**6.7000e-004**	**6.7000e-004**		**6.7000e-004**	**6.7000e-004**	**0.0000**	**2.4256**	**2.4256**	**1.5000e-004**	**0.0000**	**2.4292**

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	3.6000e-004	2.9000e-004	3.8800e-003	1.0000e-005	1.1500e-003	1.0000e-005	1.1600e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	0.9944	0.9944	3.0000e-005	3.0000e-005	1.0027
Total	**3.6000e-004**	**2.9000e-004**	**3.8800e-003**	**1.0000e-005**	**1.1500e-003**	**1.0000e-005**	**1.1600e-003**	**3.1000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**0.9944**	**0.9944**	**3.0000e-005**	**3.0000e-005**	**1.0027**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Washington and Rosemead Mixed-Use Project Mitigated Construction Run

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	190.00	1000sqft	0.34	190,000.00	0
Other Asphalt Surfaces	45.00	1000sqft	1.03	45,000.00	0
Other Non-Asphalt Surfaces	21.00	1000sqft	0.48	21,000.00	0
Recreational Swimming Pool	17.01	1000sqft	0.00	17,010.00	0
Apartments Mid Rise	255.00	Dwelling Unit	0.99	260,220.00	729
Regional Shopping Center	5.73	1000sqft	0.00	5,730.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2023
Utility Company	Pico Rivera Innovative Municipal Energy				
CO2 Intensity (lb/MWhr)	683.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - based on PRIME power mix

Land Use - based on info from applicant

Construction Phase - based on info confirmed by applicant

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - no additional equipment required for Asphalt Demolition Haul

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment -

Off-road Equipment - based on info from applicant

Off-road Equipment - no additional equipment required for Grading Soil Haul

Off-road Equipment -

Off-road Equipment - based on info provided by applicant

Off-road Equipment - no additional equipment required for Grading Soil Haul

Off-road Equipment - loader HP based on CAT 966 Loader provided by applicant

Off-road Equipment - based on info from applicant

Trips and VMT - assumes 2 trips/water truck/day. See assumptions file for calculations on dump trucks and hauling trips

Demolition -

Grading -

Architectural Coating - based on info from applicant, residential includes area for pool, nonresidential includes area for int/ext parking structure, parking only includes

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 and 1186

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	11,370.00	97,865.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	34,110.00	293,595.00
tblArchitecturalCoating	ConstArea_Parking	15,360.00	11,400.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	175,649.00	187,130.00
tblArchitecturalCoating	ConstArea_Residential_Interior	526,946.00	561,391.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	0.00

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblAreaCoating	Area_Nonresidential_Exterior	11370	9500
tblAreaCoating	Area_Nonresidential_Interior	34110	28500
tblAreaCoating	Area_Residential_Exterior	175649	168973
tblAreaCoating	Area_Residential_Interior	526946	506918
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	19.00
tblConstructionPhase	NumDays	220.00	407.00
tblConstructionPhase	NumDays	20.00	37.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	6.00	30.00
tblConstructionPhase	NumDays	6.00	12.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	10.00	19.00
tblConstructionPhase	NumDays	3.00	6.00
tblGrading	MaterialExported	0.00	7,400.00
tblGrading	MaterialExported	0.00	20,000.00
tblLandUse	LandUseSquareFeet	255,000.00	260,220.00
tblLandUse	LotAcreage	4.36	0.34
tblLandUse	LotAcreage	1.03	1.03
tblLandUse	LotAcreage	0.48	0.48
tblLandUse	LotAcreage	0.39	0.00
tblLandUse	LotAcreage	6.71	0.99
tblLandUse	LotAcreage	0.13	0.00
tblOffRoadEquipment	HorsePower	97.00	276.00
tblOffRoadEquipment	HorsePower	158.00	270.00
tblOffRoadEquipment	HorsePower	80.00	134.00

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	158.00	249.00
tblOffRoadEquipment	HorsePower	8.00	7.00
tblOffRoadEquipment	HorsePower	97.00	225.00
tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	8.00	7.00
tblOffRoadEquipment	HorsePower	97.00	225.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	96.96	76.95
tblSolidWaste	SolidWasteGenerationRate	6.02	5.78
tblTripsAndVMT	HaulingTripLength	20.00	19.00
tblTripsAndVMT	HaulingTripLength	20.00	19.00
tblTripsAndVMT	HaulingTripLength	20.00	19.00
tblTripsAndVMT	HaulingTripNumber	182.00	184.00
tblTripsAndVMT	HaulingTripNumber	925.00	1,058.00
tblTripsAndVMT	HaulingTripNumber	2,500.00	2,858.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	73.00	3.00
tblTripsAndVMT	WorkerTripNumber	60.00	12.00
tblTripsAndVMT	WorkerTripNumber	300.00	60.00
tblWater	IndoorWaterUseRate	1,006,024.88	798,432.44
tblWater	IndoorWaterUseRate	424,435.55	407,398.87
tblWater	OutdoorWaterUseRate	616,595.89	489,361.82
tblWater	OutdoorWaterUseRate	260,137.92	249,696.08

2.0 Emissions Summary

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	4.2542	49.9364	32.3389	0.1489	9.8930	1.3427	11.2251	4.0089	1.2757	5.2382	0.0000	15,312.9108	15,312.9108	1.8426	1.5328	15,812.5270
2023	39.6821	22.5162	28.6536	0.0509	0.8575	1.0531	1.9106	0.2279	0.9935	1.2213	0.0000	4,809.6571	4,809.6571	0.9959	0.0260	4,842.2862
Maximum	**39.6821**	**49.9364**	**32.3389**	**0.1489**	**9.8930**	**1.3427**	**11.2251**	**4.0089**	**1.2757**	**5.2382**	**0.0000**	**15,312.9108**	**15,312.9108**	**1.8426**	**1.5328**	**15,812.5270**

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	4.2542	49.9364	32.3389	0.1489	5.0749	1.3427	6.4070	1.9480	1.2757	3.1774	0.0000	15,312.9108	15,312.9108	1.8426	1.5328	15,812.5270
2023	39.6821	22.5162	28.6536	0.0509	0.7907	1.0531	1.8438	0.2115	0.9935	1.2049	0.0000	4,809.6571	4,809.6571	0.9959	0.0260	4,842.2862
Maximum	**39.6821**	**49.9364**	**32.3389**	**0.1489**	**5.0749**	**1.3427**	**6.4070**	**1.9480**	**1.2757**	**3.1774**	**0.0000**	**15,312.9108**	**15,312.9108**	**1.8426**	**1.5328**	**15,812.5270**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	45.44	0.00	37.19	49.03	0.00	32.16	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	Asphalt Demolition	Demolition	1/1/2022	2/22/2022	5	37	a
2	Asphalt Demolition Debris Haul	Demolition	2/16/2022	2/22/2022	5	5	b
3	Site Preparation	Site Preparation	2/23/2022	3/2/2022	5	6	c
4	Rough Grading	Grading	3/3/2022	4/13/2022	5	30	d
5	Rough Grading Soil Haul	Grading	3/29/2022	4/13/2022	5	12	e
6	Utility Trenching	Trenching	4/14/2022	7/6/2022	5	60	f
7	Fine Grading	Grading	5/12/2022	6/8/2022	5	20	g
8	Fine Grading Soil Haul	Grading	5/12/2022	6/8/2022	5	20	h
9	Building Construction	Building Construction	5/12/2022	12/1/2023	5	407	i
10	Paving	Paving	10/11/2023	11/6/2023	5	19	j
11	Architectural Coating	Architectural Coating	11/7/2023	12/1/2023	5	19	k

Acres of Grading (Site Preparation Phase): 9

Acres of Grading (Grading Phase): 60

Acres of Paving: 1.86010101010101

Residential Indoor: 561,391; Residential Outdoor: 187,130; Non-Residential Indoor: 293,595; Non-Residential Outdoor: 97,865; Striped Parking Area:

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Asphalt Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Asphalt Demolition Debris Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demolition Debris Haul	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Demolition Debris Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	276	0.37
Rough Grading	Excavators	1	8.00	270	0.38
Rough Grading	Graders	1	8.00	187	0.41
Rough Grading	Rollers	1	8.00	134	0.38
Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
Rough Grading	Scrapers	1	8.00	367	0.48
Rough Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Rough Grading Soil Haul	Graders	0	8.00	187	0.41
Rough Grading Soil Haul	Rubber Tired Dozers	0	8.00	247	0.40
Rough Grading Soil Haul	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Utility Trenching	Excavators	1	6.00	249	0.38
Utility Trenching	Plate Compactors	5	8.00	7	0.43
Utility Trenching	Tractors/Loaders/Backhoes	1	8.00	225	0.37
Utility Trenching	Trenchers	1	8.00	50	0.50
Fine Grading	Graders	0	8.00	187	0.41
Fine Grading	Plate Compactors	5	8.00	7	0.43
Fine Grading	Rubber Tired Dozers	0	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	1	8.00	225	0.37

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Fine Grading Soil Haul	Graders	0	8.00	187	0.41
Fine Grading Soil Haul	Rubber Tired Dozers	0	8.00	247	0.40
Fine Grading Soil Haul	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	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
Asphalt Demolition	5	13.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demolition Debris Haul	0	0.00	0.00	184.00	14.70	6.90	19.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	7	18.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading Soil Haul	0	0.00	0.00	1,058.00	14.70	6.90	19.00	LD_Mix	HDT_Mix	HHDT
Utility Trenching	8	20.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading Soil Haul	0	0.00	0.00	2,858.00	14.70	6.90	19.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	60.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Asphalt 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					
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**		**0.8379**	**0.8379**		**0.7829**	**0.7829**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

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	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0128	9.3000e-004	0.0137	3.6900e-003	8.9000e-004	4.5800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0450	0.0328	0.5117	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		134.3475	134.3475	3.6600e-003	3.2500e-003	135.4083
Total	**0.0489**	**0.1308**	**0.5453**	**1.7200e-003**	**0.1581**	**1.8600e-003**	**0.1600**	**0.0422**	**1.7500e-003**	**0.0440**		**176.4398**	**176.4398**	**5.0700e-003**	**9.3200e-003**	**179.3434**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**		**0.8379**	**0.8379**		**0.7829**	**0.7829**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

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	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0120	9.3000e-004	0.0129	3.4900e-003	8.9000e-004	4.3800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0450	0.0328	0.5117	1.3300e-003	0.1339	9.3000e-004	0.1349	0.0358	8.6000e-004	0.0366		134.3475	134.3475	3.6600e-003	3.2500e-003	135.4083
Total	**0.0489**	**0.1308**	**0.5453**	**1.7200e-003**	**0.1459**	**1.8600e-003**	**0.1478**	**0.0392**	**1.7500e-003**	**0.0410**		**176.4398**	**176.4398**	**5.0700e-003**	**9.3200e-003**	**179.3434**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Asphalt Demolition Debris Haul - 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					7.8706	0.0000	7.8706	1.1917	0.0000	1.1917			0.0000			0.0000
Off-Road	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**	**7.8706**	**0.0000**	**7.8706**	**1.1917**	**0.0000**	**1.1917**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.1649	5.9064	1.3944	0.0218	0.6120	0.0437	0.6556	0.1678	0.0418	0.2095		2,385.3896	2,385.3896	0.1266	0.3785	2,501.3374
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	0.0000	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
Total	**0.1649**	**5.9064**	**1.3944**	**0.0218**	**0.6120**	**0.0437**	**0.6556**	**0.1678**	**0.0418**	**0.2095**		**2,385.3896**	**2,385.3896**	**0.1266**	**0.3785**	**2,501.3374**

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Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					3.3647	0.0000	3.3647	0.5094	0.0000	0.5094			0.0000			0.0000
Off-Road	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**	**3.3647**	**0.0000**	**3.3647**	**0.5094**	**0.0000**	**0.5094**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.1649	5.9064	1.3944	0.0218	0.5704	0.0437	0.6140	0.1576	0.0418	0.1993		2,385.3896	2,385.3896	0.1266	0.3785	2,501.3374
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	0.0000	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
Total	**0.1649**	**5.9064**	**1.3944**	**0.0218**	**0.5704**	**0.0437**	**0.6140**	**0.1576**	**0.0418**	**0.1993**		**2,385.3896**	**2,385.3896**	**0.1266**	**0.3785**	**2,501.3374**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.4869	16.4656	10.1152	0.0295		0.5998	0.5998		0.5518	0.5518		2,851.0984	2,851.0984	0.9221		2,874.1509
Total	**1.4869**	**16.4656**	**10.1152**	**0.0295**	**1.5908**	**0.5998**	**2.1905**	**0.1718**	**0.5518**	**0.7236**		**2,851.0984**	**2,851.0984**	**0.9221**		**2,874.1509**

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	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0128	9.3000e-004	0.0137	3.6900e-003	8.9000e-004	4.5800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0277	0.0202	0.3149	8.2000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		82.6754	82.6754	2.2500e-003	2.0000e-003	83.3282
Total	**0.0316**	**0.1182**	**0.3485**	**1.2100e-003**	**0.1022**	**1.5000e-003**	**0.1037**	**0.0274**	**1.4200e-003**	**0.0288**		**124.7677**	**124.7677**	**3.6600e-003**	**8.0700e-003**	**127.2632**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.6801	0.0000	0.6801	0.0734	0.0000	0.0734			0.0000			0.0000
Off-Road	1.4869	16.4656	10.1152	0.0295		0.5998	0.5998		0.5518	0.5518	0.0000	2,851.0984	2,851.0984	0.9221		2,874.1509
Total	**1.4869**	**16.4656**	**10.1152**	**0.0295**	**0.6801**	**0.5998**	**1.2798**	**0.0734**	**0.5518**	**0.6252**	**0.0000**	**2,851.0984**	**2,851.0984**	**0.9221**		**2,874.1509**

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	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0120	9.3000e-004	0.0129	3.4900e-003	8.9000e-004	4.3800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0277	0.0202	0.3149	8.2000e-004	0.0824	5.7000e-004	0.0830	0.0220	5.3000e-004	0.0225		82.6754	82.6754	2.2500e-003	2.0000e-003	83.3282
Total	**0.0316**	**0.1182**	**0.3485**	**1.2100e-003**	**0.0944**	**1.5000e-003**	**0.0959**	**0.0255**	**1.4200e-003**	**0.0269**		**124.7677**	**124.7677**	**3.6600e-003**	**8.0700e-003**	**127.2632**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Rough 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					8.1431	0.0000	8.1431	3.5393	0.0000	3.5393			0.0000			0.0000
Off-Road	2.7387	29.3482	20.1327	0.0490		1.2253	1.2253		1.1272	1.1272		4,739.5873	4,739.5873	1.5329		4,777.9092
Total	**2.7387**	**29.3482**	**20.1327**	**0.0490**	**8.1431**	**1.2253**	**9.3684**	**3.5393**	**1.1272**	**4.6665**		**4,739.5873**	**4,739.5873**	**1.5329**		**4,777.9092**

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	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0128	9.3000e-004	0.0137	3.6900e-003	8.9000e-004	4.5800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0623	0.0455	0.7085	1.8400e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0545		186.0196	186.0196	5.0700e-003	4.5000e-003	187.4885
Total	**0.0662**	**0.1434**	**0.7420**	**2.2300e-003**	**0.2140**	**2.2200e-003**	**0.2162**	**0.0571**	**2.0800e-003**	**0.0591**		**228.1119**	**228.1119**	**6.4800e-003**	**0.0106**	**231.4235**

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Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					3.4812	0.0000	3.4812	1.5130	0.0000	1.5130			0.0000			0.0000
Off-Road	2.7387	29.3482	20.1327	0.0490		1.2253	1.2253		1.1272	1.1272	0.0000	4,739.5873	4,739.5873	1.5329		4,777.9092
Total	**2.7387**	**29.3482**	**20.1327**	**0.0490**	**3.4812**	**1.2253**	**4.7064**	**1.5130**	**1.1272**	**2.6403**	**0.0000**	**4,739.5873**	**4,739.5873**	**1.5329**		**4,777.9092**

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	3.9400e-003	0.0980	0.0336	3.9000e-004	0.0120	9.3000e-004	0.0129	3.4900e-003	8.9000e-004	4.3800e-003		42.0923	42.0923	1.4100e-003	6.0700e-003	43.9350
Worker	0.0623	0.0455	0.7085	1.8400e-003	0.1855	1.2900e-003	0.1867	0.0495	1.1900e-003	0.0507		186.0196	186.0196	5.0700e-003	4.5000e-003	187.4885
Total	**0.0662**	**0.1434**	**0.7420**	**2.2300e-003**	**0.1975**	**2.2200e-003**	**0.1997**	**0.0530**	**2.0800e-003**	**0.0551**		**228.1119**	**228.1119**	**6.4800e-003**	**0.0106**	**231.4235**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Rough Grading Soil Haul - 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					0.0697	0.0000	0.0697	0.0106	0.0000	0.0106			0.0000			0.0000
Off-Road	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**	**0.0697**	**0.0000**	**0.0697**	**0.0106**	**0.0000**	**0.0106**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.3950	14.1507	3.3407	0.0522	1.4662	0.1046	1.5707	0.4020	0.1001	0.5020		5,714.9959	5,714.9959	0.3032	0.9068	5,992.7874
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	0.0000	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
Total	**0.3950**	**14.1507**	**3.3407**	**0.0522**	**1.4662**	**0.1046**	**1.5707**	**0.4020**	**0.1001**	**0.5020**		**5,714.9959**	**5,714.9959**	**0.3032**	**0.9068**	**5,992.7874**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.0298	0.0000	0.0298	4.5100e-003	0.0000	4.5100e-003			0.0000			0.0000
Off-Road	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**	**0.0298**	**0.0000**	**0.0298**	**4.5100e-003**	**0.0000**	**4.5100e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.3950	14.1507	3.3407	0.0522	1.3665	0.1046	1.4711	0.3775	0.1001	0.4776		5,714.9959	5,714.9959	0.3032	0.9068	5,992.7874
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	0.0000	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
Total	**0.3950**	**14.1507**	**3.3407**	**0.0522**	**1.3665**	**0.1046**	**1.4711**	**0.3775**	**0.1001**	**0.4776**		**5,714.9959**	**5,714.9959**	**0.3032**	**0.9068**	**5,992.7874**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Utility Trenching - 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	0.9542	7.5687	5.9861	0.0178		0.3170	0.3170		0.2951	0.2951		1,664.3091	1,664.3091	0.5051		1,676.9377
Total	**0.9542**	**7.5687**	**5.9861**	**0.0178**		**0.3170**	**0.3170**		**0.2951**	**0.2951**		**1,664.3091**	**1,664.3091**	**0.5051**		**1,676.9377**

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	7.8700e-003	0.1959	0.0672	7.8000e-004	0.0256	1.8700e-003	0.0275	7.3800e-003	1.7900e-003	9.1600e-003		84.1846	84.1846	2.8100e-003	0.0121	87.8701
Worker	0.0692	0.0505	0.7872	2.0400e-003	0.2236	1.4300e-003	0.2250	0.0593	1.3200e-003	0.0606		206.6884	206.6884	5.6300e-003	5.0000e-003	208.3205
Total	**0.0771**	**0.2465**	**0.8543**	**2.8200e-003**	**0.2492**	**3.3000e-003**	**0.2525**	**0.0667**	**3.1100e-003**	**0.0698**		**290.8730**	**290.8730**	**8.4400e-003**	**0.0171**	**296.1906**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.9542	7.5687	5.9861	0.0178		0.3170	0.3170		0.2951	0.2951	0.0000	1,664.3091	1,664.3091	0.5051		1,676.9377
Total	**0.9542**	**7.5687**	**5.9861**	**0.0178**		**0.3170**	**0.3170**		**0.2951**	**0.2951**	**0.0000**	**1,664.3091**	**1,664.3091**	**0.5051**		**1,676.9377**

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	7.8700e-003	0.1959	0.0672	7.8000e-004	0.0240	1.8700e-003	0.0259	6.9700e-003	1.7900e-003	8.7600e-003		84.1846	84.1846	2.8100e-003	0.0121	87.8701
Worker	0.0692	0.0505	0.7872	2.0400e-003	0.2061	1.4300e-003	0.2075	0.0550	1.3200e-003	0.0563		206.6884	206.6884	5.6300e-003	5.0000e-003	208.3205
Total	**0.0771**	**0.2465**	**0.8543**	**2.8200e-003**	**0.2300**	**3.3000e-003**	**0.2333**	**0.0620**	**3.1100e-003**	**0.0651**		**290.8730**	**290.8730**	**8.4400e-003**	**0.0171**	**296.1906**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.8 Fine 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4500	3.9516	2.6276	9.2600e-003		0.1412	0.1412		0.1333	0.1333		841.1197	841.1197	0.2389		847.0925
Total	**0.4500**	**3.9516**	**2.6276**	**9.2600e-003**	**0.0000**	**0.1412**	**0.1412**	**0.0000**	**0.1333**	**0.1333**		**841.1197**	**841.1197**	**0.2389**		**847.0925**

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	0.0118	0.2939	0.1008	1.1800e-003	0.0384	2.8000e-003	0.0412	0.0111	2.6800e-003	0.0137		126.2770	126.2770	4.2200e-003	0.0182	131.8051
Worker	0.0519	0.0379	0.5904	1.5300e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		155.0163	155.0163	4.2200e-003	3.7500e-003	156.2404
Total	**0.0637**	**0.3318**	**0.6911**	**2.7100e-003**	**0.2061**	**3.8700e-003**	**0.2100**	**0.0555**	**3.6700e-003**	**0.0592**		**281.2933**	**281.2933**	**8.4400e-003**	**0.0220**	**288.0455**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4500	3.9516	2.6276	9.2600e-003		0.1412	0.1412		0.1333	0.1333	0.0000	841.1197	841.1197	0.2389		847.0925
Total	**0.4500**	**3.9516**	**2.6276**	**9.2600e-003**	**0.0000**	**0.1412**	**0.1412**	**0.0000**	**0.1333**	**0.1333**	**0.0000**	**841.1197**	**841.1197**	**0.2389**		**847.0925**

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	0.0118	0.2939	0.1008	1.1800e-003	0.0360	2.8000e-003	0.0388	0.0105	2.6800e-003	0.0131		126.2770	126.2770	4.2200e-003	0.0182	131.8051
Worker	0.0519	0.0379	0.5904	1.5300e-003	0.1546	1.0700e-003	0.1556	0.0413	9.9000e-004	0.0422		155.0163	155.0163	4.2200e-003	3.7500e-003	156.2404
Total	**0.0637**	**0.3318**	**0.6911**	**2.7100e-003**	**0.1905**	**3.8700e-003**	**0.1944**	**0.0517**	**3.6700e-003**	**0.0554**		**281.2933**	**281.2933**	**8.4400e-003**	**0.0220**	**288.0455**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.9 Fine Grading Soil Haul - 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					0.1131	0.0000	0.1131	0.0171	0.0000	0.0171			0.0000			0.0000
Off-Road	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**	**0.1131**	**0.0000**	**0.1131**	**0.0171**	**0.0000**	**0.0171**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.6402	22.9353	5.4145	0.0846	2.3764	0.1695	2.5459	0.6515	0.1622	0.8137		9,262.8308	9,262.8308	0.4914	1.4697	9,713.0736
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	0.0000	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
Total	**0.6402**	**22.9353**	**5.4145**	**0.0846**	**2.3764**	**0.1695**	**2.5459**	**0.6515**	**0.1622**	**0.8137**		**9,262.8308**	**9,262.8308**	**0.4914**	**1.4697**	**9,713.0736**

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Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.0484	0.0000	0.0484	7.3200e-003	0.0000	7.3200e-003			0.0000			0.0000
Off-Road	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**	**0.0484**	**0.0000**	**0.0484**	**7.3200e-003**	**0.0000**	**7.3200e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.6402	22.9353	5.4145	0.0846	2.2148	0.1695	2.3843	0.6119	0.1622	0.7741		9,262.8308	9,262.8308	0.4914	1.4697	9,713.0736
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	0.0000	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
Total	**0.6402**	**22.9353**	**5.4145**	**0.0846**	**2.2148**	**0.1695**	**2.3843**	**0.6119**	**0.1622**	**0.7741**		**9,262.8308**	**9,262.8308**	**0.4914**	**1.4697**	**9,713.0736**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.10 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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**		**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

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	5.9000e-003	0.1470	0.0504	5.9000e-004	0.0192	1.4000e-003	0.0206	5.5300e-003	1.3400e-003	6.8700e-003		63.1385	63.1385	2.1100e-003	9.1000e-003	65.9025
Worker	0.2076	0.1516	2.3615	6.1300e-003	0.6707	4.2900e-003	0.6750	0.1779	3.9500e-003	0.1818		620.0652	620.0652	0.0169	0.0150	624.9616
Total	**0.2135**	**0.2985**	**2.4119**	**6.7200e-003**	**0.6899**	**5.6900e-003**	**0.6956**	**0.1834**	**5.2900e-003**	**0.1887**		**683.2036**	**683.2036**	**0.0190**	**0.0241**	**690.8641**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

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	5.9000e-003	0.1470	0.0504	5.9000e-004	0.0180	1.4000e-003	0.0194	5.2300e-003	1.3400e-003	6.5700e-003		63.1385	63.1385	2.1100e-003	9.1000e-003	65.9025
Worker	0.2076	0.1516	2.3615	6.1300e-003	0.6182	4.2900e-003	0.6225	0.1650	3.9500e-003	0.1689		620.0652	620.0652	0.0169	0.0150	624.9616
Total	**0.2135**	**0.2985**	**2.4119**	**6.7200e-003**	**0.6362**	**5.6900e-003**	**0.6419**	**0.1702**	**5.2900e-003**	**0.1755**		**683.2036**	**683.2036**	**0.0190**	**0.0241**	**690.8641**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.10 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	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**		**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

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	3.4500e-003	0.1152	0.0446	5.6000e-004	0.0192	5.8000e-004	0.0198	5.5300e-003	5.5000e-004	6.0900e-003		60.0847	60.0847	2.0100e-003	8.6400e-003	62.7093
Worker	0.1920	0.1339	2.1684	5.9400e-003	0.6707	4.0300e-003	0.6747	0.1779	3.7100e-003	0.1816		600.0452	600.0452	0.0151	0.0139	604.5501
Total	**0.1955**	**0.2490**	**2.2130**	**6.5000e-003**	**0.6899**	**4.6100e-003**	**0.6945**	**0.1834**	**4.2600e-003**	**0.1877**		**660.1300**	**660.1300**	**0.0171**	**0.0225**	**667.2594**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**	**0.0000**	**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

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	3.4500e-003	0.1152	0.0446	5.6000e-004	0.0180	5.8000e-004	0.0186	5.2300e-003	5.5000e-004	5.7800e-003		60.0847	60.0847	2.0100e-003	8.6400e-003	62.7093
Worker	0.1920	0.1339	2.1684	5.9400e-003	0.6182	4.0300e-003	0.6222	0.1650	3.7100e-003	0.1687		600.0452	600.0452	0.0151	0.0139	604.5501
Total	**0.1955**	**0.2490**	**2.2130**	**6.5000e-003**	**0.6362**	**4.6100e-003**	**0.6408**	**0.1702**	**4.2600e-003**	**0.1745**		**660.1300**	**660.1300**	**0.0171**	**0.0225**	**667.2594**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.11 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	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003		1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.1425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0227**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**		**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

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	0.0480	0.0335	0.5421	1.4800e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		150.0113	150.0113	3.7800e-003	3.4600e-003	151.1375
Total	**0.0480**	**0.0335**	**0.5421**	**1.4800e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**150.0113**	**150.0113**	**3.7800e-003**	**3.4600e-003**	**151.1375**

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Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003	0.0000	1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.1425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0227**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**	**0.0000**	**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

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	0.0480	0.0335	0.5421	1.4800e-003	0.1546	1.0100e-003	0.1556	0.0413	9.3000e-004	0.0422		150.0113	150.0113	3.7800e-003	3.4600e-003	151.1375
Total	**0.0480**	**0.0335**	**0.5421**	**1.4800e-003**	**0.1546**	**1.0100e-003**	**0.1556**	**0.0413**	**9.3000e-004**	**0.0422**		**150.0113**	**150.0113**	**3.7800e-003**	**3.4600e-003**	**151.1375**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.12 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	37.5429					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	**37.7346**	**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	0.0384	0.0268	0.4337	1.1900e-003	0.1341	8.1000e-004	0.1349	0.0356	7.4000e-004	0.0363		120.0090	120.0090	3.0300e-003	2.7700e-003	120.9100
Total	**0.0384**	**0.0268**	**0.4337**	**1.1900e-003**	**0.1341**	**8.1000e-004**	**0.1349**	**0.0356**	**7.4000e-004**	**0.0363**		**120.0090**	**120.0090**	**3.0300e-003**	**2.7700e-003**	**120.9100**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	37.5429					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	**37.7346**	**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	0.0384	0.0268	0.4337	1.1900e-003	0.1236	8.1000e-004	0.1244	0.0330	7.4000e-004	0.0337		120.0090	120.0090	3.0300e-003	2.7700e-003	120.9100
Total	**0.0384**	**0.0268**	**0.4337**	**1.1900e-003**	**0.1236**	**8.1000e-004**	**0.1244**	**0.0330**	**7.4000e-004**	**0.0337**		**120.0090**	**120.0090**	**3.0300e-003**	**2.7700e-003**	**120.9100**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Washington and Rosemead Mixed-Use Project Mitigated Construction Run

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	190.00	1000sqft	0.34	190,000.00	0
Other Asphalt Surfaces	45.00	1000sqft	1.03	45,000.00	0
Other Non-Asphalt Surfaces	21.00	1000sqft	0.48	21,000.00	0
Recreational Swimming Pool	17.01	1000sqft	0.00	17,010.00	0
Apartments Mid Rise	255.00	Dwelling Unit	0.99	260,220.00	729
Regional Shopping Center	5.73	1000sqft	0.00	5,730.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2023
Utility Company	Pico Rivera Innovative Municipal Energy				
CO2 Intensity (lb/MWhr)	683.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - based on PRIME power mix

Land Use - based on info from applicant

Construction Phase - based on info confirmed by applicant

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - no additional equipment required for Asphalt Demolition Haul

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Off-road Equipment -

Off-road Equipment - based on info from applicant

Off-road Equipment - no additional equipment required for Grading Soil Haul

Off-road Equipment -

Off-road Equipment - based on info provided by applicant

Off-road Equipment - no additional equipment required for Grading Soil Haul

Off-road Equipment - loader HP based on CAT 966 Loader provided by applicant

Off-road Equipment - based on info from applicant

Trips and VMT - assumes 2 trips/water truck/day. See assumptions file for calculations on dump trucks and hauling trips

Demolition -

Grading -

Architectural Coating - based on info from applicant, residential includes area for pool, nonresidential includes area for int/ext parking structure, parking only includes

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 and 1186

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	11,370.00	97,865.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	34,110.00	293,595.00
tblArchitecturalCoating	ConstArea_Parking	15,360.00	11,400.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	175,649.00	187,130.00
tblArchitecturalCoating	ConstArea_Residential_Interior	526,946.00	561,391.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	0.00

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblAreaCoating	Area_Nonresidential_Exterior	11370	9500
tblAreaCoating	Area_Nonresidential_Interior	34110	28500
tblAreaCoating	Area_Residential_Exterior	175649	168973
tblAreaCoating	Area_Residential_Interior	526946	506918
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	19.00
tblConstructionPhase	NumDays	220.00	407.00
tblConstructionPhase	NumDays	20.00	37.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	6.00	30.00
tblConstructionPhase	NumDays	6.00	12.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	10.00	19.00
tblConstructionPhase	NumDays	3.00	6.00
tblGrading	MaterialExported	0.00	7,400.00
tblGrading	MaterialExported	0.00	20,000.00
tblLandUse	LandUseSquareFeet	255,000.00	260,220.00
tblLandUse	LotAcreage	4.36	0.34
tblLandUse	LotAcreage	1.03	1.03
tblLandUse	LotAcreage	0.48	0.48
tblLandUse	LotAcreage	0.39	0.00
tblLandUse	LotAcreage	6.71	0.99
tblLandUse	LotAcreage	0.13	0.00
tblOffRoadEquipment	HorsePower	97.00	276.00
tblOffRoadEquipment	HorsePower	158.00	270.00
tblOffRoadEquipment	HorsePower	80.00	134.00

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	158.00	249.00
tblOffRoadEquipment	HorsePower	8.00	7.00
tblOffRoadEquipment	HorsePower	97.00	225.00
tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	8.00	7.00
tblOffRoadEquipment	HorsePower	97.00	225.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	96.96	76.95
tblSolidWaste	SolidWasteGenerationRate	6.02	5.78
tblTripsAndVMT	HaulingTripLength	20.00	19.00
tblTripsAndVMT	HaulingTripLength	20.00	19.00
tblTripsAndVMT	HaulingTripLength	20.00	19.00
tblTripsAndVMT	HaulingTripNumber	182.00	184.00
tblTripsAndVMT	HaulingTripNumber	925.00	1,058.00
tblTripsAndVMT	HaulingTripNumber	2,500.00	2,858.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	73.00	3.00
tblTripsAndVMT	WorkerTripNumber	60.00	12.00
tblTripsAndVMT	WorkerTripNumber	300.00	60.00
tblWater	IndoorWaterUseRate	1,006,024.88	798,432.44
tblWater	IndoorWaterUseRate	424,435.55	407,398.87
tblWater	OutdoorWaterUseRate	616,595.89	489,361.82
tblWater	OutdoorWaterUseRate	260,137.92	249,696.08

2.0 Emissions Summary

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	4.2611	50.9204	32.1392	0.1484	9.8930	1.3431	11.2253	4.0089	1.2761	5.2384	0.0000	15,263.9590	15,263.9590	1.8421	1.5350	15,764.2110
2023	39.6991	22.5391	28.4359	0.0505	0.8575	1.0531	1.9106	0.2279	0.9935	1.2213	0.0000	4,770.2172	4,770.2172	0.9961	0.0272	4,803.2109
Maximum	**39.6991**	**50.9204**	**32.1392**	**0.1484**	**9.8930**	**1.3431**	**11.2253**	**4.0089**	**1.2761**	**5.2384**	**0.0000**	**15,263.9590**	**15,263.9590**	**1.8421**	**1.5350**	**15,764.2110**

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	4.2611	50.9204	32.1392	0.1484	5.0749	1.3431	6.4072	1.9480	1.2761	3.1776	0.0000	15,263.9590	15,263.9590	1.8421	1.5350	15,764.2110
2023	39.6991	22.5391	28.4359	0.0505	0.7907	1.0531	1.8438	0.2115	0.9935	1.2049	0.0000	4,770.2172	4,770.2172	0.9961	0.0272	4,803.2109
Maximum	**39.6991**	**50.9204**	**32.1392**	**0.1484**	**5.0749**	**1.3431**	**6.4072**	**1.9480**	**1.2761**	**3.1776**	**0.0000**	**15,263.9590**	**15,263.9590**	**1.8421**	**1.5350**	**15,764.2110**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	45.44	0.00	37.19	49.03	0.00	32.16	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	Asphalt Demolition	Demolition	1/1/2022	2/22/2022	5	37	a
2	Asphalt Demolition Debris Haul	Demolition	2/16/2022	2/22/2022	5	5	b
3	Site Preparation	Site Preparation	2/23/2022	3/2/2022	5	6	c
4	Rough Grading	Grading	3/3/2022	4/13/2022	5	30	d
5	Rough Grading Soil Haul	Grading	3/29/2022	4/13/2022	5	12	e
6	Utility Trenching	Trenching	4/14/2022	7/6/2022	5	60	f
7	Fine Grading	Grading	5/12/2022	6/8/2022	5	20	g
8	Fine Grading Soil Haul	Grading	5/12/2022	6/8/2022	5	20	h
9	Building Construction	Building Construction	5/12/2022	12/1/2023	5	407	i
10	Paving	Paving	10/11/2023	11/6/2023	5	19	j
11	Architectural Coating	Architectural Coating	11/7/2023	12/1/2023	5	19	k

Acres of Grading (Site Preparation Phase): 9

Acres of Grading (Grading Phase): 60

Acres of Paving: 1.86010101010101

Residential Indoor: 561,391; Residential Outdoor: 187,130; Non-Residential Indoor: 293,595; Non-Residential Outdoor: 97,865; Striped Parking Area:

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Asphalt Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Asphalt Demolition Debris Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demolition Debris Haul	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Demolition Debris Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	276	0.37
Rough Grading	Excavators	1	8.00	270	0.38
Rough Grading	Graders	1	8.00	187	0.41
Rough Grading	Rollers	1	8.00	134	0.38
Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
Rough Grading	Scrapers	1	8.00	367	0.48
Rough Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Rough Grading Soil Haul	Graders	0	8.00	187	0.41
Rough Grading Soil Haul	Rubber Tired Dozers	0	8.00	247	0.40
Rough Grading Soil Haul	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Utility Trenching	Excavators	1	6.00	249	0.38
Utility Trenching	Plate Compactors	5	8.00	7	0.43
Utility Trenching	Tractors/Loaders/Backhoes	1	8.00	225	0.37
Utility Trenching	Trenchers	1	8.00	50	0.50
Fine Grading	Graders	0	8.00	187	0.41
Fine Grading	Plate Compactors	5	8.00	7	0.43
Fine Grading	Rubber Tired Dozers	0	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	1	8.00	225	0.37

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Fine Grading Soil Haul	Graders	0	8.00	187	0.41
Fine Grading Soil Haul	Rubber Tired Dozers	0	8.00	247	0.40
Fine Grading Soil Haul	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	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
Asphalt Demolition	5	13.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demolition Debris Haul	0	0.00	0.00	184.00	14.70	6.90	19.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	7	18.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading Soil Haul	0	0.00	0.00	1,058.00	14.70	6.90	19.00	LD_Mix	HDT_Mix	HHDT
Utility Trenching	8	20.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading Soil Haul	0	0.00	0.00	2,858.00	14.70	6.90	19.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	60.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Asphalt 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					
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**		**0.8379**	**0.8379**		**0.7829**	**0.7829**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

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	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0128	9.4000e-004	0.0138	3.6900e-003	9.0000e-004	4.5800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0482	0.0363	0.4698	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		127.2444	127.2444	3.7000e-003	3.4800e-003	128.3729
Total	**0.0520**	**0.1383**	**0.5045**	**1.6500e-003**	**0.1581**	**1.8700e-003**	**0.1600**	**0.0422**	**1.7600e-003**	**0.0440**		**169.3525**	**169.3525**	**5.1000e-003**	**9.5500e-003**	**172.3259**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**		**0.8379**	**0.8379**		**0.7829**	**0.7829**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

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	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0120	9.4000e-004	0.0129	3.4900e-003	9.0000e-004	4.3800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0482	0.0363	0.4698	1.2600e-003	0.1339	9.3000e-004	0.1349	0.0358	8.6000e-004	0.0366		127.2444	127.2444	3.7000e-003	3.4800e-003	128.3729
Total	**0.0520**	**0.1383**	**0.5045**	**1.6500e-003**	**0.1459**	**1.8700e-003**	**0.1478**	**0.0392**	**1.7600e-003**	**0.0410**		**169.3525**	**169.3525**	**5.1000e-003**	**9.5500e-003**	**172.3259**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Asphalt Demolition Debris Haul - 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					7.8706	0.0000	7.8706	1.1917	0.0000	1.1917			0.0000			0.0000
Off-Road	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**	**7.8706**	**0.0000**	**7.8706**	**1.1917**	**0.0000**	**1.1917**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.1608	6.1465	1.4198	0.0218	0.6120	0.0437	0.6557	0.1678	0.0419	0.2096		2,386.1241	2,386.1241	0.1263	0.3786	2,502.1048
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	0.0000	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
Total	**0.1608**	**6.1465**	**1.4198**	**0.0218**	**0.6120**	**0.0437**	**0.6557**	**0.1678**	**0.0419**	**0.2096**		**2,386.1241**	**2,386.1241**	**0.1263**	**0.3786**	**2,502.1048**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					3.3647	0.0000	3.3647	0.5094	0.0000	0.5094			0.0000			0.0000
Off-Road	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**	**3.3647**	**0.0000**	**3.3647**	**0.5094**	**0.0000**	**0.5094**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.1608	6.1465	1.4198	0.0218	0.5704	0.0437	0.6141	0.1576	0.0419	0.1994		2,386.1241	2,386.1241	0.1263	0.3786	2,502.1048
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	0.0000	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
Total	**0.1608**	**6.1465**	**1.4198**	**0.0218**	**0.5704**	**0.0437**	**0.6141**	**0.1576**	**0.0419**	**0.1994**		**2,386.1241**	**2,386.1241**	**0.1263**	**0.3786**	**2,502.1048**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.4869	16.4656	10.1152	0.0295		0.5998	0.5998		0.5518	0.5518		2,851.0984	2,851.0984	0.9221		2,874.1509
Total	**1.4869**	**16.4656**	**10.1152**	**0.0295**	**1.5908**	**0.5998**	**2.1905**	**0.1718**	**0.5518**	**0.7236**		**2,851.0984**	**2,851.0984**	**0.9221**		**2,874.1509**

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	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0128	9.4000e-004	0.0138	3.6900e-003	9.0000e-004	4.5800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0296	0.0223	0.2891	7.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		78.3043	78.3043	2.2800e-003	2.1400e-003	78.9987
Total	**0.0335**	**0.1243**	**0.3238**	**1.1600e-003**	**0.1022**	**1.5100e-003**	**0.1037**	**0.0274**	**1.4300e-003**	**0.0288**		**120.4124**	**120.4124**	**3.6800e-003**	**8.2100e-003**	**122.9517**

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Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.6801	0.0000	0.6801	0.0734	0.0000	0.0734			0.0000			0.0000
Off-Road	1.4869	16.4656	10.1152	0.0295		0.5998	0.5998		0.5518	0.5518	0.0000	2,851.0984	2,851.0984	0.9221		2,874.1509
Total	**1.4869**	**16.4656**	**10.1152**	**0.0295**	**0.6801**	**0.5998**	**1.2798**	**0.0734**	**0.5518**	**0.6252**	**0.0000**	**2,851.0984**	**2,851.0984**	**0.9221**		**2,874.1509**

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	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0120	9.4000e-004	0.0129	3.4900e-003	9.0000e-004	4.3800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0296	0.0223	0.2891	7.7000e-004	0.0824	5.7000e-004	0.0830	0.0220	5.3000e-004	0.0225		78.3043	78.3043	2.2800e-003	2.1400e-003	78.9987
Total	**0.0335**	**0.1243**	**0.3238**	**1.1600e-003**	**0.0944**	**1.5100e-003**	**0.0959**	**0.0255**	**1.4300e-003**	**0.0269**		**120.4124**	**120.4124**	**3.6800e-003**	**8.2100e-003**	**122.9517**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Rough 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					8.1431	0.0000	8.1431	3.5393	0.0000	3.5393			0.0000			0.0000
Off-Road	2.7387	29.3482	20.1327	0.0490		1.2253	1.2253		1.1272	1.1272		4,739.5873	4,739.5873	1.5329		4,777.9092
Total	**2.7387**	**29.3482**	**20.1327**	**0.0490**	**8.1431**	**1.2253**	**9.3684**	**3.5393**	**1.1272**	**4.6665**		**4,739.5873**	**4,739.5873**	**1.5329**		**4,777.9092**

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	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0128	9.4000e-004	0.0138	3.6900e-003	9.0000e-004	4.5800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0667	0.0502	0.6505	1.7400e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0545		176.1846	176.1846	5.1300e-003	4.8100e-003	177.7470
Total	**0.0706**	**0.1523**	**0.6852**	**2.1300e-003**	**0.2140**	**2.2300e-003**	**0.2162**	**0.0571**	**2.0900e-003**	**0.0591**		**218.2927**	**218.2927**	**6.5300e-003**	**0.0109**	**221.7001**

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Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					3.4812	0.0000	3.4812	1.5130	0.0000	1.5130			0.0000			0.0000
Off-Road	2.7387	29.3482	20.1327	0.0490		1.2253	1.2253		1.1272	1.1272	0.0000	4,739.5873	4,739.5873	1.5329		4,777.9092
Total	**2.7387**	**29.3482**	**20.1327**	**0.0490**	**3.4812**	**1.2253**	**4.7064**	**1.5130**	**1.1272**	**2.6403**	**0.0000**	**4,739.5873**	**4,739.5873**	**1.5329**		**4,777.9092**

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	3.8900e-003	0.1020	0.0348	3.9000e-004	0.0120	9.4000e-004	0.0129	3.4900e-003	9.0000e-004	4.3800e-003		42.1081	42.1081	1.4000e-003	6.0700e-003	43.9531
Worker	0.0667	0.0502	0.6505	1.7400e-003	0.1855	1.2900e-003	0.1867	0.0495	1.1900e-003	0.0507		176.1846	176.1846	5.1300e-003	4.8100e-003	177.7470
Total	**0.0706**	**0.1523**	**0.6852**	**2.1300e-003**	**0.1975**	**2.2300e-003**	**0.1997**	**0.0530**	**2.0900e-003**	**0.0551**		**218.2927**	**218.2927**	**6.5300e-003**	**0.0109**	**221.7001**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Rough Grading Soil Haul - 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					0.0697	0.0000	0.0697	0.0106	0.0000	0.0106			0.0000			0.0000
Off-Road	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**	**0.0697**	**0.0000**	**0.0697**	**0.0106**	**0.0000**	**0.0106**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.3851	14.7260	3.4016	0.0522	1.4662	0.1048	1.5710	0.4020	0.1003	0.5023		5,716.7557	5,716.7557	0.3027	0.9071	5,994.6261
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	0.0000	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
Total	**0.3851**	**14.7260**	**3.4016**	**0.0522**	**1.4662**	**0.1048**	**1.5710**	**0.4020**	**0.1003**	**0.5023**		**5,716.7557**	**5,716.7557**	**0.3027**	**0.9071**	**5,994.6261**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.0298	0.0000	0.0298	4.5100e-003	0.0000	4.5100e-003			0.0000			0.0000
Off-Road	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**	**0.0298**	**0.0000**	**0.0298**	**4.5100e-003**	**0.0000**	**4.5100e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.3851	14.7260	3.4016	0.0522	1.3665	0.1048	1.4713	0.3775	0.1003	0.4778		5,716.7557	5,716.7557	0.3027	0.9071	5,994.6261
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	0.0000	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
Total	**0.3851**	**14.7260**	**3.4016**	**0.0522**	**1.3665**	**0.1048**	**1.4713**	**0.3775**	**0.1003**	**0.4778**		**5,716.7557**	**5,716.7557**	**0.3027**	**0.9071**	**5,994.6261**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Utility Trenching - 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	0.9542	7.5687	5.9861	0.0178		0.3170	0.3170		0.2951	0.2951		1,664.3091	1,664.3091	0.5051		1,676.9377
Total	**0.9542**	**7.5687**	**5.9861**	**0.0178**		**0.3170**	**0.3170**		**0.2951**	**0.2951**		**1,664.3091**	**1,664.3091**	**0.5051**		**1,676.9377**

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	7.7800e-003	0.2040	0.0695	7.8000e-004	0.0256	1.8700e-003	0.0275	7.3800e-003	1.7900e-003	9.1700e-003		84.2163	84.2163	2.8000e-003	0.0122	87.9061
Worker	0.0741	0.0558	0.7227	1.9400e-003	0.2236	1.4300e-003	0.2250	0.0593	1.3200e-003	0.0606		195.7606	195.7606	5.7000e-003	5.3500e-003	197.4967
Total	**0.0819**	**0.2598**	**0.7922**	**2.7200e-003**	**0.2492**	**3.3000e-003**	**0.2525**	**0.0667**	**3.1100e-003**	**0.0698**		**279.9769**	**279.9769**	**8.5000e-003**	**0.0175**	**285.4028**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.9542	7.5687	5.9861	0.0178		0.3170	0.3170		0.2951	0.2951	0.0000	1,664.3091	1,664.3091	0.5051		1,676.9377
Total	**0.9542**	**7.5687**	**5.9861**	**0.0178**		**0.3170**	**0.3170**		**0.2951**	**0.2951**	**0.0000**	**1,664.3091**	**1,664.3091**	**0.5051**		**1,676.9377**

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	7.7800e-003	0.2040	0.0695	7.8000e-004	0.0240	1.8700e-003	0.0259	6.9700e-003	1.7900e-003	8.7700e-003		84.2163	84.2163	2.8000e-003	0.0122	87.9061
Worker	0.0741	0.0558	0.7227	1.9400e-003	0.2061	1.4300e-003	0.2075	0.0550	1.3200e-003	0.0563		195.7606	195.7606	5.7000e-003	5.3500e-003	197.4967
Total	**0.0819**	**0.2598**	**0.7922**	**2.7200e-003**	**0.2300**	**3.3000e-003**	**0.2333**	**0.0620**	**3.1100e-003**	**0.0651**		**279.9769**	**279.9769**	**8.5000e-003**	**0.0175**	**285.4028**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.8 Fine 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4500	3.9516	2.6276	9.2600e-003		0.1412	0.1412		0.1333	0.1333		841.1197	841.1197	0.2389		847.0925
Total	**0.4500**	**3.9516**	**2.6276**	**9.2600e-003**	**0.0000**	**0.1412**	**0.1412**	**0.0000**	**0.1333**	**0.1333**		**841.1197**	**841.1197**	**0.2389**		**847.0925**

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	0.0117	0.3060	0.1043	1.1800e-003	0.0384	2.8100e-003	0.0412	0.0111	2.6900e-003	0.0138		126.3244	126.3244	4.2100e-003	0.0182	131.8592
Worker	0.0556	0.0419	0.5421	1.4500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		146.8205	146.8205	4.2700e-003	4.0100e-003	148.1225
Total	**0.0672**	**0.3479**	**0.6463**	**2.6300e-003**	**0.2061**	**3.8800e-003**	**0.2100**	**0.0555**	**3.6800e-003**	**0.0592**		**273.1449**	**273.1449**	**8.4800e-003**	**0.0222**	**279.9817**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4500	3.9516	2.6276	9.2600e-003		0.1412	0.1412		0.1333	0.1333	0.0000	841.1197	841.1197	0.2389		847.0925
Total	**0.4500**	**3.9516**	**2.6276**	**9.2600e-003**	**0.0000**	**0.1412**	**0.1412**	**0.0000**	**0.1333**	**0.1333**	**0.0000**	**841.1197**	**841.1197**	**0.2389**		**847.0925**

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	0.0117	0.3060	0.1043	1.1800e-003	0.0360	2.8100e-003	0.0388	0.0105	2.6900e-003	0.0132		126.3244	126.3244	4.2100e-003	0.0182	131.8592
Worker	0.0556	0.0419	0.5421	1.4500e-003	0.1546	1.0700e-003	0.1556	0.0413	9.9000e-004	0.0422		146.8205	146.8205	4.2700e-003	4.0100e-003	148.1225
Total	**0.0672**	**0.3479**	**0.6463**	**2.6300e-003**	**0.1905**	**3.8800e-003**	**0.1944**	**0.0517**	**3.6800e-003**	**0.0554**		**273.1449**	**273.1449**	**8.4800e-003**	**0.0222**	**279.9817**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.9 Fine Grading Soil Haul - 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					0.1131	0.0000	0.1131	0.0171	0.0000	0.0171			0.0000			0.0000
Off-Road	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**	**0.1131**	**0.0000**	**0.1131**	**0.0171**	**0.0000**	**0.0171**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.6242	23.8679	5.5133	0.0846	2.3764	0.1699	2.5462	0.6515	0.1625	0.8141		9,265.6831	9,265.6831	0.4906	1.4702	9,716.0537
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	0.0000	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
Total	**0.6242**	**23.8679**	**5.5133**	**0.0846**	**2.3764**	**0.1699**	**2.5462**	**0.6515**	**0.1625**	**0.8141**		**9,265.6831**	**9,265.6831**	**0.4906**	**1.4702**	**9,716.0537**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					0.0484	0.0000	0.0484	7.3200e-003	0.0000	7.3200e-003			0.0000			0.0000
Off-Road	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**	**0.0484**	**0.0000**	**0.0484**	**7.3200e-003**	**0.0000**	**7.3200e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.6242	23.8679	5.5133	0.0846	2.2148	0.1699	2.3847	0.6119	0.1625	0.7744		9,265.6831	9,265.6831	0.4906	1.4702	9,716.0537
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	0.0000	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
Total	**0.6242**	**23.8679**	**5.5133**	**0.0846**	**2.2148**	**0.1699**	**2.3847**	**0.6119**	**0.1625**	**0.7744**		**9,265.6831**	**9,265.6831**	**0.4906**	**1.4702**	**9,716.0537**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.10 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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**		**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

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	5.8300e-003	0.1530	0.0521	5.9000e-004	0.0192	1.4000e-003	0.0206	5.5300e-003	1.3400e-003	6.8800e-003		63.1622	63.1622	2.1000e-003	9.1100e-003	65.9296
Worker	0.2222	0.1675	2.1682	5.8100e-003	0.6707	4.2900e-003	0.6750	0.1779	3.9500e-003	0.1818		587.2819	587.2819	0.0171	0.0160	592.4901
Total	**0.2281**	**0.3205**	**2.2203**	**6.4000e-003**	**0.6899**	**5.6900e-003**	**0.6956**	**0.1834**	**5.2900e-003**	**0.1887**		**650.4441**	**650.4441**	**0.0192**	**0.0252**	**658.4197**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

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	5.8300e-003	0.1530	0.0521	5.9000e-004	0.0180	1.4000e-003	0.0194	5.2300e-003	1.3400e-003	6.5700e-003		63.1622	63.1622	2.1000e-003	9.1100e-003	65.9296
Worker	0.2222	0.1675	2.1682	5.8100e-003	0.6182	4.2900e-003	0.6225	0.1650	3.9500e-003	0.1689		587.2819	587.2819	0.0171	0.0160	592.4901
Total	**0.2281**	**0.3205**	**2.2203**	**6.4000e-003**	**0.6362**	**5.6900e-003**	**0.6419**	**0.1702**	**5.2900e-003**	**0.1755**		**650.4441**	**650.4441**	**0.0192**	**0.0252**	**658.4197**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.10 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	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**		**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

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	3.3400e-003	0.1206	0.0460	5.6000e-004	0.0192	5.8000e-004	0.0198	5.5300e-003	5.6000e-004	6.0900e-003		60.1861	60.1861	2.0000e-003	8.6600e-003	62.8173
Worker	0.2063	0.1479	1.9931	5.6200e-003	0.6707	4.0300e-003	0.6747	0.1779	3.7100e-003	0.1816		568.4122	568.4122	0.0153	0.0148	573.2034
Total	**0.2096**	**0.2684**	**2.0391**	**6.1800e-003**	**0.6899**	**4.6100e-003**	**0.6945**	**0.1834**	**4.2700e-003**	**0.1877**		**628.5983**	**628.5983**	**0.0173**	**0.0235**	**636.0208**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**	**0.0000**	**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

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	3.3400e-003	0.1206	0.0460	5.6000e-004	0.0180	5.8000e-004	0.0186	5.2300e-003	5.6000e-004	5.7900e-003		60.1861	60.1861	2.0000e-003	8.6600e-003	62.8173
Worker	0.2063	0.1479	1.9931	5.6200e-003	0.6182	4.0300e-003	0.6222	0.1650	3.7100e-003	0.1687		568.4122	568.4122	0.0153	0.0148	573.2034
Total	**0.2096**	**0.2684**	**2.0391**	**6.1800e-003**	**0.6362**	**4.6100e-003**	**0.6408**	**0.1702**	**4.2700e-003**	**0.1745**		**628.5983**	**628.5983**	**0.0173**	**0.0235**	**636.0208**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.11 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	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003		1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.1425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0227**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**		**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

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	0.0516	0.0370	0.4983	1.4100e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		142.1030	142.1030	3.8300e-003	3.7000e-003	143.3009
Total	**0.0516**	**0.0370**	**0.4983**	**1.4100e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**142.1030**	**142.1030**	**3.8300e-003**	**3.7000e-003**	**143.3009**

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Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003	0.0000	1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.1425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0227**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**	**0.0000**	**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

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	0.0516	0.0370	0.4983	1.4100e-003	0.1546	1.0100e-003	0.1556	0.0413	9.3000e-004	0.0422		142.1030	142.1030	3.8300e-003	3.7000e-003	143.3009
Total	**0.0516**	**0.0370**	**0.4983**	**1.4100e-003**	**0.1546**	**1.0100e-003**	**0.1556**	**0.0413**	**9.3000e-004**	**0.0422**		**142.1030**	**142.1030**	**3.8300e-003**	**3.7000e-003**	**143.3009**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.12 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	37.5429					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	**37.7346**	**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	0.0413	0.0296	0.3986	1.1200e-003	0.1341	8.1000e-004	0.1349	0.0356	7.4000e-004	0.0363		113.6824	113.6824	3.0700e-003	2.9600e-003	114.6407
Total	**0.0413**	**0.0296**	**0.3986**	**1.1200e-003**	**0.1341**	**8.1000e-004**	**0.1349**	**0.0356**	**7.4000e-004**	**0.0363**		**113.6824**	**113.6824**	**3.0700e-003**	**2.9600e-003**	**114.6407**

Washington and Rosemead Mixed-Use Project Mitigated Construction Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	37.5429					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	**37.7346**	**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	0.0413	0.0296	0.3986	1.1200e-003	0.1236	8.1000e-004	0.1244	0.0330	7.4000e-004	0.0337		113.6824	113.6824	3.0700e-003	2.9600e-003	114.6407
Total	**0.0413**	**0.0296**	**0.3986**	**1.1200e-003**	**0.1236**	**8.1000e-004**	**0.1244**	**0.0330**	**7.4000e-004**	**0.0337**		**113.6824**	**113.6824**	**3.0700e-003**	**2.9600e-003**	**114.6407**

CalEEMod Operations Model

Washington and Rosemead Mixed Use Project Operations Run - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Washington and Rosemead Mixed Use Project Operations Run

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	190.00	1000sqft	0.34	190,000.00	0
Other Asphalt Surfaces	45.00	1000sqft	1.03	45,000.00	0
Other Non-Asphalt Surfaces	21.00	1000sqft	0.48	21,000.00	0
High Turnover (Sit Down Restaurant)	2.87	1000sqft	0.00	2,865.00	0
Recreational Swimming Pool	17.50	1000sqft	0.00	17,500.00	0
Apartments Mid Rise	255.00	Dwelling Unit	0.99	260,220.00	729
Regional Shopping Center	2.87	1000sqft	0.00	2,865.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2023
Utility Company	Pico Rivera Innovative Municipal Energy				
CO2 Intensity (lb/MWhr)	683.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - based on data provided by the applicant

Construction Phase -

Vehicle Trips - residential VMT provided by LLG, no trips associated with the swimming pool, assuming sat/sun trips are the same as weekday trips

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

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Woodstoves - assumes 3 barbecue grills operating for 3 hours each on weekends

Area Coating - residential area includes swimming pool, non-residential includes coating of the parking structure

Energy Use -

Water And Wastewater - Assumes 100% aerobic treatment.

Water Mitigation -

Fleet Mix - see fleet mix adjustment for apartments in assumptions file

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	11615	97865
tblAreaCoating	Area_Nonresidential_Interior	34845	293595
tblAreaCoating	Area_Parking	15360	11400
tblAreaCoating	Area_Residential_Exterior	175649	187461
tblAreaCoating	Area_Residential_Interior	526946	562383
tblFireplaces	FireplaceDayYear	25.00	104.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	216.75	3.00
tblFireplaces	NumberNoFireplace	25.50	252.00
tblFireplaces	NumberWood	12.75	0.00
tblFleetMix	HHD	8.0120e-003	1.5490e-003
tblFleetMix	LDA	0.54	0.64
tblFleetMix	LDT1	0.06	0.07
tblFleetMix	LDT2	0.19	0.22
tblFleetMix	LHD1	0.02	4.4630e-003
tblFleetMix	LHD2	6.0830e-003	1.1760e-003
tblFleetMix	MCY	0.02	0.03
tblFleetMix	MDV	0.13	0.02
tblFleetMix	MH	3.3740e-003	6.5200e-004
tblFleetMix	MHD	0.01	2.0250e-003
tblFleetMix	OBUS	9.2500e-004	0.00
tblFleetMix	SBUS	6.9800e-004	1.3500e-004

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tblFleetMix	UBUS	6.1100e-004	0.00
tblLandUse	LandUseSquareFeet	2,870.00	2,865.00
tblLandUse	LandUseSquareFeet	255,000.00	260,220.00
tblLandUse	LandUseSquareFeet	2,870.00	2,865.00
tblLandUse	LotAcreage	4.36	0.34
tblLandUse	LotAcreage	0.07	0.00
tblLandUse	LotAcreage	0.40	0.00
tblLandUse	LotAcreage	6.71	0.99
tblLandUse	LotAcreage	0.07	0.00
tblSolidWaste	SolidWasteGenerationRate	34.15	32.73
tblSolidWaste	SolidWasteGenerationRate	99.75	76.95
tblSolidWaste	SolidWasteGenerationRate	3.01	2.89
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	20.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	HO_TL	8.70	10.08
tblVehicleTrips	HS_TL	5.90	10.08
tblVehicleTrips	HW_TL	14.70	10.08
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	43.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	37.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	ST_TR	4.91	4.57
tblVehicleTrips	ST_TR	122.40	110.47
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	ST_TR	46.12	39.27
tblVehicleTrips	SU_TR	4.09	4.57

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tblVehicleTrips	SU_TR	142.64	110.47
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	SU_TR	21.10	39.27
tblVehicleTrips	WD_TR	5.44	4.57
tblVehicleTrips	WD_TR	112.18	110.47
tblVehicleTrips	WD_TR	28.82	0.00
tblVehicleTrips	WD_TR	37.75	39.27
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	871,141.75	834,717.71
tblWater	IndoorWaterUseRate	1,035,005.02	798,432.44
tblWater	IndoorWaterUseRate	212,588.14	203,699.43
tblWater	OutdoorWaterUseRate	55,604.79	53,279.85
tblWater	OutdoorWaterUseRate	634,357.92	489,361.82
tblWater	OutdoorWaterUseRate	130,295.95	124,848.04
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	12.75	0.00
tblWoodstoves	NumberNoncatalytic	12.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

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2.0 Emissions Summary

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	1.3009	0.0329	2.6350	1.6000e-004		0.0148	0.0148		0.0148	0.0148	0.0000	7.2995	7.2995	4.2100e-003	5.0000e-005	7.4210
Energy	0.0216	0.1861	0.0927	1.1800e-003		0.0149	0.0149		0.0149	0.0149	0.0000	888.5564	888.5564	0.0367	7.8600e-003	891.8152
Mobile	0.9478	0.8135	9.7565	0.0188	2.1191	0.0136	2.1327	0.5632	0.0126	0.5758	0.0000	1,751.0031	1,751.0031	0.1199	0.0658	1,773.5962
Waste						0.0000	0.0000		0.0000	0.0000	46.6615	0.0000	46.6615	2.7576	0.0000	115.6020
Water						0.0000	0.0000		0.0000	0.0000	6.5280	112.9416	119.4697	0.0279	0.0149	124.5950
Total	**2.2703**	**1.0325**	**12.4841**	**0.0202**	**2.1191**	**0.0433**	**2.1624**	**0.5632**	**0.0422**	**0.6054**	**53.1896**	**2,759.8006**	**2,812.9902**	**2.9464**	**0.0885**	**2,913.0293**

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	1.3009	0.0329	2.6350	1.6000e-004		0.0148	0.0148		0.0148	0.0148	0.0000	7.2995	7.2995	4.2100e-003	5.0000e-005	7.4210
Energy	0.0216	0.1861	0.0927	1.1800e-003		0.0149	0.0149		0.0149	0.0149	0.0000	888.5564	888.5564	0.0367	7.8600e-003	891.8152
Mobile	0.9478	0.8135	9.7565	0.0188	2.1191	0.0136	2.1327	0.5632	0.0126	0.5758	0.0000	1,751.0031	1,751.0031	0.1199	0.0658	1,773.5962
Waste						0.0000	0.0000		0.0000	0.0000	46.6615	0.0000	46.6615	2.7576	0.0000	115.6020
Water						0.0000	0.0000		0.0000	0.0000	5.2224	95.6914	100.9139	0.0226	0.0119	105.0298
Total	**2.2703**	**1.0325**	**12.4841**	**0.0202**	**2.1191**	**0.0433**	**2.1624**	**0.5632**	**0.0422**	**0.6054**	**51.8840**	**2,742.5504**	**2,794.4344**	**2.9410**	**0.0856**	**2,893.4642**

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	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**	**2.45**	**0.63**	**0.66**	**0.18**	**3.32**	**0.67**

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	0.9478	0.8135	9.7565	0.0188	2.1191	0.0136	2.1327	0.5632	0.0126	0.5758	0.0000	1,751.0031	1,751.0031	0.1199	0.0658	1,773.5962
Unmitigated	0.9478	0.8135	9.7565	0.0188	2.1191	0.0136	2.1327	0.5632	0.0126	0.5758	0.0000	1,751.0031	1,751.0031	0.1199	0.0658	1,773.5962

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,165.35	1,165.35	1165.35	4,275,809	4,275,809
Enclosed Parking with Elevator	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	317.05	317.05	317.05	1,016,956	1,016,956
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Regional Shopping Center	112.70	112.70	112.70	387,748	387,748
Total	1,595.10	1,595.10	1,595.10	5,680,513	5,680,513

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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
Apartments Mid Rise	10.08	10.08	10.08	40.20	19.20	40.60	100	0	0
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
High Turnover (Sit Down Restaurant)	16.60	8.40	6.90	8.50	72.50	19.00	100	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.644264	0.074319	0.221712	0.020000	0.004463	0.001176	0.002025	0.001549	0.000000	0.000000	0.029705	0.000135	0.000652
Enclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
High Turnover (Sit Down Restaurant)	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Other Asphalt Surfaces	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Other Non-Asphalt Surfaces	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Recreational Swimming Pool	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Regional Shopping Center	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

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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	675.2855	675.2855	0.0326	3.9500e-003	677.2769
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	675.2855	675.2855	0.0326	3.9500e-003	677.2769
NaturalGas Mitigated	0.0216	0.1861	0.0927	1.1800e-003		0.0149	0.0149		0.0149	0.0149	0.0000	213.2709	213.2709	4.0900e-003	3.9100e-003	214.5383
NaturalGas Unmitigated	0.0216	0.1861	0.0927	1.1800e-003		0.0149	0.0149		0.0149	0.0149	0.0000	213.2709	213.2709	4.0900e-003	3.9100e-003	214.5383

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					
Apartments Mid Rise	3.33198e+006	0.0180	0.1535	0.0653	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	177.8072	177.8072	3.4100e-003	3.2600e-003	178.8638
Enclosed Parking with Elevator	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
High Turnover (Sit Down Restaurant)	659895	3.5600e-003	0.0324	0.0272	1.9000e-004		2.4600e-003	2.4600e-003		2.4600e-003	2.4600e-003	0.0000	35.2145	35.2145	6.7000e-004	6.5000e-004	35.4238
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
Other Non-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
Recreational Swimming Pool	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
Regional Shopping Center	4669.95	3.0000e-005	2.3000e-004	1.9000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2492	0.2492	0.0000	0.0000	0.2507
Total		**0.0216**	**0.1861**	**0.0927**	**1.1700e-003**		**0.0149**	**0.0149**		**0.0149**	**0.0149**	**0.0000**	**213.2709**	**213.2709**	**4.0800e-003**	**3.9100e-003**	**214.5383**

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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					
Apartments Mid Rise	3.33198e+006	0.0180	0.1535	0.0653	9.8000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	177.8072	177.8072	3.4100e-003	3.2600e-003	178.8638
Enclosed Parking with Elevator	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
High Turnover (Sit Down Restaurant)	659895	3.5600e-003	0.0324	0.0272	1.9000e-004		2.4600e-003	2.4600e-003		2.4600e-003	2.4600e-003	0.0000	35.2145	35.2145	6.7000e-004	6.5000e-004	35.4238
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
Other Non-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
Recreational Swimming Pool	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
Regional Shopping Center	4669.95	3.0000e-005	2.3000e-004	1.9000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2492	0.2492	0.0000	0.0000	0.2507
Total		**0.0216**	**0.1861**	**0.0927**	**1.1700e-003**		**0.0149**	**0.0149**		**0.0149**	**0.0149**	**0.0000**	**213.2709**	**213.2709**	**4.0800e-003**	**3.9100e-003**	**214.5383**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	981584	304.5347	0.0147	1.7800e-003	305.4327
Enclosed Parking with Elevator	1.0336e+006	320.6725	0.0155	1.8800e-003	321.6181
High Turnover (Sit Down Restaurant)	123969	38.4610	1.8600e-003	2.2000e-004	38.5744
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	37445.6	11.6174	5.6000e-004	7.0000e-005	11.6517
Total		**675.2855**	**0.0326**	**3.9500e-003**	**677.2769**

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Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	981584	304.5347	0.0147	1.7800e-003	305.4327
Enclosed Parking with Elevator	1.0336e+006	320.6725	0.0155	1.8800e-003	321.6181
High Turnover (Sit Down Restaurant)	123969	38.4610	1.8600e-003	2.2000e-004	38.5744
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	37445.6	11.6174	5.6000e-004	7.0000e-005	11.6517
Total		**675.2855**	**0.0326**	**3.9500e-003**	**677.2769**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	1.3009	0.0329	2.6350	1.6000e-004		0.0148	0.0148		0.0148	0.0148	0.0000	7.2995	7.2995	4.2100e-003	5.0000e-005	7.4210
Unmitigated	1.3009	0.0329	2.6350	1.6000e-004		0.0148	0.0148		0.0148	0.0148	0.0000	7.2995	7.2995	4.2100e-003	5.0000e-005	7.4210

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.1803					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0408					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.0000e-004	2.5900e-003	1.1000e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	2.9969	2.9969	6.0000e-005	5.0000e-005	3.0147
Landscaping	0.0796	0.0304	2.6339	1.4000e-004		0.0146	0.0146		0.0146	0.0146	0.0000	4.3025	4.3025	4.1500e-003	0.0000	4.4063
Total	**1.3009**	**0.0329**	**2.6350**	**1.6000e-004**		**0.0148**	**0.0148**		**0.0148**	**0.0148**	**0.0000**	**7.2995**	**7.2995**	**4.2100e-003**	**5.0000e-005**	**7.4210**

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	0.1803					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0408					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.0000e-004	2.5900e-003	1.1000e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	2.9969	2.9969	6.0000e-005	5.0000e-005	3.0147
Landscaping	0.0796	0.0304	2.6339	1.4000e-004		0.0146	0.0146		0.0146	0.0146	0.0000	4.3025	4.3025	4.1500e-003	0.0000	4.4063
Total	**1.3009**	**0.0329**	**2.6350**	**1.6000e-004**		**0.0148**	**0.0148**		**0.0148**	**0.0148**	**0.0000**	**7.2995**	**7.2995**	**4.2100e-003**	**5.0000e-005**	**7.4210**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	100.9139	0.0226	0.0119	105.0298
Unmitigated	119.4697	0.0279	0.0149	124.5950

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	16.6143 / 10.4742	109.0987	0.0252	0.0134	113.7182
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	0.834718 / 0.0532798	3.8510	1.1900e-003	6.6000e-004	4.0783
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.798432 / 0.489362	5.1947	1.2100e-003	6.4000e-004	5.4166
Regional Shopping Center	0.203699 / 0.124848	1.3253	3.1000e-004	1.6000e-004	1.3819
Total		**119.4697**	**0.0279**	**0.0149**	**124.5950**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	13.2914 / 9.83529	92.2973	0.0204	0.0107	96.0077
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	0.667774 / 0.0500298	3.1063	9.5000e-004	5.3000e-004	3.2882
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.638746 / 0.459511	4.3902	9.8000e-004	5.2000e-004	4.5684
Regional Shopping Center	0.16296 / 0.117232	1.1201	2.5000e-004	1.3000e-004	1.1655
Total		**100.9139**	**0.0226**	**0.0119**	**105.0298**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	46.6615	2.7576	0.0000	115.6020
Unmitigated	46.6615	2.7576	0.0000	115.6020

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	117.3	23.8108	1.4072	0.0000	58.9904
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	32.73	6.6439	0.3926	0.0000	16.4600
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	76.95	15.6202	0.9231	0.0000	38.6983
Regional Shopping Center	2.89	0.5866	0.0347	0.0000	1.4534
Total		**46.6615**	**2.7576**	**0.0000**	**115.6020**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	117.3	23.8108	1.4072	0.0000	58.9904
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	32.73	6.6439	0.3926	0.0000	16.4600
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	76.95	15.6202	0.9231	0.0000	38.6983
Regional Shopping Center	2.89	0.5866	0.0347	0.0000	1.4534
Total		**46.6615**	**2.7576**	**0.0000**	**115.6020**

Washington and Rosemead Mixed Use Project Operations Run - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

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

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Washington and Rosemead Mixed Use Project Operations Run

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	190.00	1000sqft	0.34	190,000.00	0
Other Asphalt Surfaces	45.00	1000sqft	1.03	45,000.00	0
Other Non-Asphalt Surfaces	21.00	1000sqft	0.48	21,000.00	0
High Turnover (Sit Down Restaurant)	2.87	1000sqft	0.00	2,865.00	0
Recreational Swimming Pool	17.50	1000sqft	0.00	17,500.00	0
Apartments Mid Rise	255.00	Dwelling Unit	0.99	260,220.00	729
Regional Shopping Center	2.87	1000sqft	0.00	2,865.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2023
Utility Company	Pico Rivera Innovative Municipal Energy				
CO2 Intensity (lb/MWhr)	683.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - based on data provided by the applicant

Construction Phase -

Vehicle Trips - residential VMT provided by LLG, no trips associated with the swimming pool, assuming sat/sun trips are the same as weekday trips

Vehicle Emission Factors -

Washington and Rosemead Mixed Use Project Operations Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - assumes 3 barbecue grills operating for 3 hours each on weekends

Area Coating - residential area includes swimming pool, non-residential includes coating of the parking structure

Energy Use -

Water And Wastewater - Assumes 100% aerobic treatment.

Water Mitigation -

Fleet Mix - see fleet mix adjustment for apartments in assumptions file

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	11615	97865
tblAreaCoating	Area_Nonresidential_Interior	34845	293595
tblAreaCoating	Area_Parking	15360	11400
tblAreaCoating	Area_Residential_Exterior	175649	187461
tblAreaCoating	Area_Residential_Interior	526946	562383
tblFireplaces	FireplaceDayYear	25.00	104.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	216.75	3.00
tblFireplaces	NumberNoFireplace	25.50	252.00
tblFireplaces	NumberWood	12.75	0.00
tblFleetMix	HHD	8.0120e-003	1.5490e-003
tblFleetMix	LDA	0.54	0.64
tblFleetMix	LDT1	0.06	0.07
tblFleetMix	LDT2	0.19	0.22
tblFleetMix	LHD1	0.02	4.4630e-003
tblFleetMix	LHD2	6.0830e-003	1.1760e-003
tblFleetMix	MCY	0.02	0.03
tblFleetMix	MDV	0.13	0.02
tblFleetMix	MH	3.3740e-003	6.5200e-004

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	MHD	0.01	2.0250e-003
tblFleetMix	OBUS	9.2500e-004	0.00
tblFleetMix	SBUS	6.9800e-004	1.3500e-004
tblFleetMix	UBUS	6.1100e-004	0.00
tblLandUse	LandUseSquareFeet	2,870.00	2,865.00
tblLandUse	LandUseSquareFeet	255,000.00	260,220.00
tblLandUse	LandUseSquareFeet	2,870.00	2,865.00
tblLandUse	LotAcreage	4.36	0.34
tblLandUse	LotAcreage	0.07	0.00
tblLandUse	LotAcreage	0.40	0.00
tblLandUse	LotAcreage	6.71	0.99
tblLandUse	LotAcreage	0.07	0.00
tblSolidWaste	SolidWasteGenerationRate	34.15	32.73
tblSolidWaste	SolidWasteGenerationRate	99.75	76.95
tblSolidWaste	SolidWasteGenerationRate	3.01	2.89
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	20.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	HO_TL	8.70	10.08
tblVehicleTrips	HS_TL	5.90	10.08
tblVehicleTrips	HW_TL	14.70	10.08
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	43.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	37.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	ST_TR	4.91	4.57

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	122.40	110.47
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	ST_TR	46.12	39.27
tblVehicleTrips	SU_TR	4.09	4.57
tblVehicleTrips	SU_TR	142.64	110.47
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	SU_TR	21.10	39.27
tblVehicleTrips	WD_TR	5.44	4.57
tblVehicleTrips	WD_TR	112.18	110.47
tblVehicleTrips	WD_TR	28.82	0.00
tblVehicleTrips	WD_TR	37.75	39.27
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	871,141.75	834,717.71
tblWater	IndoorWaterUseRate	1,035,005.02	798,432.44
tblWater	IndoorWaterUseRate	212,588.14	203,699.43
tblWater	OutdoorWaterUseRate	55,604.79	53,279.85
tblWater	OutdoorWaterUseRate	634,357.92	489,361.82
tblWater	OutdoorWaterUseRate	130,295.95	124,848.04
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	12.75	0.00
tblWoodstoves	NumberNoncatalytic	12.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

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	7.3331	0.2926	21.0922	1.4300e-003		0.1206	0.1206		0.1206	0.1206	0.0000	101.4714	101.4714	0.0378	1.1600e-003	102.7636
Energy	0.1181	1.0198	0.5079	6.4400e-003		0.0816	0.0816		0.0816	0.0816		1,288.1695	1,288.1695	0.0247	0.0236	1,295.8244
Mobile	5.3744	4.0206	54.3814	0.1073	11.8768	0.0748	11.9515	3.1517	0.0691	3.2208		11,007.4857	11,007.4857	0.7081	0.3733	11,136.4293
Total	**12.8256**	**5.3330**	**75.9815**	**0.1152**	**11.8768**	**0.2769**	**12.1537**	**3.1517**	**0.2713**	**3.4229**	**0.0000**	**12,397.1265**	**12,397.1265**	**0.7706**	**0.3981**	**12,535.0173**

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	7.3331	0.2926	21.0922	1.4300e-003		0.1206	0.1206		0.1206	0.1206	0.0000	101.4714	101.4714	0.0378	1.1600e-003	102.7636
Energy	0.1181	1.0198	0.5079	6.4400e-003		0.0816	0.0816		0.0816	0.0816		1,288.1695	1,288.1695	0.0247	0.0236	1,295.8244
Mobile	5.3744	4.0206	54.3814	0.1073	11.8768	0.0748	11.9515	3.1517	0.0691	3.2208		11,007.4857	11,007.4857	0.7081	0.3733	11,136.4293
Total	**12.8256**	**5.3330**	**75.9815**	**0.1152**	**11.8768**	**0.2769**	**12.1537**	**3.1517**	**0.2713**	**3.4229**	**0.0000**	**12,397.1265**	**12,397.1265**	**0.7706**	**0.3981**	**12,535.0173**

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	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

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	5.3744	4.0206	54.3814	0.1073	11.8768	0.0748	11.9515	3.1517	0.0691	3.2208		11,007.485	11,007.485	0.7081	0.3733	11,136.429
Unmitigated	5.3744	4.0206	54.3814	0.1073	11.8768	0.0748	11.9515	3.1517	0.0691	3.2208		11,007.485	11,007.485	0.7081	0.3733	11,136.429

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,165.35	1,165.35	1165.35	4,275,809	4,275,809
Enclosed Parking with Elevator	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	317.05	317.05	317.05	1,016,956	1,016,956
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Regional Shopping Center	112.70	112.70	112.70	387,748	387,748
Total	1,595.10	1,595.10	1,595.10	5,680,513	5,680,513

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
Apartments Mid Rise	10.08	10.08	10.08	40.20	19.20	40.60	100	0	0
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	100	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	100	0	0

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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
Apartments Mid Rise	0.644264	0.074319	0.221712	0.020000	0.004463	0.001176	0.002025	0.001549	0.000000	0.000000	0.029705	0.000135	0.000652
Enclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
High Turnover (Sit Down Restaurant)	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Other Asphalt Surfaces	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Other Non-Asphalt Surfaces	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Recreational Swimming Pool	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Regional Shopping Center	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

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	0.1181	1.0198	0.5079	6.4400e-003		0.0816	0.0816		0.0816	0.0816		1,288.1695	1,288.1695	0.0247	0.0236	1,295.8244
NaturalGas Unmitigated	0.1181	1.0198	0.5079	6.4400e-003		0.0816	0.0816		0.0816	0.0816		1,288.1695	1,288.1695	0.0247	0.0236	1,295.8244

Washington and Rosemead Mixed Use Project Operations Run - Los Angeles-South Coast County, Summer

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					
Apartments Mid Rise	9128.71	0.0985	0.8413	0.3580	5.3700e-003		0.0680	0.0680		0.0680	0.0680		1,073.9663	1,073.9663	0.0206	0.0197	1,080.3484
Enclosed Parking with Elevator	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
High Turnover (Sit Down Restaurant)	1807.93	0.0195	0.1773	0.1489	1.0600e-003		0.0135	0.0135		0.0135	0.0135		212.6980	212.6980	4.0800e-003	3.9000e-003	213.9619
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
Other Non-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
Recreational Swimming Pool	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
Regional Shopping Center	12.7944	1.4000e-004	1.2500e-003	1.0500e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.5052	1.5052	3.0000e-005	3.0000e-005	1.5142
Total		**0.1181**	**1.0198**	**0.5079**	**6.4400e-003**		**0.0816**	**0.0816**		**0.0816**	**0.0816**		**1,288.1695**	**1,288.1695**	**0.0247**	**0.0236**	**1,295.8245**

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					
Apartments Mid Rise	9.12871	0.0985	0.8413	0.3580	5.3700e-003		0.0680	0.0680		0.0680	0.0680		1,073.9663	1,073.9663	0.0206	0.0197	1,080.3484
Enclosed Parking with Elevator	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
High Turnover (Sit Down Restaurant)	1.80793	0.0195	0.1773	0.1489	1.0600e-003		0.0135	0.0135		0.0135	0.0135		212.6980	212.6980	4.0800e-003	3.9000e-003	213.9619
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
Other Non-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
Recreational Swimming Pool	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
Regional Shopping Center	0.0127944	1.4000e-004	1.2500e-003	1.0500e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.5052	1.5052	3.0000e-005	3.0000e-005	1.5142
Total		**0.1181**	**1.0198**	**0.5079**	**6.4400e-003**		**0.0816**	**0.0816**		**0.0816**	**0.0816**		**1,288.1695**	**1,288.1695**	**0.0247**	**0.0236**	**1,295.8245**

Washington and Rosemead Mixed Use Project Operations Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.0 Area Detail

6.1 Mitigation Measures Area

	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	7.3331	0.2926	21.0922	1.4300e-003		0.1206	0.1206		0.1206	0.1206	0.0000	101.4714	101.4714	0.0378	1.1600e-003	102.7636
Unmitigated	7.3331	0.2926	21.0922	1.4300e-003		0.1206	0.1206		0.1206	0.1206	0.0000	101.4714	101.4714	0.0378	1.1600e-003	102.7636

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	0.9877					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.7030					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	5.8200e-003	0.0498	0.0212	3.2000e-004		4.0200e-003	4.0200e-003		4.0200e-003	4.0200e-003	0.0000	63.5294	63.5294	1.2200e-003	1.1600e-003	63.9069
Landscaping	0.6366	0.2428	21.0710	1.1100e-003		0.1166	0.1166		0.1166	0.1166		37.9420	37.9420	0.0366		38.8566
Total	**7.3331**	**0.2926**	**21.0922**	**1.4300e-003**		**0.1206**	**0.1206**		**0.1206**	**0.1206**	**0.0000**	**101.4714**	**101.4714**	**0.0378**	**1.1600e-003**	**102.7636**

Washington and Rosemead Mixed Use Project Operations Run - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.9877					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.7030					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	5.8200e-003	0.0498	0.0212	3.2000e-004		4.0200e-003	4.0200e-003		4.0200e-003	4.0200e-003	0.0000	63.5294	63.5294	1.2200e-003	1.1600e-003	63.9069
Landscaping	0.6366	0.2428	21.0710	1.1100e-003		0.1166	0.1166		0.1166	0.1166		37.9420	37.9420	0.0366		38.8566
Total	**7.3331**	**0.2926**	**21.0922**	**1.4300e-003**		**0.1206**	**0.1206**		**0.1206**	**0.1206**	**0.0000**	**101.4714**	**101.4714**	**0.0378**	**1.1600e-003**	**102.7636**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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

Washington and Rosemead Mixed Use Project Operations Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Washington and Rosemead Mixed Use Project Operations Run

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	190.00	1000sqft	0.34	190,000.00	0
Other Asphalt Surfaces	45.00	1000sqft	1.03	45,000.00	0
Other Non-Asphalt Surfaces	21.00	1000sqft	0.48	21,000.00	0
High Turnover (Sit Down Restaurant)	2.87	1000sqft	0.00	2,865.00	0
Recreational Swimming Pool	17.50	1000sqft	0.00	17,500.00	0
Apartments Mid Rise	255.00	Dwelling Unit	0.99	260,220.00	729
Regional Shopping Center	2.87	1000sqft	0.00	2,865.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2023
Utility Company	Pico Rivera Innovative Municipal Energy				
CO2 Intensity (lb/MWhr)	683.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - based on data provided by the applicant

Construction Phase -

Vehicle Trips - residential VMT provided by LLG, no trips associated with the swimming pool, assuming sat/sun trips are the same as weekday trips

Vehicle Emission Factors -

Washington and Rosemead Mixed Use Project Operations Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - assumes 3 barbecue grills operating for 3 hours each on weekends

Area Coating - residential area includes swimming pool, non-residential includes coating of the parking structure

Energy Use -

Water And Wastewater - Assumes 100% aerobic treatment.

Water Mitigation -

Fleet Mix - see fleet mix adjustment for apartments in assumptions file

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	11615	97865
tblAreaCoating	Area_Nonresidential_Interior	34845	293595
tblAreaCoating	Area_Parking	15360	11400
tblAreaCoating	Area_Residential_Exterior	175649	187461
tblAreaCoating	Area_Residential_Interior	526946	562383
tblFireplaces	FireplaceDayYear	25.00	104.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	216.75	3.00
tblFireplaces	NumberNoFireplace	25.50	252.00
tblFireplaces	NumberWood	12.75	0.00
tblFleetMix	HHD	8.0120e-003	1.5490e-003
tblFleetMix	LDA	0.54	0.64
tblFleetMix	LDT1	0.06	0.07
tblFleetMix	LDT2	0.19	0.22
tblFleetMix	LHD1	0.02	4.4630e-003
tblFleetMix	LHD2	6.0830e-003	1.1760e-003
tblFleetMix	MCY	0.02	0.03
tblFleetMix	MDV	0.13	0.02
tblFleetMix	MH	3.3740e-003	6.5200e-004

Washington and Rosemead Mixed Use Project Operations Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	MHD	0.01	2.0250e-003
tblFleetMix	OBUS	9.2500e-004	0.00
tblFleetMix	SBUS	6.9800e-004	1.3500e-004
tblFleetMix	UBUS	6.1100e-004	0.00
tblLandUse	LandUseSquareFeet	2,870.00	2,865.00
tblLandUse	LandUseSquareFeet	255,000.00	260,220.00
tblLandUse	LandUseSquareFeet	2,870.00	2,865.00
tblLandUse	LotAcreage	4.36	0.34
tblLandUse	LotAcreage	0.07	0.00
tblLandUse	LotAcreage	0.40	0.00
tblLandUse	LotAcreage	6.71	0.99
tblLandUse	LotAcreage	0.07	0.00
tblSolidWaste	SolidWasteGenerationRate	34.15	32.73
tblSolidWaste	SolidWasteGenerationRate	99.75	76.95
tblSolidWaste	SolidWasteGenerationRate	3.01	2.89
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	20.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	HO_TL	8.70	10.08
tblVehicleTrips	HS_TL	5.90	10.08
tblVehicleTrips	HW_TL	14.70	10.08
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	43.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	37.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	ST_TR	4.91	4.57

Washington and Rosemead Mixed Use Project Operations Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	122.40	110.47
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	ST_TR	46.12	39.27
tblVehicleTrips	SU_TR	4.09	4.57
tblVehicleTrips	SU_TR	142.64	110.47
tblVehicleTrips	SU_TR	13.60	0.00
tblVehicleTrips	SU_TR	21.10	39.27
tblVehicleTrips	WD_TR	5.44	4.57
tblVehicleTrips	WD_TR	112.18	110.47
tblVehicleTrips	WD_TR	28.82	0.00
tblVehicleTrips	WD_TR	37.75	39.27
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	871,141.75	834,717.71
tblWater	IndoorWaterUseRate	1,035,005.02	798,432.44
tblWater	IndoorWaterUseRate	212,588.14	203,699.43
tblWater	OutdoorWaterUseRate	55,604.79	53,279.85
tblWater	OutdoorWaterUseRate	634,357.92	489,361.82
tblWater	OutdoorWaterUseRate	130,295.95	124,848.04
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

Washington and Rosemead Mixed Use Project Operations Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	12.75	0.00
tblWoodstoves	NumberNoncatalytic	12.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

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	7.3331	0.2926	21.0922	1.4300e-003		0.1206	0.1206		0.1206	0.1206	0.0000	101.4714	101.4714	0.0378	1.1600e-003	102.7636
Energy	0.1181	1.0198	0.5079	6.4400e-003		0.0816	0.0816		0.0816	0.0816		1,288.1695	1,288.1695	0.0247	0.0236	1,295.8244
Mobile	5.2945	4.3965	53.0972	0.1021	11.8768	0.0748	11.9516	3.1517	0.0691	3.2208		10,475.0016	10,475.0016	0.7304	0.3948	10,610.8969
Total	**12.7457**	**5.7088**	**74.6973**	**0.1100**	**11.8768**	**0.2770**	**12.1537**	**3.1517**	**0.2713**	**3.4230**	**0.0000**	**11,864.6425**	**11,864.6425**	**0.7928**	**0.4195**	**12,009.4849**

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	7.3331	0.2926	21.0922	1.4300e-003		0.1206	0.1206		0.1206	0.1206	0.0000	101.4714	101.4714	0.0378	1.1600e-003	102.7636
Energy	0.1181	1.0198	0.5079	6.4400e-003		0.0816	0.0816		0.0816	0.0816		1,288.1695	1,288.1695	0.0247	0.0236	1,295.8244
Mobile	5.2945	4.3965	53.0972	0.1021	11.8768	0.0748	11.9516	3.1517	0.0691	3.2208		10,475.0016	10,475.0016	0.7304	0.3948	10,610.8969
Total	**12.7457**	**5.7088**	**74.6973**	**0.1100**	**11.8768**	**0.2770**	**12.1537**	**3.1517**	**0.2713**	**3.4230**	**0.0000**	**11,864.6425**	**11,864.6425**	**0.7928**	**0.4195**	**12,009.4849**

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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**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10 Total	Fugitive	Exhaust	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.2945	4.3965	53.0972	0.1021	11.8768	0.0748	11.9516	3.1517	0.0691	3.2208		10,475.001	10,475.001	0.7304	0.3948	10,610.896
Unmitigated	5.2945	4.3965	53.0972	0.1021	11.8768	0.0748	11.9516	3.1517	0.0691	3.2208		10,475.001	10,475.001	0.7304	0.3948	10,610.896

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,165.35	1,165.35	1165.35	4,275,809	4,275,809
Enclosed Parking with Elevator	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	317.05	317.05	317.05	1,016,956	1,016,956
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Regional Shopping Center	112.70	112.70	112.70	387,748	387,748
Total	1,595.10	1,595.10	1,595.10	5,680,513	5,680,513

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
Apartments Mid Rise	10.08	10.08	10.08	40.20	19.20	40.60	100	0	0
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	100	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	100	0	0

Washington and Rosemead Mixed Use Project Operations Run - Los Angeles-South Coast County, Winter

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
Apartments Mid Rise	0.644264	0.074319	0.221712	0.020000	0.004463	0.001176	0.002025	0.001549	0.000000	0.000000	0.029705	0.000135	0.000652
Enclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
High Turnover (Sit Down Restaurant)	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Other Asphalt Surfaces	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Other Non-Asphalt Surfaces	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Recreational Swimming Pool	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Regional Shopping Center	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

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	0.1181	1.0198	0.5079	6.4400e-003		0.0816	0.0816		0.0816	0.0816		1,288.1695	1,288.1695	0.0247	0.0236	1,295.8244
NaturalGas Unmitigated	0.1181	1.0198	0.5079	6.4400e-003		0.0816	0.0816		0.0816	0.0816		1,288.1695	1,288.1695	0.0247	0.0236	1,295.8244

Washington and Rosemead Mixed Use Project Operations Run - Los Angeles-South Coast County, Winter

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					
Apartments Mid Rise	9128.71	0.0985	0.8413	0.3580	5.3700e-003		0.0680	0.0680		0.0680	0.0680		1,073.9663	1,073.9663	0.0206	0.0197	1,080.3484
Enclosed Parking with Elevator	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
High Turnover (Sit Down Restaurant)	1807.93	0.0195	0.1773	0.1489	1.0600e-003		0.0135	0.0135		0.0135	0.0135		212.6980	212.6980	4.0800e-003	3.9000e-003	213.9619
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
Other Non-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
Recreational Swimming Pool	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
Regional Shopping Center	12.7944	1.4000e-004	1.2500e-003	1.0500e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.5052	1.5052	3.0000e-005	3.0000e-005	1.5142
Total		**0.1181**	**1.0198**	**0.5079**	**6.4400e-003**		**0.0816**	**0.0816**		**0.0816**	**0.0816**		**1,288.1695**	**1,288.1695**	**0.0247**	**0.0236**	**1,295.8245**

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					
Apartments Mid Rise	9.12871	0.0985	0.8413	0.3580	5.3700e-003		0.0680	0.0680		0.0680	0.0680		1,073.9663	1,073.9663	0.0206	0.0197	1,080.3484
Enclosed Parking with Elevator	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
High Turnover (Sit Down Restaurant)	1.80793	0.0195	0.1773	0.1489	1.0600e-003		0.0135	0.0135		0.0135	0.0135		212.6980	212.6980	4.0800e-003	3.9000e-003	213.9619
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
Other Non-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
Recreational Swimming Pool	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
Regional Shopping Center	0.0127944	1.4000e-004	1.2500e-003	1.0500e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.5052	1.5052	3.0000e-005	3.0000e-005	1.5142
Total		**0.1181**	**1.0198**	**0.5079**	**6.4400e-003**		**0.0816**	**0.0816**		**0.0816**	**0.0816**		**1,288.1695**	**1,288.1695**	**0.0247**	**0.0236**	**1,295.8245**

Washington and Rosemead Mixed Use Project Operations Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.0 Area Detail

6.1 Mitigation Measures Area

	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	7.3331	0.2926	21.0922	1.4300e-003		0.1206	0.1206		0.1206	0.1206	0.0000	101.4714	101.4714	0.0378	1.1600e-003	102.7636
Unmitigated	7.3331	0.2926	21.0922	1.4300e-003		0.1206	0.1206		0.1206	0.1206	0.0000	101.4714	101.4714	0.0378	1.1600e-003	102.7636

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	0.9877					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.7030					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	5.8200e-003	0.0498	0.0212	3.2000e-004		4.0200e-003	4.0200e-003		4.0200e-003	4.0200e-003	0.0000	63.5294	63.5294	1.2200e-003	1.1600e-003	63.9069
Landscaping	0.6366	0.2428	21.0710	1.1100e-003		0.1166	0.1166		0.1166	0.1166		37.9420	37.9420	0.0366		38.8566
Total	**7.3331**	**0.2926**	**21.0922**	**1.4300e-003**		**0.1206**	**0.1206**		**0.1206**	**0.1206**	**0.0000**	**101.4714**	**101.4714**	**0.0378**	**1.1600e-003**	**102.7636**

Washington and Rosemead Mixed Use Project Operations Run - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.9877					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.7030					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	5.8200e-003	0.0498	0.0212	3.2000e-004		4.0200e-003	4.0200e-003		4.0200e-003	4.0200e-003	0.0000	63.5294	63.5294	1.2200e-003	1.1600e-003	63.9069
Landscaping	0.6366	0.2428	21.0710	1.1100e-003		0.1166	0.1166		0.1166	0.1166		37.9420	37.9420	0.0366		38.8566
Total	**7.3331**	**0.2926**	**21.0922**	**1.4300e-003**		**0.1206**	**0.1206**		**0.1206**	**0.1206**	**0.0000**	**101.4714**	**101.4714**	**0.0378**	**1.1600e-003**	**102.7636**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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

LST Worksheets

Construction Localized Significance Thresholds - Asphalt Demolition

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
5	2.00	25	82	2.85

Source Receptor	Southeast LA County	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	8	3	1.5
NOx	**114**	Graders	0.5	0.0625			0
CO	**861**	Dozers	0.5	0.0625	8	1	0.5
PM10	**7.00**	Scrapers	1	0.125			0
PM2.5	**4.00**					**Acres**	2.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	2	114	111	121	145	205
	2	114	111	121	145	205
		114	111	121	145	205
CO	2	861	1082	1496	2625	7500
	2	861	1082	1496	2625	7500
		861	1082	1496	2625	7500
PM10	2	7	21	39	74	182
	2	7	21	39	74	182
		7	21	39	74	182
PM2.5	2	4	6	10	22	92
	2	4	6	10	22	92
		4	6	10	22	92

Southeast LA County

2.00 Acres

	25	**50**	**100**	**200**	**500**
NOx	114	111	121	145	205
CO	861	1082	1496	2625	7500
PM10	7	21	39	74	182
PM2.5	4	6	10	22	92

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
5	2	5	2
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds - Asphalt Demolition and Debris Haul

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
5	2.00	25	82	2.85

Source Receptor	Southeast LA County	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	8	3	1.5
NOx	**114**	Graders	0.5	0.0625			0
CO	**861**	Dozers	0.5	0.0625	8	1	0.5
PM10	**7.00**	Scrapers	1	0.125			0
PM2.5	**4.00**					**Acres**	2.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	2	114	111	121	145	205
	2	114	111	121	145	205
		114	111	121	145	205
CO	2	861	1082	1496	2625	7500
	2	861	1082	1496	2625	7500
		861	1082	1496	2625	7500
PM10	2	7	21	39	74	182
	2	7	21	39	74	182
		7	21	39	74	182
PM2.5	2	4	6	10	22	92
	2	4	6	10	22	92
		4	6	10	22	92

Southeast LA County

2.00 Acres

	25	**50**	**100**	**200**	**500**
NOx	114	111	121	145	205
CO	861	1082	1496	2625	7500
PM10	7	21	39	74	182
PM2.5	4	6	10	22	92

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
5	2	5	2
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds - Site Preparation

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
5	1.94	25	82	2.85

Source Receptor	Southeast LA County	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	7	1	0.4375
NOx	**112**	Graders	0.5	0.0625	8	1	0.5
CO	**843**	Dozers	0.5	0.0625			0
PM10	**6.81**	Scrapers	1	0.125	8	1	1
PM2.5	**3.94**					**Acres**	1.94

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	80	81	94	123	192
	2	114	111	121	145	205
		112	109	119	144	204
CO	1	571	735	1088	2104	6854
	2	861	1082	1496	2625	7500
		843	1060	1471	2592	7460
PM10	1	4	13	30	66	173
	2	7	21	39	74	182
		7	21	38	74	181
PM2.5	1	3	4	8	19	86
	2	4	6	10	22	92
		4	6	10	22	92

Southeast LA County

1.94 Acres

	25	**50**	**100**	**200**	**500**
NOx	112	109	119	144	204
CO	843	1060	1471	2592	7460
PM10	7	21	38	74	181
PM2.5	4	6	10	22	92

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
5	1	5	2
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds - Rough Grading

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
5	2.85	25	82	2.85

Source Receptor	**Southeast LA County**	**Equipment**	**Acres/8-hr Day**		**Daily hours**	**Equipment Used**	**Acres**
Distance (meters)	25	Tractors	0.5	0.0625	7	2	0.875
NOx	**130**	Graders	0.5	0.0625	8	1	0.5
CO	**1,036**	Dozers	0.5	0.0625	8	1	0.5
PM10	**8.98**	Scrapers	1	0.125	8	1	1
PM2.5	**4.85**					**Acres**	2.88

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	2	114	111	121	145	205
	3	133	129	139	161	218
		130	126	137	159	216
CO	2	861	1082	1496	2625	7500
	3	1067	1340	1810	3039	8104
		1036	1301	1763	2977	8013
PM10	2	7	21	39	74	182
	3	9	28	46	81	189
		9	27	45	80	188
PM2.5	2	4	6	10	22	92
	3	5	7	12	25	96
		5	7	11	24	95

Southeast LA County

2.85 Acres

	25	**50**	**100**	**200**	**500**
NOx	130	126	137	159	216
CO	1036	1301	1763	2977	8013
PM10	9	27	45	80	188
PM2.5	5	7	11	24	95

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
5	2	5	3
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds - Rough Grading and Soil Haul

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
5	2.85	25	82	2.85

Source Receptor	**Southeast LA County**	**Equipment**	**Acres/8-hr Day**		**Daily hours**	**Equipment Used**	**Acres**
Distance (meters)	25	Tractors	0.5	0.0625	7	2	0.875
NOx	**130**	Graders	0.5	0.0625	8	1	0.5
CO	**1,036**	Dozers	0.5	0.0625	8	1	0.5
PM10	**8.98**	Scrapers	1	0.125	8	1	1
PM2.5	**4.85**					**Acres**	2.88

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	2	114	111	121	145	205
	3	133	129	139	161	218
		130	126	137	159	216
CO	2	861	1082	1496	2625	7500
	3	1067	1340	1810	3039	8104
		1036	1301	1763	2977	8013
PM10	2	7	21	39	74	182
	3	9	28	46	81	189
		9	27	45	80	188
PM2.5	2	4	6	10	22	92
	3	5	7	12	25	96
		5	7	11	24	95

Southeast LA County

2.85 Acres

	25	**50**	**100**	**200**	**500**
NOx	130	126	137	159	216
CO	1036	1301	1763	2977	8013
PM10	9	27	45	80	188
PM2.5	5	7	11	24	95

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
5	2	5	3
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds - Utilities Trenching

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
5	0.50	25	82	2.85

Source Receptor	**Southeast LA County**	**Equipment**	**Acres/8-hr Day**		**Daily hours**	**Equipment Used**	**Acres**
Distance (meters)	25	Tractors	0.5	0.0625	8	1	0.5
NOx	**80**	Graders	0.5	0.0625			0
CO	**571**	Dozers	0.5	0.0625			0
PM10	**4.00**	Scrapers	1	0.125			0
PM2.5	**3.00**					**Acres**	0.50

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	80	81	94	123	192
	1	80	81	94	123	192
		80	81	94	123	192
CO	1	571	735	1088	2104	6854
	1	571	735	1088	2104	6854
		571	735	1088	2104	6854
PM10	1	4	13	30	66	173
	1	4	13	30	66	173
		4	13	30	66	173
PM2.5	1	3	4	8	19	86
	1	3	4	8	19	86
		3	4	8	19	86

Southeast LA County

0.50 Acres

	25	**50**	**100**	**200**	**500**
NOx	80	81	94	123	192
CO	571	735	1088	2104	6854
PM10	4	13	30	66	173
PM2.5	3	4	8	19	86

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
5	1	5	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds - Utilities Trenching, Fine Grading and Soil Haul, and Building Construction

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
5	1.38	25	82	2.85

Source Receptor	**Southeast LA County**	**Equipment**	**Acres/8-hr Day**		**Daily hours**	**Equipment Used**	**Acres**
Distance (meters)	25	Tractors	0.5	0.0625	8	2	1
NOx	**93**	Tractors	0.5	0.0625	6	1	0.375
CO	**680**	Graders	0.5	0.0625			0
PM10	**5.12**	Dozers	0.5	0.0625			0
PM2.5	**3.37**	Scrapers	1	0.125			0
						Acres	1.38

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	80	81	94	123	192
	2	114	111	121	145	205
		93	92	104	131	197
CO	1	571	735	1088	2104	6854
	2	861	1082	1496	2625	7500
		680	865	1241	2299	7096
PM10	1	4	13	30	66	173
	2	7	21	39	74	182
		5	16	33	69	176
PM2.5	1	3	4	8	19	86
	2	4	6	10	22	92
		3	5	9	20	88

Southeast LA County

1.38 Acres

	25	**50**	**100**	**200**	**500**
NOx	93	92	104	131	197
CO	680	865	1241	2299	7096
PM10	5	16	33	69	176
PM2.5	3	5	9	20	88

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
5	1	5	2
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds - Utilities Trenching and Building Construction

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
5	0.88	25	82	2.85

Source Receptor	**Southeast LA County**	**Equipment**	**Acres/8-hr Day**		**Daily hours**	**Equipment Used**	**Acres**
Distance (meters)	25	Tractors	0.5	0.0625	8	1	0.5
NOx	**80**	Tractors	0.5	0.0625	6	1	0.375
CO	**571**	Graders	0.5	0.0625			0
PM10	**4.00**	Dozers	0.5	0.0625			0
PM2.5	**3.00**	Scrapers	1	0.125			0
						Acres	0.88

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	80	81	94	123	192
	1	80	81	94	123	192
		80	81	94	123	192
CO	1	571	735	1088	2104	6854
	1	571	735	1088	2104	6854
		571	735	1088	2104	6854
PM10	1	4	13	30	66	173
	1	4	13	30	66	173
		4	13	30	66	173
PM2.5	1	3	4	8	19	86
	1	3	4	8	19	86
		3	4	8	19	86

Southeast LA County

0.88 Acres

	25	**50**	**100**	**200**	**500**
NOx	80	81	94	123	192
CO	571	735	1088	2104	6854
PM10	4	13	30	66	173
PM2.5	3	4	8	19	86

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
5	1	5	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds - Building Construction

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
5	0.38	25	82	2.85

Source Receptor	Southeast LA County
Distance (meters)	25
NOx	**80**
CO	**571**
PM10	**4.00**
PM2.5	**3.00**

Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Tractors	0.5	0.0625	6	1	0.375
Graders	0.5	0.0625			0
Dozers	0.5	0.0625			0
Scrapers	1	0.125			0
				Acres	0.38

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	80	81	94	123	192
	1	80	81	94	123	192
		80	81	94	123	192
CO	1	571	735	1088	2104	6854
	1	571	735	1088	2104	6854
		571	735	1088	2104	6854
PM10	1	4	13	30	66	173
	1	4	13	30	66	173
		4	13	30	66	173
PM2.5	1	3	4	8	19	86
	1	3	4	8	19	86
		3	4	8	19	86

Southeast LA County

0.38 Acres

	25	**50**	**100**	**200**	**500**
NOx	80	81	94	123	192
CO	571	735	1088	2104	6854
PM10	4	13	30	66	173
PM2.5	3	4	8	19	86

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
5	1	5	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds - Building Construction and Paving

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
5	0.88	25	82	2.85

Source Receptor	**Southeast LA County**	**Equipment**	**Acres/8-hr Day**		**Daily hours**	**Equipment Used**	**Acres**
Distance (meters)	25	Tractors	0.5	0.0625	6	1	0.375
NOx	**80**	Tractors	0.5	0.0625	8	1	0.5
CO	**571**	Graders	0.5	0.0625			0
PM10	**4.00**	Dozers	0.5	0.0625			0
PM2.5	**3.00**	Scrapers	1	0.125			0
						Acres	0.88

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	80	81	94	123	192
	1	80	81	94	123	192
		80	81	94	123	192
CO	1	571	735	1088	2104	6854
	1	571	735	1088	2104	6854
		571	735	1088	2104	6854
PM10	1	4	13	30	66	173
	1	4	13	30	66	173
		4	13	30	66	173
PM2.5	1	3	4	8	19	86
	1	3	4	8	19	86
		3	4	8	19	86

Southeast LA County

0.88 Acres

	25	**50**	**100**	**200**	**500**
NOx	80	81	94	123	192
CO	571	735	1088	2104	6854
PM10	4	13	30	66	173
PM2.5	3	4	8	19	86

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
5	1	5	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds - Building Construction and Architectural Coating

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
5	0.38	25	82	2.85

Source Receptor	**Southeast LA County**	**Equipment**	**Acres/8-hr Day**		**Daily hours**	**Equipment Used**	**Acres**
Distance (meters)	25	Tractors	0.5	0.0625	6	1	0.375
NOx	**80**	Graders	0.5	0.0625			0
CO	**571**	Dozers	0.5	0.0625			0
PM10	**4.00**	Scrapers	1	0.125			0
PM2.5	**3.00**					**Acres**	0.38

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	80	81	94	123	192
	1	80	81	94	123	192
		80	81	94	123	192
CO	1	571	735	1088	2104	6854
	1	571	735	1088	2104	6854
		571	735	1088	2104	6854
PM10	1	4	13	30	66	173
	1	4	13	30	66	173
		4	13	30	66	173
PM2.5	1	3	4	8	19	86
	1	3	4	8	19	86
		3	4	8	19	86

Southeast LA County

0.38 Acres

	25	**50**	**100**	**200**	**500**
NOx	80	81	94	123	192
CO	571	735	1088	2104	6854
PM10	4	13	30	66	173
PM2.5	3	4	8	19	86

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
5	1	5	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Energy Calculations

Construction-Related Fuel/Energy Usage

CONSTRUCTION WORKER COMMUTE

Year	Gas		Diesel		Electricity	
	VMT	Gallons	VMT	Gallons	VMT	kWh
2022	1,130,150	39,860	8,282	188	17,515	5,760
2023	1,049,511	37,092	7,100	164	16,251	5,301
Total	**2,179,660**	**76,952**	**15,382**	**351**	**33,766**	**11,060**

CONSTRUCTION VENDOR TRIPS

Year	Gas		Diesel	
	VMT	Gallons	VMT	Gallons
2022	6,985	1,386	78,144	9,799
2023	9,473	1,854	107,849	12,795
Total	**16,457**	**3,240**	**185,993**	**22,594**

CONSTRUCTION TRUCK HAUL TRIPS

Year	Gas		Diesel	
	VMT	Gallons	VMT	Gallons
2022	66	16	76,619	11,622
Total	**66**	**16**	**76,619**	**11,622**

CONSTRUCTION OFF-ROAD EQUIPMENT

Year	Gasoline gallons	Diesel gallons
2022	8,346	29,074
2023	10,411	20,464
Total	**18,757**	**49,537**

CONSTRUCTION TOTAL

Year	Gas		Diesel		Electricity	
	VMT	Gallons	VMT	Gallons	VMT	kWh
2022	1,137,200	49,609	163,046	50,682	17,515	5,760
2023	1,058,983	49,357	114,949	33,423	16,251	5,301
Total	**2,196,183**	**98,966**	**277,995**	**84,105**	**33,766**	**11,060**

Construction Worker Trips Fuel Usage Worksheet

Note: Per CalEEMod methodology, worker vehicles are "LD_Mix", which is 50% LDA, 25% LDT1, and 25% LDT2

Activity[1]	Daily trips[1,2]	Trip miles[2]	Trip days[1]	Annual VMT
2022				
Asphalt Demolition	13	14.7	37	7,071
Asphalt Demolition Debris Haul	0	14.7	5	0
Site Preparation	8	14.7	6	706
Rough Grading	18	14.7	30	7,938
Rough Grading Soil Haul	0	14.7	12	0
Utility Trenching	20	14.7	60	17,640
Fine Grading	15	14.7	20	4,410
Fine Grading Soil Haul	0	14.7	20	0
Building Construction 2022	299	14.7	167	734,015
				0
				0
2023				
Building Construction 2023	299	14.7	240	1,054,872
Paving	15	14.7	19	4,190
Architectural Coating	60	14.7	19	16,758
				0

[1] *Based on information provided.*

[2] *Based on CalEEMod defaults.*

Year	LDA VMT	LDT1 VMT	LDT2 VMT	Gasoline[1]						Diesel[1]						Electricity[1]			
				LDA mpg	LDA gallons	LDT1 mpg	LDT1 gallons	LDT2 mpg	LDT2 gallons	LDA mpg	LDA gallons	LDT1 mpg	LDT1 gallons	LDT2 mpg	LDT2 gallons	LDA m/kWh	LDA kWh	LDT1 m/kWh	LDT1 kWh
2022	771,779	192,945	192,945	30.28	24,734	26.12	7,322	24.33	7,804	47.29	144	21.78	3	34.76	40	3.04	5,225	3.04	534
2023	537,910	268,955	268,955	31.12	16,699	26.80	9,919	25.20	10,473	48.57	102	22.08	4	35.74	57	3.07	4,319	3.07	982

Gasoline		Diesel		Electricity	
VMT	Gallons	VMT	Gallons	VMT	kWh
1,130,150	39,860	8,282	188	17,515	5,760
1,049,511	37,092	7,100	164	16,251	5,301
2,179,660	**76,952**	**15,382**	**351**	**33,766**	**11,060**

[1] *EMFAC2017 v1.0.3.*

Year	VMT from gasoline			VMT from diesel			VMT from electricity	
	LDA	LDT1	LDT2	LDA	LDT1	LDT2	LDA	LDT1
2022	97.06%	99.12%	98.39%	0.88%	0.04%	0.72%	2.06%	0.84%
2023	96.62%	98.85%	98.14%	0.92%	0.03%	0.76%	2.46%	1.12%

Appendix C: Evidence Used to Define the Average Number of KWH Required to Displace a Gallong of Gasoline

Table A 3: Evidence from U.S. Department of Energy and U.S. Environmental Protection Agency's fuel economy website[32]

Vehicle	Model year	Electric consumption	Gasoline fuel economy	Number of kWh that are equivalent to 1 gallon
Ford Fusion Energi & Ford C-Max Energi	2013	0.34 kWh per mile	43 mpg	14.6
Chevrolet Volt	2013	0.35 kWh per mile	37 mpg	12.9
Chevrolet Volt	2012	0.36 kWh per mile	37 mpg	13.3
Fisker Karma	2012	0.62 kWh per mile	20 mpg	12.4
Toyota Prius	2013	0.29 kWh per mile & 0.2 gal	50 mpg	13.1
Average for five models	-	-	-	13.3 +/- 0.8

Table A 5: Average power consumption per mile traveled over time for different PEV categories

Year range	2012- 2020	2020-2030	2030-2040	2040-2050	2050
Efficiency improvement per year	0.3%	0.8%	0.9%	0.9%	
Year	2012	2020	2030	2040	2050
Relative energy efficiency	1.000	0.976	0.901	0.823	0.752

https://www.fhwa.dot.gov/environment/climate_change/mitigation/publications_and_tools/ev_deployment/page08.cfm

0.34	14.6
0.35	12.9
0.36	13.3
0.34	13.3

Year	Estimated Electric Consumption
2013	0.34
2014	0.34
2015	0.34
2016	0.34
2017	0.34
2018	0.34
2019	0.34
2020	0.33
2021	0.33
2022	0.33
2023	0.33
2024	0.32
2025	0.32
2026	0.32
2027	0.32
2028	0.31
2029	0.31
2030	0.31
2031	0.31
2032	0.30
2033	0.30
2034	0.30
2035	0.29

Vendor Trips Fuel Usage Worksheet

Note: Based on CalEEMod methodology, vendor vehicles HHDT (T7).

Activity[1]	Daily trips[1,2]	Trip miles[2]	Trip days[1]	Annual VMT
2022				
Asphalt Demolition	2	6.9	37	511
Asphalt Demolition Debris Haul	0	6.9	5	0
Site Preparation	2	6.9	6	83
Rough Grading	2	6.9	30	414
Rough Grading Soil Haul	0	6.9	12	0
Utility Trenching	4	6.9	60	1,656
Fine Grading	6	6.9	20	828
Fine Grading Soil Haul	0	6.9	20	0
Building Construction 2022	72	6.9	167	82,966
2023				
Building Construction 2023	72	6.9	240	119,232
Paving	0	6.9	19	0
Architectural Coating	0	6.9	19	0
				0

[1] *Based on information provided.*

[2] *Based on CalEEMod defaults.*

Year	HHDT (T7) VMT	MHDT (T6) VMT	Gasoline[1]				Diesel[1]			
			HHDT (T7) mpg	HHDT (T7) gallons	MHDT (T6) mpg	MHDT (T6) gallons	HHDT (T7) mpg	HHDT (T7) gallons	MHDT (T6) mpg	MHDT (T6) gallons
2022	43,229	43,229	4.10	9	5.04	1,378	6.59	6,350	10.52	3,448
2023	59,616	59,616	4.20	12	5.12	1,842	7.00	8,232	11.00	4,563

[1] *EMFAC2017 v1.0.3.*

Year	VMT from gasoline		VMT from diesel	
	HHDT (T7)	MHDT (T6)	HHDT (T7)	MHDT (T6)
2022	0.08%	16.07%	96.85%	83.93%
2023	0.08%	15.81%	96.71%	84.19%

VENDOR

Gasoline		Diesel	
VMT	Gallons	VMT	Gallons
6,984.79	1,386.40	78,144	9,799
9,472.67	1,853.96	107,849	12,795
16,457.46	**3,240.36**	**185,993**	**22,594**

Truck Haul Trips Fuel Usage Worksheet

Note: Hauling vehicles are HHDT (T7)

Activity	Total Trips[1]	Mi/Trip[1]	Annual VMT
2022			
Asphalt Demolition Debris Haul	184	19	3,496
Rough Grading Soil Haul	1,058	19	20,102
Fine Grading Soil Haul	2,858	19	54,302
			0

[1] *Based on information provided by the District.*

Year	VMT	Gasoline[1]		Diesel[1]	
		HHDT (T7) mpg	HHDT (T7) gallons	HHDT (T7) mpg	HHDT (T7) gallons
2022	77,900	4.10	16	6.59	11,622

[1] *EMFAC2017 v1.0.3.*

Gasoline		Diesel	
VMT	Gallons	VMT	Gallons
66	16	76,619	11,622
66	**16**	**76,619**	**11,622**

Year	VMT from gasoline	VMT from diesel
2022	0.08%	98.36%

Off-Road Construction Equipment Fuel Usage Worksheet

Year	Total Gasoline	Total Diesel Gallons	Total Natural Gas
2022	8,346	29,074	0
2023	10,411	20,464	0
Total	**18,757**	**49,537**	**0**

Equipment Type[1]	Number of Equipment[1]	Horsepower	OFFROAD2017 Horsepower Category	Fuel Type	Working days[1]	Hours Per Day	Total Hours of Operation	Gasoline Gal/Hr[2]	Total Gasoline gallons	Diesel Gal/Hr[2]	Total Diesel gallons	Natural Gas Gal/Hr[2]	Total Natural Gas gallons
2022													
Asphalt Demolition													
Concrete/Industrial Saws	1	81	*100*	*Gasoline*	37	8	296	4.71	1,396	0.00	0	0.00	0
Rubber Tired Dozers	1	247	*300*	*Diesel*	37	8	296	0.00	0	4.54	1,343	0.00	0
Tractors/Loaders/Backhoes	3	97	*100*	*Diesel*	37	8	888	0.00	0	1.59	1,413	0.00	0
Site Preparation													
Graders	1	187	*300*	*Diesel*	6	8	48	0.00	0	4.58	220	0.00	0
Scrapers	1	367	*600*	*Diesel*	6	8	48	0.00	0	10.55	507	0.00	0
Tractors/Loaders/Backhoes	1	276	*300*	*Diesel*	6	7	42	0.00	0	3.98	167	0.00	0
Rough Grading													
Excavators	1	270	*300*	*Diesel*	30	8	240	0.00	0	4.32	1,037	0.00	0
Graders	1	187	*300*	*Diesel*	30	8	240	0.00	0	4.58	1,099	0.00	0
Rollers	1	134	*175*	*Diesel*	30	8	240	0.00	0	2.79	669	0.00	0
Rubber Tired Dozers	1	247	*300*	*Diesel*	30	8	240	0.00	0	4.54	1,089	0.00	0
Scrapers	1	367	*600*	*Diesel*	30	8	240	0.00	0	10.55	2,533	0.00	0
Tractors/Loaders/Backhoes	2	97	*100*	*Diesel*	30	7	420	0.00	0	1.59	668	0.00	0
Utility Trenching													
Excavators	1	249	*300*	*Diesel*	60	6	360	0.00	0	4.32	1,556	0.00	0
Tractors/Loaders/Backhoes	1	225	*300*	*Diesel*	60	8	480	0.00	0	3.98	1,908	0.00	0
Trenchers	1	50	*50*	*Diesel*	60	8	480	0.00	0	1.15	554	0.00	0
Plate Compactors	5	7	*25*	*Diesel*	60	8	2,400	0.00	0	0.20	472	0.00	0
Fine Grading													
Tractors/Loaders/Backhoes	1	225	*300*	*Diesel*	20	8	160	0.00	0	3.98	636	0.00	0
Plate Compactors	5	7	*25*	*Diesel*	20	8	800	0.00	0	0.20	157	0.00	0
Building Construction													
Cranes	1	231	*300*	*Diesel*	167	8	1,336	0.00	0	3.28	4,387	0.00	0
Generator Sets	1	84	*100*	*Gasoline*	167	8	1,336	5.20	6,951	0.00	0	0.00	0
Tractors/Loaders/Backhoes	1	97	*100*	*Diesel*	167	6	1,002	0.00	0	1.59	1,594	0.00	0
Forklifts	2	89	*100*	*Diesel*	167	7	2,338	0.00	0	0.98	2,296	0.00	0
Welders	3	46	*50*	*Diesel*	167	8	4,008	0.00	0	1.19	4,769	0.00	0
							TOTAL		**8,346**		**29,074**		**0**
2023													
Building Construction													
Cranes	1	231	*300*	*Diesel*	240	8	1,920	0.00	0	3.28	6,293	0.00	0
Generator Sets	1	84	*100*	*Gasoline*	240	8	1,920	5.20	9,982	0.00	0	0.00	0
Tractors/Loaders/Backhoes	1	97	*100*	*Diesel*	240	6	1,440	0.00	0	1.59	2,293	0.00	0
Forklifts	2	89	*100*	*Diesel*	240	7	3,360	0.00	0	0.98	3,299	0.00	0
Welders	3	46	*50*	*Diesel*	240	8	5,760	0.00	0	1.19	6,849	0.00	0
Paving													
Cement and Mortar Mixers	1	9	*25*	*Diesel*	19	8	152	0.00	0	0.33	50	0.00	0
Pavers	1	130	*175*	*Diesel*	19	8	152	0.00	0	3.40	517	0.00	0
Paving Equipment	1	132	*175*	*Diesel*	19	8	152	0.00	0	2.67	405	0.00	0
Tractors/Loaders/Backhoes	1	97	*100*	*Diesel*	19	8	152	0.00	0	1.59	242	0.00	0
Rollers	2	80	*100*	*Diesel*	19	8	304	0.00	0	1.69	515	0.00	0
Architectural Coating													
Air Compressors	1	78	*100*	*Gasoline*	19	6	114	3.77	429	0.00	0	0.00	0
							TOTAL		**10,411**		**20,464**		**0**

[1] Based on information provided.

[2] OFFROAD2017 v.1.0.1

EMFAC Fuel Usage: Year 2022

Vehicle type	GAS			DSL			NG			ELEC
	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day
All other buses	0	0	0.00	144,213	14,122	10.21	0	0	0.00	0
LDA	149,966,457	4,951,891	30.28	1,365,564	28,876	47.29	0	0	0.00	3,181,478
LDT1	17,043,180	652,540	26.12	6,627	304	21.78	0	0	0.00	144,752
LDT2	51,802,173	2,129,498	24.33	378,461	10,888	34.76	0	0	0.00	469,870
LHD1	3,836,225	367,280	10.44	2,744,971	126,149	21.76	0	0	0.00	0
LHD2	625,803	68,770	9.10	1,067,421	54,454	19.60	0	0	0.00	0
MCY	1,237,635	34,667	35.70	0	0	0.00	0	0	0.00	0
MDV	32,233,548	1,629,223	19.78	771,652	28,703	26.88	0	0	0.00	250,682
MH	190,935	37,177	5.14	61,785	5,859	10.54	0	0	0.00	0
Motor coach	0	0	0.00	91,142	13,998	6.51	0	0	0.00	0
OBUS	163,041	32,643	4.99	0	0	0.00	0	0	0.00	0
PTO	0	0	0.00	76,505	15,508	4.93	0	0	0.00	0
SBUS	55,608	6,053	9.19	109,536	14,360	7.63	0	0	0.00	0
T6	793,122	157,239	5.04	4,140,797	393,561	10.52	0	0	0.00	0
T7	5,769	1,407	4.10	6,735,541	1,021,710	6.59	106,828	47,783	2.24	0
UBUS	32,989	7,783	4.24	1,181	209	5.66	437,121	111,088	3.93	1,070
Total	**257,986,485**	**10,076,171**	**25.60**	**17,695,397**	**1,728,701**	**10.24**	**543,949**	**158,871**	**3.42**	**4,047,852**

Source: EMFAC2017 (v1.0.3) Emissions Inventory
Region Type: Sub-Area
Region: Los Angeles (SC)
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	Fuel Consumption
Los Angeles (SC)	2022	All Other Buses	Aggregate	Aggregate	DSL	2387.615771	144212.5891	20055.97247	14.12157342
Los Angeles (SC)	2022	LDA	Aggregate	Aggregate	GAS	3949334.32	149966456.8	18636854.28	4951.890616
Los Angeles (SC)	2022	LDA	Aggregate	Aggregate	DSL	34750.74201	1365564.321	164528.3052	28.87579459
Los Angeles (SC)	2022	LDA	Aggregate	Aggregate	ELEC	78084.60157	3181477.948	389918.6908	0
Los Angeles (SC)	2022	LDT1	Aggregate	Aggregate	GAS	458115.2498	17043179.81	2118381.376	652.5401757
Los Angeles (SC)	2022	LDT1	Aggregate	Aggregate	DSL	270.6503295	6627.200698	961.4710483	0.304298206
Los Angeles (SC)	2022	LDT1	Aggregate	Aggregate	ELEC	3508.68045	144752.0157	17546.16027	0
Los Angeles (SC)	2022	LDT2	Aggregate	Aggregate	GAS	1372144.276	51802172.9	6443902.5	2129.497975
Los Angeles (SC)	2022	LDT2	Aggregate	Aggregate	DSL	8920.377392	378460.5711	44003.20424	10.88805719
Los Angeles (SC)	2022	LDT2	Aggregate	Aggregate	ELEC	14383.25646	469869.8144	72773.64326	0
Los Angeles (SC)	2022	LHD1	Aggregate	Aggregate	GAS	105423.6869	3836224.58	1570655.854	367.2799521
Los Angeles (SC)	2022	LHD1	Aggregate	Aggregate	DSL	64097.22758	2744971.33	806262.4886	126.1492688
Los Angeles (SC)	2022	LHD2	Aggregate	Aggregate	GAS	17796.61867	625803.0177	265143.1013	68.76969502
Los Angeles (SC)	2022	LHD2	Aggregate	Aggregate	DSL	25927.3097	1067421.343	326132.9395	54.45422002
Los Angeles (SC)	2022	MCY	Aggregate	Aggregate	GAS	177319.3254	1237635.154	354638.6508	34.66720507
Los Angeles (SC)	2022	MDV	Aggregate	Aggregate	GAS	921693.6708	32233548.24	4274374.135	1629.222502
Los Angeles (SC)	2022	MDV	Aggregate	Aggregate	DSL	19516.67089	771652.3864	96044.41776	28.70279505
Los Angeles (SC)	2022	MDV	Aggregate	Aggregate	ELEC	7423.218148	250681.8433	37959.59904	0
Los Angeles (SC)	2022	MH	Aggregate	Aggregate	GAS	18777.11371	190934.9774	1878.462455	37.17660803
Los Angeles (SC)	2022	MH	Aggregate	Aggregate	DSL	5865.304828	61785.30748	586.5304828	5.859423982
Los Angeles (SC)	2022	Motor Coach	Aggregate	Aggregate	DSL	676.2916755	91141.88557	9873.858462	13.99760817
Los Angeles (SC)	2022	OBUS	Aggregate	Aggregate	GAS	3972.712037	163041.1007	79486.02243	32.64328018
Los Angeles (SC)	2022	PTO	Aggregate	Aggregate	DSL	0	76505.4461	0	15.50775389
Los Angeles (SC)	2022	SBUS	Aggregate	Aggregate	GAS	1378.869452	55608.41612	5515.47781	6.053496228
Los Angeles (SC)	2022	SBUS	Aggregate	Aggregate	DSL	3460.157096	109535.682	39929.73315	14.35975618
Los Angeles (SC)	2022	T6 Ag	Aggregate	Aggregate	DSL	12.10479957	101.9666453	53.26111809	0.012181572
Los Angeles (SC)	2022	T6 CAIRP heavy	Aggregate	Aggregate	DSL	272.1638062	53846.97659	3973.591571	4.680155196
Los Angeles (SC)	2022	T6 CAIRP small	Aggregate	Aggregate	DSL	144.6349106	7530.75419	2111.669694	0.699944378
Los Angeles (SC)	2022	T6 instate construction heavy	Aggregate	Aggregate	DSL	2518.967495	168570.4564	11388.15411	16.56194729
Los Angeles (SC)	2022	T6 instate construction small	Aggregate	Aggregate	DSL	8157.753968	433957.0754	36880.88852	42.40587222
Los Angeles (SC)	2022	T6 instate heavy	Aggregate	Aggregate	DSL	10296.35106	1423092.141	118818.4637	128.9338909
Los Angeles (SC)	2022	T6 instate small	Aggregate	Aggregate	DSL	37908.6179	1932060.83	437460.1947	186.9232192
Los Angeles (SC)	2022	T6 OOS heavy	Aggregate	Aggregate	DSL	156.4590604	31080.56962	2284.302283	2.699014263
Los Angeles (SC)	2022	T6 OOS small	Aggregate	Aggregate	DSL	83.58460294	4317.240411	1220.335203	0.401773955
Los Angeles (SC)	2022	T6 Public	Aggregate	Aggregate	DSL	4445.935083	69430.49194	13486.00307	8.507368053
Los Angeles (SC)	2022	T6 utility	Aggregate	Aggregate	DSL	996.7203316	16808.24099	11462.28381	1.735997959
Los Angeles (SC)	2022	T6TS	Aggregate	Aggregate	GAS	14505.49561	793122.3284	290225.9562	157.2392835
Los Angeles (SC)	2022	T7 Ag	Aggregate	Aggregate	DSL	5.193051548	102.8930892	22.84942681	0.01852168
Los Angeles (SC)	2022	T7 CAIRP	Aggregate	Aggregate	DSL	6003.500987	1067306.387	87651.11441	155.0696328
Los Angeles (SC)	2022	T7 CAIRP construction	Aggregate	Aggregate	DSL	671.4917023	121085.6232	3035.787878	16.55458348
Los Angeles (SC)	2022	T7 NNOOS	Aggregate	Aggregate	DSL	6498.761345	1301079.701	94881.91563	179.099333
Los Angeles (SC)	2022	T7 NOOS	Aggregate	Aggregate	DSL	2371.048773	419354.6563	34617.31208	62.47642547
Los Angeles (SC)	2022	T7 POLA	Aggregate	Aggregate	DSL	8258.014728	1072153.038	62760.91194	188.7409496
Los Angeles (SC)	2022	T7 Public	Aggregate	Aggregate	DSL	5475.906144	110937.1004	16610.24862	19.0808356
Los Angeles (SC)	2022	T7 Single	Aggregate	Aggregate	DSL	5794.937297	385296.7187	66872.77297	58.88961274
Los Angeles (SC)	2022	T7 single construction	Aggregate	Aggregate	DSL	4300.116371	300391.1598	19440.65893	44.46501106
Los Angeles (SC)	2022	T7 SWCV	Aggregate	Aggregate	DSL	1379.990695	56384.18389	5381.963711	27.81339016
Los Angeles (SC)	2022	T7 SWCV	Aggregate	Aggregate	NG	2623.533087	106827.7218	10231.77904	47.782843
Los Angeles (SC)	2022	T7 tractor	Aggregate	Aggregate	DSL	12166.67647	1645420.533	154516.7912	230.7310322
Los Angeles (SC)	2022	T7 tractor construction	Aggregate	Aggregate	DSL	3592.159925	247796.2601	16240.01536	37.46414496
Los Angeles (SC)	2022	T7 utility	Aggregate	Aggregate	DSL	405.4684121	8232.431424	4662.886739	1.306947156
Los Angeles (SC)	2022	T7IS	Aggregate	Aggregate	GAS	55.2683338	5768.621752	1105.808823	1.407168754
Los Angeles (SC)	2022	UBUS	Aggregate	Aggregate	GAS	460.6006493	32989.32038	1842.402597	7.783285084
Los Angeles (SC)	2022	UBUS	Aggregate	Aggregate	DSL	10.1389	1181.230112	40.5556	0.208547568
Los Angeles (SC)	2022	UBUS	Aggregate	Aggregate	ELEC	12	1070.403311	48	0
Los Angeles (SC)	2022	UBUS	Aggregate	Aggregate	NG	4129.345993	437121.0718	16517.38397	111.0876976

EMFAC Fuel Usage: Year 2023

Vehicle type	GAS			DSL			NG			ELEC
	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day
All other buses	0	0	0.00	148,348	14,082	10.53	0	0	0.00	0
LDA	149,418,106	4,801,115	31.12	1,426,245	29,363	48.57	0	0	0.00	3,806,342
LDT1	17,372,475	648,191	26.80	6,133	278	22.08	0	0	0.00	196,782
LDT2	52,162,943	2,069,800	25.20	404,272	11,313	35.74	0	0	0.00	584,569
LHD1	3,800,052	359,383	10.57	2,893,383	130,924	22.10	0	0	0.00	0
LHD2	625,879	67,954	9.21	1,126,544	56,597	19.90	0	0	0.00	0
MCY	1,265,085	35,455	35.68	0	0	0.00	0	0	0.00	0
MDV	32,264,362	1,576,940	20.46	823,486	29,770	27.66	0	0	0.00	342,100
MH	191,392	36,760	5.21	64,319	6,026	10.67	0	0	0.00	0
Motor coach	0	0	0.00	92,744	13,826	6.71	0	0	0.00	0
OBUS	159,343	31,499	5.06	0	0	0.00	0	0	0.00	0
PTO	0	0	0.00	77,199	14,935	5.17	0	0	0.00	0
SBUS	58,916	6,358	9.27	110,638	14,360	7.70	0	0	0.00	0
T6	797,300	155,868	5.12	4,246,866	386,115	11.00	0	0	0.00	0
T7	5,905	1,406	4.20	6,872,058	981,183	7.00	113,852	50,168	2.27	0
UBUS	33,184	7,630	4.35	1,181	209	5.66	439,713	111,745	3.93	1,070
Total	**258,154,940**	**9,798,359**	**26.35**	**18,293,417**	**1,688,982**	**10.83**	**553,565**	**161,913**	**3.42**	**4,930,863**

3,400,030,661

0.34%

81875000 11690001.06

Source: EMFAC2017 (v1.0.3) Emissions Inventory
Region Type: Sub-Area
Region: Los Angeles (SC)
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	Fuel Consumption
Los Angeles (SC)	2023	All Other Buses	Aggregate	Aggregate	DSL	2413.362241	148347.7525	20272.24282	14.0818541
Los Angeles (SC)	2023	LDA	Aggregate	Aggregate	GAS	3986929.129	149418105.6	18815397.63	4801.114553
Los Angeles (SC)	2023	LDA	Aggregate	Aggregate	DSL	36740.62878	1426244.815	174171.2985	29.36298643
Los Angeles (SC)	2023	LDA	Aggregate	Aggregate	ELEC	91678.53845	3806341.937	457107.9273	0
Los Angeles (SC)	2023	LDT1	Aggregate	Aggregate	GAS	472375.6724	17372474.6	2187811.198	648.1906909
Los Angeles (SC)	2023	LDT1	Aggregate	Aggregate	DSL	252.4118747	6132.921962	894.9059766	0.277775308
Los Angeles (SC)	2023	LDT1	Aggregate	Aggregate	ELEC	4635.248736	196781.6242	23233.68477	0
Los Angeles (SC)	2023	LDT2	Aggregate	Aggregate	GAS	1397479.324	52162943.36	6567821.268	2069.799895
Los Angeles (SC)	2023	LDT2	Aggregate	Aggregate	DSL	9765.230182	404272.1374	48008.05802	11.31280557
Los Angeles (SC)	2023	LDT2	Aggregate	Aggregate	ELEC	18283.62829	584568.8418	92279.45183	0
Los Angeles (SC)	2023	LHD1	Aggregate	Aggregate	GAS	105195.9307	3800052.408	1567262.626	359.3833271
Los Angeles (SC)	2023	LHD1	Aggregate	Aggregate	DSL	68776.35703	2893383.107	865120.0508	130.9243641
Los Angeles (SC)	2023	LHD2	Aggregate	Aggregate	GAS	17937.98852	625878.5235	267249.3013	67.95438628
Los Angeles (SC)	2023	LHD2	Aggregate	Aggregate	DSL	27873.77545	1126544.027	350617.0299	56.59739854
Los Angeles (SC)	2023	MCY	Aggregate	Aggregate	GAS	183955.3723	1265084.637	367910.7446	35.45479504
Los Angeles (SC)	2023	MDV	Aggregate	Aggregate	GAS	931795.9713	32264362.15	4326648.043	1576.940395
Los Angeles (SC)	2023	MDV	Aggregate	Aggregate	DSL	21297.50738	823486.0536	104465.3428	29.77006577
Los Angeles (SC)	2023	MDV	Aggregate	Aggregate	ELEC	10378.92649	342100.1259	52903.33041	0
Los Angeles (SC)	2023	MH	Aggregate	Aggregate	GAS	18786.35518	191391.548	1879.386973	36.76042896
Los Angeles (SC)	2023	MH	Aggregate	Aggregate	DSL	6166.797629	64319.47927	616.6797629	6.026053915
Los Angeles (SC)	2023	Motor Coach	Aggregate	Aggregate	DSL	658.0910352	92743.98303	9608.129114	13.82589661
Los Angeles (SC)	2023	OBUS	Aggregate	Aggregate	GAS	3965.955178	159342.8081	79350.83121	31.49929974
Los Angeles (SC)	2023	PTO	Aggregate	Aggregate	DSL	0	77198.6472	0	14.93547066
Los Angeles (SC)	2023	SBUS	Aggregate	Aggregate	GAS	1481.565044	58916.21473	5926.260176	6.358131428
Los Angeles (SC)	2023	SBUS	Aggregate	Aggregate	DSL	3497.078427	110638.3688	40355.80019	14.36000383
Los Angeles (SC)	2023	T6 Ag	Aggregate	Aggregate	DSL	11.67476155	97.073849	51.36895084	0.011080203
Los Angeles (SC)	2023	T6 CAIRP heavy	Aggregate	Aggregate	DSL	280.5602581	54871.42749	4096.179768	4.630891473
Los Angeles (SC)	2023	T6 CAIRP small	Aggregate	Aggregate	DSL	147.0353228	7680.714425	2146.715713	0.690922567
Los Angeles (SC)	2023	T6 instate construction heavy	Aggregate	Aggregate	DSL	2593.685207	170789.0459	11725.94998	16.01357351
Los Angeles (SC)	2023	T6 instate construction small	Aggregate	Aggregate	DSL	7838.439815	439668.4712	35437.28165	40.85987457
Los Angeles (SC)	2023	T6 instate heavy	Aggregate	Aggregate	DSL	10535.34865	1466280.47	121576.4628	127.6396288
Los Angeles (SC)	2023	T6 instate small	Aggregate	Aggregate	DSL	37375.9816	1984183.072	431313.6457	183.0271301
Los Angeles (SC)	2023	T6 OOS heavy	Aggregate	Aggregate	DSL	161.7713139	31697.11686	2361.861183	2.673821474
Los Angeles (SC)	2023	T6 OOS small	Aggregate	Aggregate	DSL	84.77351604	4403.138169	1237.693334	0.39634697
Los Angeles (SC)	2023	T6 Public	Aggregate	Aggregate	DSL	4479.460204	70241.70163	13587.69594	8.450363812
Los Angeles (SC)	2023	T6 utility	Aggregate	Aggregate	DSL	1011.45952	16954.26417	11631.78448	1.721713991
Los Angeles (SC)	2023	T6TS	Aggregate	Aggregate	GAS	14623.10816	797300.0842	292579.148	155.8676623
Los Angeles (SC)	2023	T7 Ag	Aggregate	Aggregate	DSL	5.450542727	89.56607012	23.982388	0.015745035
Los Angeles (SC)	2023	T7 CAIRP	Aggregate	Aggregate	DSL	5967.126018	1085857.383	87120.03986	152.0768811
Los Angeles (SC)	2023	T7 CAIRP construction	Aggregate	Aggregate	DSL	672.7726984	122679.2552	3041.579212	16.23989484
Los Angeles (SC)	2023	T7 NNOOS	Aggregate	Aggregate	DSL	6698.602472	1323677.931	97799.59609	176.2912352
Los Angeles (SC)	2023	T7 NOOS	Aggregate	Aggregate	DSL	2364.918201	426649.092	34527.80573	61.26348855
Los Angeles (SC)	2023	T7 POLA	Aggregate	Aggregate	DSL	8486.558826	1131828.731	64497.84707	175.4952223
Los Angeles (SC)	2023	T7 Public	Aggregate	Aggregate	DSL	5541.588258	112265.4557	16809.48436	19.02171313
Los Angeles (SC)	2023	T7 Single	Aggregate	Aggregate	DSL	5934.360332	388787.818	68481.69547	56.1742218
Los Angeles (SC)	2023	T7 single construction	Aggregate	Aggregate	DSL	4385.71399	304344.6678	19827.64243	42.88123171
Los Angeles (SC)	2023	T7 SWCV	Aggregate	Aggregate	DSL	1255.519365	51298.487	4896.525523	25.30419893
Los Angeles (SC)	2023	T7 SWCV	Aggregate	Aggregate	NG	2795.817267	113851.643	10903.68734	50.16782394
Los Angeles (SC)	2023	T7 tractor	Aggregate	Aggregate	DSL	12205.73158	1665217.666	155012.7911	219.5996373
Los Angeles (SC)	2023	T7 tractor construction	Aggregate	Aggregate	DSL	3685.502446	251057.5562	16662.01327	35.5101791
Los Angeles (SC)	2023	T7 utility	Aggregate	Aggregate	DSL	409.1727144	8303.947199	4705.486215	1.309375599
Los Angeles (SC)	2023	T7IS	Aggregate	Aggregate	GAS	52.86814563	5904.510911	1057.785858	1.405502268
Los Angeles (SC)	2023	UBUS	Aggregate	Aggregate	GAS	463.3229945	33183.96593	1853.291978	7.630187276
Los Angeles (SC)	2023	UBUS	Aggregate	Aggregate	DSL	10.1389	1181.230112	40.5556	0.208547568
Los Angeles (SC)	2023	UBUS	Aggregate	Aggregate	ELEC	12	1070.403311	48	0
Los Angeles (SC)	2023	UBUS	Aggregate	Aggregate	NG	4153.840831	439713.4848	16615.36332	111.7447779

EMFAC Fuel Usage: Year 2024

Vehicle type	GAS			DSL			NG			ELEC
	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day
All other buses	0	0	0.00	10,617	951	11.16	0	0	0.00	0
LDA	24,478,837	721,471	33.93	263,556	4,810	54.80	0	0	0.00	585,973
LDT1	2,347,037	81,177	28.91	534	20	26.67	0	0	0.00	27,901
LDT2	7,375,146	266,553	27.67	56,317	1,356	41.53	0	0	0.00	82,985
LHD1	481,214	43,424	11.08	516,977	24,028	21.52	0	0	0.00	0
LHD2	72,284	7,458	9.69	201,738	10,267	19.65	0	0	0.00	0
MCY	177,526	4,688	37.87	0	0	0.00	0	0	0.00	0
MDV	5,478,215	250,698	21.85	149,588	4,923	30.38	0	0	0.00	53,455
MH	34,330	6,493	5.29	14,833	1,344	11.04	0	0	0.00	0
Motor coach	0	0	0.00	5,801	817	7.10	0	0	0.00	0
OBUS	14,690	2,754	5.33	0	0	0.00	0	0	0.00	0
PTO	0	0	0.00	44,321	8,231	5.38	0	0	0.00	0
SBUS	15,095	1,692	8.92	28,336	3,643	7.78	0	0	0.00	0
T6	56,942	10,447	5.45	757,769	63,999	11.84	0	0	0.00	0
T7	477	107	4.47	1,990,376	257,897	7.72	13,507	5,508	2.45	0
UBUS	23,428	3,649	6.42	12	1	9.31	27,220	6,438	4.23	1
Total	**40,555,220**	**1,400,612**	**28.96**	**4,040,774**	**382,287**	**10.57**	**40,728**	**11,947**	**3.41**	**750,315**

486,012,369

2.18%

81875000 10608708.92

Source: EMFAC2017 (v1.0.3) Emissions Inventory
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	Fuel Consumption
Riverside (SC)	2024	All Other Buses	Aggregate	Aggregate	DSL	186.6469617	10617.02237	1567.834478	0.951083116
Riverside (SC)	2024	LDA	Aggregate	Aggregate	GAS	617514.3579	24478836.56	2921789.652	721.470804
Riverside (SC)	2024	LDA	Aggregate	Aggregate	DSL	6395.726935	263555.9906	30567.96518	4.809813607
Riverside (SC)	2024	LDA	Aggregate	Aggregate	ELEC	14425.0696	585972.9711	72164.24752	0
Riverside (SC)	2024	LDT1	Aggregate	Aggregate	GAS	63219.76211	2347037.162	289438.0097	81.17710169
Riverside (SC)	2024	LDT1	Aggregate	Aggregate	DSL	24.10721025	533.616122	80.30352254	0.020009633
Riverside (SC)	2024	LDT1	Aggregate	Aggregate	ELEC	661.8262843	27901.35626	3349.231994	0
Riverside (SC)	2024	LDT2	Aggregate	Aggregate	GAS	191595.1165	7375145.522	898075.5151	266.5528329
Riverside (SC)	2024	LDT2	Aggregate	Aggregate	DSL	1293.932614	56317.20384	6361.076033	1.356033097
Riverside (SC)	2024	LDT2	Aggregate	Aggregate	ELEC	2788.874311	82984.78588	14057.46342	0
Riverside (SC)	2024	LHD1	Aggregate	Aggregate	GAS	15013.79924	481213.6981	223683.2382	43.42353163
Riverside (SC)	2024	LHD1	Aggregate	Aggregate	DSL	15906.59016	516976.9352	200084.8937	24.02819078
Riverside (SC)	2024	LHD2	Aggregate	Aggregate	GAS	2255.583712	72284.45286	33604.83649	7.458415808
Riverside (SC)	2024	LHD2	Aggregate	Aggregate	DSL	6233.384608	201737.9091	78408.13677	10.26708544
Riverside (SC)	2024	MCY	Aggregate	Aggregate	GAS	28768.15998	177525.5663	57536.31996	4.688277597
Riverside (SC)	2024	MDV	Aggregate	Aggregate	GAS	154289.1501	5478215.24	706842.2487	250.6982454
Riverside (SC)	2024	MDV	Aggregate	Aggregate	DSL	3716.540326	149587.74	17947.53147	4.923362916
Riverside (SC)	2024	MDV	Aggregate	Aggregate	ELEC	1759.655155	53454.88255	8929.865345	0
Riverside (SC)	2024	MH	Aggregate	Aggregate	GAS	4447.773714	34330.11049	444.9552824	6.493354428
Riverside (SC)	2024	MH	Aggregate	Aggregate	DSL	1971.591273	14832.52594	197.1591273	1.343822937
Riverside (SC)	2024	Motor Coach	Aggregate	Aggregate	DSL	41.66717465	5801.444675	608.3407499	0.816676557
Riverside (SC)	2024	OBUS	Aggregate	Aggregate	GAS	436.1488407	14690.22853	8726.466005	2.754009451
Riverside (SC)	2024	PTO	Aggregate	Aggregate	DSL	0	44320.51384	0	8.231074899
Riverside (SC)	2024	SBUS	Aggregate	Aggregate	GAS	439.6915571	15094.65462	1758.766228	1.692046723
Riverside (SC)	2024	SBUS	Aggregate	Aggregate	DSL	894.0425814	28336.36505	10317.12744	3.642655698
Riverside (SC)	2024	T6 Ag	Aggregate	Aggregate	DSL	3.9383837	51.75334321	17.32888828	0.005409636
Riverside (SC)	2024	T6 CAIRP heavy	Aggregate	Aggregate	DSL	49.73399344	9550.295224	726.1163042	0.731860052
Riverside (SC)	2024	T6 CAIRP small	Aggregate	Aggregate	DSL	24.96534236	1268.079315	364.4939984	0.104950477
Riverside (SC)	2024	T6 instate construction heavy	Aggregate	Aggregate	DSL	718.0278456	46818.84183	3246.175973	4.060184428
Riverside (SC)	2024	T6 instate construction small	Aggregate	Aggregate	DSL	1329.827221	73074.30684	6012.097161	6.278103945
Riverside (SC)	2024	T6 instate heavy	Aggregate	Aggregate	DSL	1955.847622	252286.4697	22570.2104	20.3587064
Riverside (SC)	2024	T6 instate small	Aggregate	Aggregate	DSL	7155.65398	357211.5975	82575.25483	30.70294593
Riverside (SC)	2024	T6 OOS heavy	Aggregate	Aggregate	DSL	27.82709184	5323.550954	406.2755409	0.408378013
Riverside (SC)	2024	T6 OOS small	Aggregate	Aggregate	DSL	14.50505463	733.2068189	211.7737976	0.060718604
Riverside (SC)	2024	T6 Public	Aggregate	Aggregate	DSL	572.8870163	8644.463881	1737.757281	1.025146392
Riverside (SC)	2024	T6 utility	Aggregate	Aggregate	DSL	168.0721872	2806.151619	1932.830153	0.262543169
Riverside (SC)	2024	T6TS	Aggregate	Aggregate	GAS	1398.543137	56941.89869	27982.05108	10.44742239
Riverside (SC)	2024	T7 Ag	Aggregate	Aggregate	DSL	11.02709983	81.84916247	48.51923924	0.014933858
Riverside (SC)	2024	T7 CAIRP	Aggregate	Aggregate	DSL	1645.805361	299560.044	24028.75827	39.14777377
Riverside (SC)	2024	T7 CAIRP construction	Aggregate	Aggregate	DSL	184.0292624	33630.38079	831.9891402	4.15338895
Riverside (SC)	2024	T7 NNOOS	Aggregate	Aggregate	DSL	1884.35287	365176.1496	27511.5519	45.14141174
Riverside (SC)	2024	T7 NOOS	Aggregate	Aggregate	DSL	654.0349978	117689.7529	9548.910967	15.80270964
Riverside (SC)	2024	T7 POLA	Aggregate	Aggregate	DSL	2361.768314	322447.2538	17949.43919	43.89630122
Riverside (SC)	2024	T7 Public	Aggregate	Aggregate	DSL	772.9859549	15672.22522	2344.724061	2.577420553
Riverside (SC)	2024	T7 Single	Aggregate	Aggregate	DSL	3081.23414	223206.9666	35557.01478	29.31439017
Riverside (SC)	2024	T7 single construction	Aggregate	Aggregate	DSL	1193.602479	83430.7891	5396.2304	11.02968579
Riverside (SC)	2024	T7 SWCV	Aggregate	Aggregate	DSL	58.81650987	2403.147296	229.3843885	1.186225468
Riverside (SC)	2024	T7 SWCV	Aggregate	Aggregate	NG	332.158218	13507.35785	1295.41705	5.508111343
Riverside (SC)	2024	T7 tractor	Aggregate	Aggregate	DSL	3482.41357	455986.8217	44226.65233	56.14184556
Riverside (SC)	2024	T7 tractor construction	Aggregate	Aggregate	DSL	1010.739777	68823.05569	4569.515232	9.153884138
Riverside (SC)	2024	T7 utility	Aggregate	Aggregate	DSL	111.7721205	2267.75523	1285.379386	0.337087411
Riverside (SC)	2024	T7IS	Aggregate	Aggregate	GAS	6.027894532	477.2704955	120.6061138	0.106770859
Riverside (SC)	2024	UBUS	Aggregate	Aggregate	GAS	166.3958246	23427.66786	665.5832982	3.649202734
Riverside (SC)	2024	UBUS	Aggregate	Aggregate	DSL	0.141961099	11.67769301	0.567844395	0.001254697
Riverside (SC)	2024	UBUS	Aggregate	Aggregate	ELEC	0.058469431	1.251702935	0.233877724	0
Riverside (SC)	2024	UBUS	Aggregate	Aggregate	NG	207.5051617	27220.24364	830.0206468	6.438402902

Operation-Related Vehicle Fuel/Energy Usage

Proposed Project -- Passenger Vehicles

MODIFIED PROJECT COMMUTE

Vehicle Type	Gas		Diesel		CNG		Electricity	
	VMT	Gallons	VMT	Gallons	VMT	Gallons	VMT	kWh
All	5,451,955	193,685	120,266	7,308	1,085	330	107,211	34,971
Total	**5,451,955**	**193,685**	**120,266**	**7,308**	**1,085**	**330**	**107,211**	**34,971**

Proposed Project

PROPOSED CONDITIONS

Vehicle type	Fleet percent			VMT			
	Apartments Mid-Rise	Regional Shopping Center	High Turnover (Sit Down Restaurant)	Apartments Mid-Rise	Regional Shopping Center	High Turnover (Sit Down Restaurant)	Total
LDA	64.43%	54.48%	54.48%	2,754,750	554,022	211,239	3,520,011
LDT1	7.43%	6.28%	6.28%	317,774	63,910	24,368	406,051
LDT2	22.17%	18.75%	18.75%	947,998	190,657	72,694	1,211,349
MDV	2.00%	12.72%	12.72%	85,516	129,392	49,335	264,244
LHD1	0.45%	2.31%	2.31%	19,083	23,480	8,953	51,516
LHD2	0.12%	0.61%	0.61%	5,028	6,186	2,359	13,573
MHD	0.20%	1.05%	1.05%	8,659	10,653	4,062	23,373
HHD	0.15%	0.80%	0.80%	6,623	8,148	3,107	17,878
OBUS	0.00%	0.09%	0.09%	0	941	359	1,299
UBUS	0.00%	0.06%	0.06%	0	621	237	858
MCY	2.97%	2.44%	2.44%	127,013	24,808	9,459	161,279
SBUS	0.01%	0.07%	0.07%	577	710	271	1,558
MH	0.07%	0.34%	0.34%	2,788	3,431	1,308	7,527
	100.00%	100.00%	100.00%	4,275,809	1,016,956	387,748	5,680,513

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,165.35	1,165.35	1165.35	4,275,809	4,275,809
Enclosed Parking with Elevator	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	317.05	317.05	317.05	1,016,956	1,016,956
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Recreational Swimming Pool	0.00	0.00	0.00		
Regional Shopping Center	112.70	112.70	112.70	387,748	387,748
Total	1,595.10	1,595.10	1,595.10	5,680,513	5,680,513

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.644264	0.074319	0.221712	0.020000	0.004463	0.001176	0.002025	0.001549	0.000000	0.000000	0.029705	0.000135	0.000652
Enclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
High Turnover (Sit Down Restaurant)	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Other Asphalt Surfaces	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Other Non-Asphalt Surfaces	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Recreational Swimming Pool	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Regional Shopping Center	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

PROPOSED CONDITIONS

Vehicle type	Gas percent	Diesel percent	CNG percent	Electricity percent	
LDA	96.62%	0.92%	0.00%	2.46%	
LDT1	98.85%	0.03%	0.00%	1.12%	
LDT2	98.14%	0.76%	0.00%	1.10%	
MDV	96.51%	2.46%	0.00%	1.02%	
LHD1	56.77%	43.23%	0.00%	0.00%	
LHD2	35.72%	64.28%	0.00%	0.00%	
MHD	15.81%	84.19%	0.00%	0.00%	<< Equal to T6 (https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf)
HHD	0.08%	98.29%	1.63%	0.00%	<< Equal to T7 (https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf)
OBUS	39.79%	60.21%	0.00%	0.00%	<< Motor coach, all other buses, and OBUS (https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf)
UBUS	6.98%	0.25%	92.54%	0.23%	
MCY	100.00%	0.00%	0.00%	0.00%	
SBUS	34.75%	65.25%	0.00%	0.00%	
MH	74.85%	25.15%	0.00%	0.00%	

PROPOSED CONDITIONS

Vehicle type	Gasoline			Diesel			CNG			Electricity		
	VMT	mpg	Gallons	VMT	mpg	Gallons	VMT	mpg	Gallons	VMT	m/kWh	kWh
LDA	3,400,912	31.12	109,278	32,463	48.57	668	0	0.00	0	86,636	3.07	28,260
LDT1	401,363	26.80	14,975	142	22.08	6	0	0.00	0	4,546	3.07	1,483
LDT2	1,188,813	25.20	47,172	9,214	35.74	258	0	0.00	0	13,323	3.07	4,346
MDV	255,030	20.46	12,465	6,509	27.66	235	0	0.00	0	2,704	3.07	882
LHD1	29,247	10.57	2,766	22,269	22.10	1,008	0	0.00	0	0	3.07	0
LHD2	4,848	9.21	526	8,726	19.90	438	0	0.00	0	0	3.07	0
MHD	3,694	5.12	722	19,678	11.00	1,789	0	0.00	0	0	3.07	0
HHD	15	4.20	4	17,572	7.00	2,509	291	2.27	128	0	3.07	0
OBUS	517	5.06	102	782	9.06	86	0	0.00	0	0	3.07	0
UBUS	60	4.35	14	2	5.66	0	794	3.93	202	2	3.07	0
MCY	161,279	35.68	4,520	0	0.00	0	0	0.00	0	0	3.07	0
SBUS	541	9.27	58	1,016	7.70	132	0	0.00	0	0	3.07	0
MH	5,634	5.21	1,082	1,893	10.67	177	0	0.00	0	0	3.07	0
	5,451,955		**193,685**	**120,266**		**7,308**	**1,085**		**330**	**107,211**		**34,971**

Appendix

Appendix B Geotechnical Engineering Investigation

Appendix

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GEOTECHNICAL • ENVIRONMENTAL • GEOLOGY • MATERIALS TESTING & INSPECTION • FORENSIC • LABORATORY

SALEM
engineering group, inc.

GEOTECHNICAL ENGINEERING INVESTIGATION

PROPOSED MIXED-USE BUILDING
8825 WASHINGTON BOULEVARD
PICO RIVERA, CALIFORNIA

SALEM PROJECT NO. 3-220-0499
JULY 31, 2020

PREPARED FOR:

MR. JEROME MICKELSON
OPTIMUS PROPERTIES, INC.
1891 CENTURY PARK EAST, SUITE 2100
LOS ANGELES, CA 90067

PREPARED BY:

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July 31, 2020 Project No. 3-220-0499

Mr. Jerome Mickelson
Executive Vice President
Optimus Properties, Inc.
1801 Century Park East, Suite 2100
Los Angeles, CA 90067

SUBJECT: GEOTECHNICAL ENGINEERING INVESTIGATION
PROPOSED MIXED-USE BUILDING
8825 WASHINGTON BOULEVARD
PICO RIVERA, CALIFORNIA

Dear Mr. Mickelson:

At your request and authorization, SALEM Engineering Group, Inc. (SALEM) has prepared this Geotechnical Engineering Investigation report for the Proposed Mixed-Use Building to be located at the subject site.

The accompanying report presents our findings, conclusions, and recommendations regarding the geotechnical aspects of designing and constructing the project as presently proposed. In our opinion, the proposed project is feasible from a geotechnical viewpoint provided our recommendations are incorporated into the design and construction of the project.

We appreciate the opportunity to assist you with this project. Should you have questions regarding this report or need additional information, please contact the undersigned at (909) 980-6455.

Respectfully Submitted,

SALEM ENGINEERING GROUP, INC.

Clarence Jiang, GE
Senior Geotechnical Engineer
RGE 2477

R. Sammy Salem, MS, PE, GE
Principal Engineer
RCE 52762 / RGE 2549

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GEOTECHNICAL ENGINEERING INVESTIGATION
PROPOSED MIXED-USE BUILDING
8825 WASHINGTON BOULEVARD
PICO RIVERA, CALIFORNIA

1. PURPOSE AND SCOPE

This report presents the results of our Geotechnical Engineering Investigation for the Proposed Mixed-Use Building to be located at 8825 Washington Boulevard in Pico Rivera, California (see Figure 1, Vicinity Map).

The purpose of our geotechnical engineering investigation was to observe and sample the subsurface conditions encountered at the site, and provide conclusions and recommendations relative to the geotechnical aspects of constructing the project as presently proposed. The scope of this investigation included a field exploration, laboratory testing, engineering analysis and the preparation of this report. Our field exploration was performed on July 7 and 8, 2020 and included the drilling of six (6) small-diameter soil borings to a maximum depth of 51½ feet at the site. Additionally, three (3) percolation tests were conducted at a depth of approximately 15 feet below ground surface. The locations of the soil borings and percolation tests are depicted on Figure 2, Site Plan. A detailed discussion of our field investigation, exploratory boring logs are presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to evaluate pertinent physical properties for engineering analyses. Appendix B presents the laboratory test results in tabular and graphic format.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions. If project details vary significantly from those described herein, SALEM should be contacted to determine the necessity for review and possible revision of this report.

Earthwork and Pavement Specifications are presented in Appendix C. If text of the report conflict with the specifications in Appendix C, the recommendations in the text of the report have precedence.

2. PROJECT DESCRIPTION

Based on the information provided to us, we understand the proposed development of the site will include demolition of a 34,445 square-foot restaurant building and construction of a mixed use, 6 story, 255-unit wrap-apartment with 7 levels of parking (1 level underground) and ±5,000 square feet of ground level retail spaces. The building also includes one level of underground public self-storage (±23,000 square feet) with a separate entrance. Maximum wall load is expected to be 30 kips per linear foot. Maximum column load is expected to be 500 kips. Floor slab soil bearing pressure is expected to be 150 psf.

A site grading plan was not available at the time of preparation of this report. As the site area is essentially level, we anticipate that cuts and fills during earthwork will be minimal and limited to providing level pads and positive site drainage. In the event that changes occur in the nature or design of the project, the conclusions and recommendations contained in this report will not be considered valid unless the changes are reviewed and the conclusions of our report are modified. The site configuration and locations of proposed improvements are shown on the Site Plan, Figure 2.

3. SITE LOCATION AND DESCRIPTION

The project site encompasses approximately 2.6 acres and is located within the southwest portion of the Pico Rivera Marketplace which is situated at the northwest corner of Washington Boulevard and Rosemead Boulevard in the City of Pico Rivera, California (see Vicinity Map, Figure 1).

The site is currently occupied by a vacant restaurant building (8825 Washington Blvd) with paved parking and landscaping. The landscaping includes palm trees that are up to 50 feet tall.

At the time of our field exploration, a 4 to 5 foot deep trench with miscellaneous debris was present to the southwest of the vacant building. Excavated soils were stockpiled along the trench. Mounds of soil and debris were present directly west of the vacant building and at the westernmost portion of the site. The site is relatively flat with no major changes in grade and has an average elevation of approximately 165 feet above mean sea level based on Google Earth imagery.

4. FIELD EXPLORATION

Our field exploration consisted of site surface reconnaissance and subsurface exploration. The exploratory test borings (B-1 through B-6) were drilled on July 7 and 8, 2020 in the area shown on the Site Plan, Figure 2. The test borings were advanced with 6-inch diameter solid flight augers rotated by a truck-mounted CME 55 drill rig. The test borings were extended to a maximum depth of approximately 51½ feet below existing grade.

The materials encountered in the test borings were visually classified in the field, and logs were recorded by a field engineer and stratification lines were approximated on the basis of observations made at the time of drilling. Visual classification of the materials encountered in the test borings were generally made in accordance with the Unified Soil Classification System (ASTM D2487).

A soil classification chart and key to sampling is presented on the Unified Soil Classification Chart, in Appendix "A." The logs of the test borings are presented in Appendix "A." The Boring Logs include the soil type, color, moisture content, dry density, and the applicable Unified Soil Classification System symbol. The location of the test borings were determined by measuring from features shown on the Site Plan, provided to us. Hence, accuracy can be implied only to the degree that this method warrants.

The actual boundaries between different soil types may be gradual and soil conditions may vary. For a more detailed description of the materials encountered, the Boring Logs in Appendix "A" should be consulted. Soil samples were obtained from the test borings at the depths shown on the logs of borings. The MCS samples were recovered and capped at both ends to preserve the samples at their natural moisture content; SPT samples were recovered and placed in a sealed bag to preserve their natural moisture content. The borings were backfilled with soil cuttings after completion of the drilling.

5. LABORATORY TESTING

Laboratory tests were performed on selected soil samples to evaluate their physical characteristics and engineering properties. The laboratory-testing program was formulated with emphasis on the evaluation of natural moisture, density, shear strength, consolidation potential, expansion, maximum density and optimum moisture determination, and gradation of the materials encountered.

In addition, chemical tests were performed to evaluate the corrosivity of the soils to buried concrete and metal. Details of the laboratory test program and the results of laboratory test are summarized in Appendix "B." This information, along with the field observations, was used to prepare the final boring logs in Appendix "A."

6. GEOLOGIC SETTING

The subject site is located in an area termed the central plain of the Los Angeles Basin between the Los Angeles River and San Gabriel River within the Peninsular Range of Southern California. This plain has been formed by deposition of alluvium within the flood plain of the Rio Hondo and San Gabriel River which flow generally southward from the hills and mountains to the north. Published reports indicate that the Quaternary Age alluvium is from 600 to 800 feet thick in the area, and is underlain by Tertiary Age marine sedimentary rocks several thousand feet in thickness. These deposits are generally fine to coarse grained, consisting primarily of mixtures of gravel, sand, and silt of valleys and floodplains. Tectonism of the region is dominated by the interaction of the East Pacific Plate and the North American Plate along a transform boundary. Deposits encountered on the subject site during exploratory drilling are discussed in detail in this report.

7. GEOLOGIC HAZARDS

7.1 Faulting and Seismicity

Based on the proximity of several dominant active faults and seismogenic structures, as well as the historic seismic record, the area of the subject site is considered subject to relatively high seismic activity. The seismic hazard most likely to impact the site is ground-shaking due to a large earthquake on one of the major active regional faults. Moderate to large earthquakes have affected the area of the subject site within historic time.

The project area is not within an Alquist-Priolo Earthquake Fault (Special Studies) Zone and will not require a special site investigation by an Engineering Geologist. Soils on site are classified as Site Class D in accordance with Chapter 16 of the California Building Code. The proposed structures are determined to be in Seismic Design Category D.

To determine the distance of known active faults within 100 miles of the site, we used the United States Geological Survey (USGS) web-based application *2008 National Seismic Hazard Maps - Fault Parameters*. Site latitude is 33.9847° north; site longitude is 118.0984° west. The ten closest active faults are summarized below in Table 7.1.

TABLE 7.1
REGIONAL FAULT SUMMARY

Fault Name	Distance to Site (miles)	Maximum Earthquake Magnitude, M_w
Puente Hills (LA)	2.0	7.0
Elsinore; W+GI+T+J+CM	2.9	7.9
Puente Hills (Santa Fe Springs)	4.9	6.7
Elysian Park (Upper)	5.6	6.7
Puente Hills (Coyote Hills)	7.1	6.9
Raymond	9.4	6.8
Verdugo	10.6	6.9
Newport-Inglewood Connected alt 2	11.5	7.5
Newport-Inglewood Connected alt 1	11.8	7.5
Hollywood	12.0	6.7

The faults tabulated above and numerous other faults in the region are sources of potential ground motion. However, earthquakes that might occur on other faults throughout California are also potential generators of significant ground motion and could subject the site to intense ground shaking.

7.2 Surface Fault Rupture

The site is not within a currently established State of California Earthquake Fault Zone for surface fault rupture hazards. No active 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.

7.3 Ground Shaking

Seismic coefficients and spectral response acceleration values were developed based on the 2019 California Building Code CBC). The CBC methodology for determining design ground motion values is based on the Office of Statewide Health Planning and Development (OHSPD) Seismic Design Maps, which incorporate both probabilistic and deterministic seismic ground motion.

Based on the 2019 CBC, a Site Class D represents the on-site soil conditions with standard penetration resistance, N-values, averaging between 15 and 50 blows per foot in the upper 100 feet below site grade. A table providing the recommended design acceleration parameters of the project site, based on a Site Class D designation, is included in Section 9.2.1 of this report.

Based on the Office of Statewide Health Planning and Development (OSHPD) Seismic Design Maps, the estimated design peak ground acceleration adjusted for site class effects (PGA_M) was determined to be 0.869g (based on both probabilistic and deterministic seismic ground motion).

7.4 Liquefaction

Soil liquefaction is a state of soil particles suspension caused by a complete loss of strength when the effective stress drops to zero. Liquefaction normally occurs under saturated conditions in soils such as sand in which the strength is purely frictional. Primary factors that trigger liquefaction are: moderate to strong ground shaking (seismic source), relatively clean, loose granular soils (primarily poorly graded sands and silty sands), and saturated soil conditions (shallow groundwater). Due to the increasing overburden pressure with depth, liquefaction of granular soils is generally limited to the upper 50 feet of a soil profile.

Groundwater was not encountered during our investigation. Based on the State of California Seismic Hazard Zone Report 037, Whittier Quadrangle, Plate 1.2, Open-File Report 98-28, the historically highest groundwater is at a depth of approximately 15 feet below ground surface.

The soils encountered within the depth of 51½ feet on the project site consisted predominately of loose to very dense silty sand, well-graded sand, well-graded sand with silt, poorly graded sand, and poorly graded sand with silt; and soft to stiff silt, sandy silt, and sandy clay. Low to very low cohesion strength is associated with the sandy soil. A seismic hazard, which could cause damage to the proposed development during seismic shaking, is the post-liquefaction settlement of the liquefied sands.

Based on the State of California, Seismic Hazard Zone Map, Whittier Quadrangle, Dated March 25, 1999, the site is located within a liquefaction potential zone. The potential for soil liquefaction during a seismic event was evaluated using LiqIT computer program (version 4.7.5) developed by GeoLogismiki of Greece. For the analysis, a maximum earthquake magnitude of 7.9 M_w, a peak horizontal ground surface acceleration of 0.87g (with a 2% probability of exceedance in 50 years) and a groundwater depth of 15 feet were considered appropriate for the liquefaction analysis. The liquefaction analysis indicated that the site soils had a low potential for liquefaction under seismic conditions. The total liquefaction-induced settlements were calculated to be 2.34 to 3.87 inches. The liquefaction analysis report is included in Appendix A.

7.5 Lateral Spreading

Lateral spreading is a phenomenon in which soils move laterally during seismic shaking and is often associated with liquefaction. The amount of movement depends on the soil strength, duration and intensity of seismic shaking, topography, and free face geometry. Due to the relatively flat site topography, we judge the likelihood of lateral spreading to be low.

7.6 Landslides

There are no known landslides at the site, nor is the site in the path of any known or potential landslides. We do not consider the potential for a landslide to be a hazard to this project.

7.7 Tsunamis and Seiches

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.

8. SOIL AND GROUNDWATER CONDITIONS

8.1 Subsurface Conditions

The subsurface conditions encountered appear typical of those found in the geologic region of the site. In general, the soils within the depth of exploration consisted predominately of loose to very dense silty sand, well-graded sand, well-graded sand with silt, poorly graded sand, and poorly graded sand with silt; and soft to stiff silt, sandy silt, and sandy clay. The pavement within our test borings consisted of approximately 4 inches of asphalt concrete (AC) underlain by approximately 0 to 3 inches of aggregate base (AB). A layer of geofabric (Petromat) was encountered within the AC.

Fill soils are anticipated to be present onsite between our test boring locations since the site was previously graded for the current development. Verification of the extent of fill should be determined during site grading. Field and laboratory tests suggest that the deeper native soils are moderately strong and slightly compressible. These soils extended to the termination depth of our borings.

The soils were classified in the field during the drilling and sampling operations. The stratification lines were approximated by the field engineer on the basis of observations made at the time of drilling. The actual boundaries between different soil types may be gradual and soil conditions may vary. For a more detailed description of the materials encountered, the Boring Logs in Appendix "A" should be consulted. The Boring Logs include the soil type, color, moisture content, dry density, and the applicable Unified Soil Classification System symbol. The locations of the test borings were determined by measuring from feature shown on the Site Plan, provided to us. Hence, accuracy can be implied only to the degree that this method warrants.

8.2 Groundwater

The test boring locations were checked for the presence of groundwater during and after the drilling operations. Free groundwater was not encountered during this investigation. The historically highest groundwater is estimated to be at a depth of approximately 15 feet below existing grade based on the Seismic Hazard Zone Report 037, Whittier 7.5-Minute Quadrangle, Plate 1.2, Open-File Report 98-28.

It should be recognized that water table elevations may fluctuate with time, being dependent upon seasonal precipitation, irrigation, land use, localized pumping, and climatic conditions as well as other factors. Therefore, water level observations at the time of the field investigation may vary from those encountered during the construction phase of the project. The evaluation of such factors is beyond the scope of this report.

8.3 Soil Corrosion Screening

Excessive sulfate in either the soil or native water may result in an adverse reaction between the cement in concrete and the soil. The 2014 Edition of ACI 318 (ACI 318) has established criteria for evaluation of sulfate and chloride levels and how they relate to cement reactivity with soil and/or water.

A soil sample was obtained from the project site and was tested for the evaluation of the potential for concrete deterioration or steel corrosion due to attack by soil-borne soluble salts and soluble chloride. The water-soluble sulfate concentration in the saturation extract from the soil sample was detected to be less

than 50 mg/kg. ACI 318 Tables 19.3.1.1 and 19.3.2.1 outline exposure categories, classes, and concrete requirements by exposure class. ACI 318 requirements for site concrete based upon soluble sulfate are summarized in Table 8.3 below.

TABLE 8.3
WATER SOLUBLE SULFATE EXPOSURE REQUIREMENTS

Water Soluble Sulfate (SO_4) in Soil, % by Weight	Exposure Severity	Exposure Class	Maximum w/cm Ratio	Min. Concrete Compressive Strength	Cementations Materials Type
0.0050	Not Severe	S0	N/A	2,500 psi	No Restriction

The water-soluble chloride concentration detected in saturation extract from the soil samples was 24 mg/kg. This level of chloride concentration is considered to be mildly corrosive.

It is recommended that a qualified corrosion engineer be consulted regarding protection of buried steel or ductile iron piping and conduit or, at a minimum, applicable manufacturer's recommendations for corrosion protection of buried metal pipe be closely followed.

8.4 Percolation Testing

Three (3) percolation tests (P-1 through P-3) were performed at the proposed infiltration system areas and were conducted in accordance with the criteria set in the Low Impact Development BMP Guideline of the County of Los Angeles, Department of Public Works. Results of the falling head tests are presented in the attachments to this report. The approximate locations of the percolation tests are shown on the attached Site Plan, Figure 2.

The holes were pre-saturated before percolation testing commenced. Percolation rates were measured by filling the test holes with clean water and measuring the water drops at a certain time interval. The percolation rate data are presented in tabular format at the end of this Report. The difference in the percolation rates are reflected by the varied type of soil materials at the bottom of the test holes. The test results are shown on the table below.

TABLE 8.4
PERCOLATION TEST RESULTS

Test No.	Depth (feet)	Measured Percolation Rate (inch/hour)	Total Reduction Factor*	Design Infiltration Rate (inch/hour)**	Soil Type***
P-1	14.5	12.00	4	**3.00**	SAND (SP)
P-2	14.4	11.20	4	**2.80**	SAND w/Silt (SW/SM)
P-3	14.4	11.81	4	**2.95**	SAND (SP)

*** RF_t = 2, RF_v = 1, RF_s = 2, Total Reduction Factor, RF = RF_t x RF_v x RF_s = 4**
****Design Infiltration Rate = Measured Percolation Rate / RF**
***** At bottom of drilled holes**

RF_s = 1 to 3 which is based on the specified levels of pre-treatment and maintenance requirements. The value should be verified by the project Civil Engineer.

Please be advised that when performing percolation testing services in relatively small diameter borings, that the testing may not fully model the actual full scale long term performance of a given site. This is particularly true where percolation test data is to be used in the design of large infiltration system such as may be proposed for the site. The measured percolation rate includes dispersion of the water at the sidewalls of the boring as well as into the underlying soils. The soil infiltration or percolation rates are based on tests conducted with clear water. The infiltration/percolation rates may vary with time as a result of soil clogging from water impurities.

The soils may also become less permeable to impermeable if the soil is compacted. Thus, periodic maintenance consisting of clearing the bottom of the drainage system of clogged soils should be expected. The infiltration/percolation rate may become slower if the surrounding soil is wet or saturated due to prolonged rainfalls. Additional percolation tests should be conducted at bottom of the drainage system during construction to verify the infiltration/percolation rate. Groundwater, if closer to the bottom of the drainage system, will also reduce the infiltration/percolation rate. Infiltration systems shall be located, at minimum, a distance of 10 feet from any foundations and 10 feet from property lines. Infiltration in compacted fill is not allowed. Provided that the infiltration system is located at a minimum distance of 10 feet away from any foundations, the infiltration would not result in distress to the adjacent buildings.

The scope of our services did not include a groundwater study and was limited to the performance of percolation testing and soil profile description, and the submitted data only. Our services did not include those associated with septic system design. Neither did services include an Environmental Site Assessment for the presence or absence of hazardous and/or toxic materials in the soil, groundwater, or atmosphere; or the presence of wetlands. Any statements, or absence of statements, in this report or on any boring logs regarding odors, unusual or suspicious items, or conditions observed, are strictly for descriptive purposes and are not intended to convey engineering judgment regarding potential hazardous and/or toxic assessment.

9. CONCLUSIONS AND RECOMMENDATIONS

9.1 General

9.1.1 Based upon the data collected during this investigation, and from a geotechnical engineering standpoint, it is our opinion that the site is suitable for the proposed construction of improvements at the site as planned, provided the recommendations contained in this report are incorporated into the project design and construction. Conclusions and recommendations provided in this report are based on our review of available literature, analysis of data obtained from our field exploration and laboratory testing program, and our understanding of the proposed development at this time.

9.1.2 The primary geotechnical constraints identified in our investigation is the presence of undocumented fill, liquefiable soils and compressible materials at the site. Recommendations to mitigate the effects of potentially compressible materials are provided in this report.

9.1.3 The scope of this investigation did not include subsurface exploration within the existing building during field exploration. As such, subsurface soil conditions and materials present

below the existing site structures are unknown and may be different than those noted within this report. The presence of potentially unacceptable fill materials, undocumented fill, and/or loose soil material that may be present below existing site features shall be taken into consideration. Our firm shall be present at the time of demolition activities to verify soil conditions are consistent with those identified as part of this investigation.

9.1.4 Fill soils are anticipated to be present onsite between our test boring locations since the site was previously graded for the current development. Undocumented fill materials are not suitable to support any future structures and should be excavated and replaced with Engineered Fill. The extent and consistency of the fills should be verified during site construction. Prior to fill placement, SALEM should inspect the bottom of the excavation to verify the bottom condition.

9.1.5 Site demolition activities shall include removal of all surface obstructions not intended to be incorporated into final site design. In addition, underground buried structures and/or utility lines encountered during demolition and construction should be properly removed and the resulting excavations backfilled with Engineered Fill. It is suspected that possible demolition activities of the existing structures may disturb the upper soils. After demolition activities, it is recommended that disturbed soils be removed and/or recompacted.

9.1.6 Geogrid is a commonly and economically used method to reduce structural damage due to liquefaction. This method has been accepted by cities and counties throughout California, and implemented into design and construction of many retail buildings. However, this method may not be accepted by some local jurisdictions. We have no control for the acceptance of this method for this project. To use geogrid method, it is recommended that the proposed building be designed and the structural drawings be prepared **after** this report is approved by the City of Pico Rivera.

9.1.7 Recommendations for the geogrid system (option 1) are provided in Section 9.6 of this report. As an alternative to the use of geogrid, the proposed building may be supported by a structural slab system. A structural slab system will help reduce structural damage caused by liquefaction. Recommendations for a structural slab system (option 2) are provided in Section 9.7 of this report.

9.1.8 In lieu of the geogrid reinforcement method or the structural slab system, the buildings may be supported on deep foundations or by utilizing stone columns. Recommendations for a deep foundation system or the stone column method may be provided to the client by Salem Engineering Group, Inc. upon request.

9.1.9 SALEM shall review the project grading and foundation plans, and specifications prior to final design submittal to assess whether our recommendations have been properly implemented and evaluate if additional analysis and/or recommendations are required. If SALEM is not provided plans and specifications for review, we cannot assume any responsibility for the future performance of the project.

9.1.10 SALEM shall be present at the site during site demolition and preparation to observe site clearing/demolition, preparation of exposed surfaces after clearing, and placement, treatment and compaction of fill material.

9.1.11 SALEM's observations should be supplemented with periodic compaction tests to establish substantial conformance with these recommendations. Moisture content of footings and slab subgrade should be tested immediately prior to concrete placement. SALEM should observe foundation excavations prior to placement of reinforcing steel or concrete to assess whether the actual bearing conditions are compatible with the conditions anticipated during the preparation of this report.

9.2 Seismic Design Criteria

9.2.1 For seismic design of the structures, and in accordance with the seismic provisions of the 2019 CBC, our recommended parameters are shown below. These parameters are based on Probabilistic Ground Motion of 2% Probability of Exceedance in 50 years. The Site Class was determined based on the results of our field exploration.

TABLE 9.2.1
SEISMIC DESIGN PARAMETERS

Seismic Item	Symbol	Value	ASCE 7-16 or 2019 CBC Reference
Site Coordinates (Datum = NAD 83)		33.9847 Lat -118.0984 Lon	
Site Class	--	D	ASCE 7-16 Table 20.3-1
Soil Profile Name	--	Stiff Soil	ASCE 7-16 Table 20.3-1
Risk Category	--	II	CBC Table 1604.5
Site Coefficient for PGA	F_{PGA}	1.1	ASCE 7-16 Table 11.8-1
Peak Ground Acceleration (adjusted for Site Class effects)	PGA_M	0.869g	ASCE 7-16 Equation 11.8-1
Seismic Design Category	SDC	D	ASCE 7-16 Section 11.6
Mapped Spectral Acceleration (Short period - 0.2 sec)	S_S	1.833 g	CBC Figure 1613.2.1(1)
Mapped Spectral Acceleration (1.0 sec. period)	S_1	0.656 g	CBC Figure 1613.2.1(2)
Site Class Modified Site Coefficient	F_a	1	CBC Table 1613.2.3(1)
Site Class Modified Site Coefficient	F_v	*1.7	CBC Table 1613.2.3(2)
MCE Spectral Response Acceleration (Short period - 0.2 sec) $S_{MS} = F_a S_S$	S_{MS}	1.833 g	CBC Equation 16-36
MCE Spectral Response Acceleration (1.0 sec. period) $S_{M1} = F_v S_1$	S_{M1}	*1.115 g	CBC Equation 16-37
Design Spectral Response Acceleration $S_{DS}=\frac{2}{3}S_{MS}$ (short period - 0.2 sec)	S_{DS}	1.222 g	CBC Equation 16-38
Design Spectral Response Acceleration $S_{D1}=\frac{2}{3}S_{M1}$ (1.0 sec. period)	S_{D1}	*0.743 g	CBC Equation 16-39
Short Term Transition Period (S_{D1}/S_{DS}), seconds	T_S	0.608	ASCE 7-16, Section 11.4.6
Long Term Transition Period (seconds)	T_L	8	ASCE 7-16, Figure 22-14

*** Determined per ASCE Table 11.4-2 for use in calculating T_S only**

9.2.2 Site Specific Ground Motion Analysis was not included in the scope of this investigation. Per ASCE 11.4.8, structures on Site Class D with S_1 greater than or equal to 0.2 may require Site Specific Ground Motion Analysis. However, a site specific motion analysis may not be required based on Exceptions listed in ASCE 11.4.8. The Structural Engineer should verify whether Exception No. 2 of ASCE 7-16, Section 11.4.8, is valid for the site. In the event that a site specific ground motion analysis is required, SALEM should be contacted for these services.

9.2.3 Conformance to the criteria in the above table 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.

9.3 Soil and Excavation Characteristics

9.3.1 Based on the soil conditions encountered in our soil borings, the onsite soils can be excavated with moderate effort using conventional excavation equipment.

9.3.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable Occupational Safety and Health Administration (OSHA) rules and regulations to maintain safety and maintain the stability of adjacent existing improvements. Temporary excavations are further discussed in a later Section of this report.

9.3.3 The near surface soils identified as part of our investigation are, generally, moist to very moist due to the absorption characteristics of the soil. Earthwork operations may encounter very moist unstable soils which may require removal to a stable bottom. Exposed native soils exposed as part of site grading operations shall not be allowed to dry out and should be kept continuously moist prior to placement of subsequent fill.

9.4 Materials for Fill

9.4.1 Excavated soils generated from cut operations at the site are suitable for use as general Engineered Fill in structural area, provided they do not contain deleterious matter, organic material, rock material larger than 3 inches in maximum dimension, or an Expansion Index greater than 20 (EI>20).

9.4.2 The preferred materials specified for Engineered Fill are suitable for most applications with the exception of exposure to erosion. Project site winterization and protection of exposed soils during the construction phase should be the sole responsibility of the Contractor, since they have complete control of the project site.

9.4.3 Import soil shall be well-graded, slightly cohesive silty fine sand or sandy silt, with relatively impervious characteristics when compacted. A clean sand or very sandy soil is not acceptable for this purpose. This material should be approved by the Engineer prior to use and should typically possess the soil characteristics summarized below in Table 9.4.3.

TABLE 9.4.3
IMPORT FILL REQUIREMENTS

Minimum Percent Passing No. 200 Sieve	15
Maximum Percent Passing No. 200 Sieve	50
Minimum Percent Passing No. 4 Sieve	70
Maximum Particle Size	3"
Maximum Plasticity Index	12
Maximum CBC Expansion Index	20

9.4.4 Environmental characteristics and corrosion potential of import soil materials should also be considered.

9.4.5 Proposed import materials should be sampled, tested, and approved by SALEM prior to its transportation to the site.

9.5 Grading

9.5.1 A representative of our firm should be present during all site clearing and grading operations to test and observe earthwork construction. This testing and observation is an integral part of our service as acceptance of earthwork construction is dependent upon compaction of the material and the stability of the material. The Geotechnical Engineer may reject any material that does not meet compaction and stability requirements. Further recommendations of this report are predicated upon the assumption that earthwork construction will conform to recommendations set forth in this section as well as other portions of this report.

9.5.2 A preconstruction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer and geotechnical engineer in attendance.

9.5.3 Site preparation should begin with removal of existing surface/subsurface structures, underground utilities (as required), any existing uncertified fill, and debris. Excavations or depressions resulting from site clearing operations, or other existing excavations or depressions, should be restored with Engineered Fill in accordance with the recommendations of this report.

9.5.4 Surface vegetation consisting of grasses and other similar vegetation should be removed by stripping to a sufficient depth to remove organic-rich topsoil. The upper 2 to 4 inches of the soils containing, vegetation, roots and other objectionable organic matter encountered at the time of grading should be stripped and removed from the surface. Deeper stripping may be required in localized areas. In addition, existing oversized rocks, concrete and asphalt materials shall be removed from areas of proposed improvements and stockpiled separately from excavated soil material. The stripped vegetation, oversized rocks, asphalt and concrete materials will not be suitable for use as Engineered Fill or within 5 feet of building pads or within pavement areas. However, stripped topsoil may be stockpiled and reused in landscape or non-structural areas or exported from the site.

9.5.5 Structural building pad areas should be considered as areas extending a minimum of 5 feet horizontally beyond the outside dimensions of the building, including footings and non-cantilevered overhangs carrying structural loads.

9.5.6 Recommendations for grading of the proposed building area are provided in Sections 9.6 and 9.7 (Options 1 or 2 for liquefaction mitigation) of this report.

9.5.7 Prior to placement of fill soils, the upper 10 to 12 inches of native subgrade soils should be scarified, moisture-conditioned to **no less** than the optimum moisture content and re-compacted to a minimum of 95% of the maximum dry density based on ASTM D1557-07 Test Method.

9.5.8 All Engineered Fill (including scarified ground surfaces and backfill) should be placed in thin lifts to allow for adequate bonding and compaction (typically 6 to 8 inches in loose thickness).

9.5.9 All Engineered Fill soils should be placed, moisture conditioned to near optimum moisture content, and compacted to at least 95% relative compaction.

9.5.10 An integral part of satisfactory fill placement is the stability of the placed lift of soil. If placed materials exhibit excessive instability as determined by a SALEM field representative, the lift will be considered unacceptable and shall be remedied prior to placement of additional fill material. Additional lifts should not be placed if the previous lift did not meet the required dry density or if soil conditions are not stable.

9.5.11 Within pavement areas, it is recommended that scarification, moisture conditioning and re-compaction be performed to at least 12 inches below existing grade or finish grade, whichever is deeper. In addition, the upper 12 inches of final pavement subgrade, whether completed at-grade, by excavation, or by filling, should be uniformly moisture-conditioned to no less than the optimum moisture content and compacted to at least 95% relative compaction.

9.5.12 Final pavement subgrade should be finished to a smooth, unyielding surface. We further recommend proof-rolling the subgrade with a loaded water truck (or similar equipment with high contact pressure) to verify the stability of the subgrade prior to placing aggregate base.

9.5.13 The most effective site preparation alternatives will depend on site conditions prior to grading. We should evaluate site conditions and provide supplemental recommendations immediately prior to grading, if necessary.

9.5.14 We do not anticipate groundwater or seepage to adversely affect construction if conducted during the drier months of the year (typically summer and fall). However, groundwater and soil moisture conditions could be significantly different during the wet season (typically winter and spring) as surface soil becomes wet; perched groundwater conditions may develop. Grading during this time period will likely encounter wet materials resulting in possible excavation and fill placement difficulties. Project site winterization consisting of placement of aggregate base and protecting exposed soils during construction should be performed. If the construction schedule requires grading operations during the wet season, we can provide additional recommendations as conditions warrant.

9.5.15 Wet soils will become non conducive to site grading as the upper soils yield under the weight of the construction equipment. Therefore, mitigation measures should be performed for stabilization. Typical remedial measures include: discing and aerating the soil during dry weather; mixing the soil with dryer materials; removing and replacing the soil with an approved fill material or placement of crushed rocks or aggregate base material; or mixing the soil with an approved lime or cement product.

The most common remedial measure of stabilizing the bottom of the excavation due to wet soil condition is to reduce the moisture of the soil to near the optimum moisture content by having the subgrade soils scarified and aerated or mixed with drier soils prior to compacting. However, the drying process may require an extended period of time and delay the construction operation.

To expedite the stabilizing process, slurry or crushed rock may be utilized for stabilization provided this method is approved by the owner for the cost purpose. If the use of slurry or crushed rock is considered, it is recommended that the upper soft and wet soils be replaced by 6 to 24 inches of 2-sack slurry or ¾-inch to 1-inch crushed rocks. The thickness of the slurry or rock layer depends on the severity of the soil instability. The recommended 6 to 24 inches of crushed rock material will provide a stable platform.

It is further recommended that lighter compaction equipment be utilized for compacting the crushed rock. A layer of geofabric is recommended to be placed on top of the compacted crushed rock to minimize migration of soil particles into the voids of the crushed rock, resulting in soil movement. Although it is not required, the use of geogrid (e.g. Tensar TX7) below the crushed rock will enhance stability and reduce the required thickness of crushed rock necessary for stabilization.

Our firm should be consulted prior to implementing remedial measures to provide appropriate recommendations.

9.6 Option 1 - Shallow Foundations and Slabs with Geogrid

9.6.1 The site is suitable for use of conventional shallow foundations consisting of continuous strip footings in combination with isolated spread footings bearing on geogrid reinforced Engineered Fill.

9.6.2 Subsurface soils within the site are prone to liquefaction under high ground shaking acceleration during an earthquake. Our preliminary calculations indicated that the building areas, and at least 5 feet beyond, should be over-excavated to a depth of 4 feet below proposed footing bottom and the resulting excavation should be backfilled with a layered system of Engineered Fill and geogrid reinforcing fabric.

Any undocumented and uncompacted fills encountered during grading should be removed and replaced with engineered fill. The depth of the over-excavation should be measured from existing ground or rough pad grade, whichever is greater.

A preliminary design procedure is provided below. Global seismic induced settlement of the site is still anticipated when liquefaction occurs. Prior to placing the geogrid, the bottom of the subgrade should be scarified to a depth of 10 to 12 inches, moisture conditioned to no less than the optimum moisture content, and re-compacted to a minimum of 95% relative compaction based on ASTM D1557.

The first layer of geogrid reinforcement will be placed directly on the prepared subgrade at a depth of 4 feet below proposed footing bottom. The geogrid material should be overlapped a minimum of 3 feet in all directions. The interlock between the geogrid and Engineered Fill will provide load transfer. No vehicles may traverse the geogrid prior to placement of the Engineered Fill cover. The next layer of geogrid should be placed on top of the compacted Engineered Fill. This and subsequent layers need only be overlapped a minimum of 1 foot on all sides.

The fill soils excavated from the area may be moisture conditioned and re-compacted between geogrid layers as reinforced fill. The reinforced fill should be moisture conditioned to near optimum moisture content and re-compacted to a minimum of 95% of the maximum dry density based on ASTM D 1557 Test Method.

A total of four (4) geogrid layers, including the layer at the base of the excavation should be installed at vertical increments of 1 foot. The geogrid layers should extend to a minimum of 5 feet beyond the exterior footing perimeter of the structure. The geogrid reinforcement fabric should consist of Tensar® TX7 Geogrid. Any additional unstable soils within building areas should be excavated and backfilled with Engineered Fill.

It is recommended that the entire site be excavated at once, and soils be stockpiled on adjacent or nearby properties. The geogrid and excavated soil may then be placed and re-compacted as recommended herein.

Alternatively, the contractor may elect to excavate the site in two stages, where excavated soil can be stockpiled over one-half of the site while the other half is mitigated. However, if the contractor elects the option of two stages over the preferred option of using one stage, a minimum of 5 feet of geogrid from the first half should overlap the second half.

Furthermore, the overlapping geogrid should be protected from damages, which may be caused by operating equipment. It is further recommended that flexible utility connections be used for the project.

9.6.3 It is recommended that continuous bearing wall footings to be utilized for the building have a minimum width of 15 inches, and a minimum embedment depth of 24 inches below lowest adjacent pad grade (18 inches for below ground structures). Isolated column footings should have a minimum width of 24 inches, and a minimum embedment depth of 24 inches below lowest adjacent pad grade (18 inches for below ground structures).

9.6.4 Footing concrete should be placed into neat excavation. The footing bottoms shall be maintained free of loose and disturbed soil.

9.6.5 Footings proportioned as recommended above may be designed for the maximum allowable soil bearing pressures shown in the table below.

Loading Condition	Allowable Bearing
Dead Load Only	2,500 psf
Dead-Plus-Live Load	3,000 psf
Total Load, Including Wind or Seismic Loads	4,000 psf

9.6.6 For design purposes, total static settlement not exceeding ½ inch may be assumed for shallow foundations. Differential static settlement should not exceed ¼ inch over 30 feet. Most of the settlement is expected to occur during construction as the loads are applied. However, additional post-construction settlement may occur if the foundation soils are flooded or saturated. The footing excavations should not be allowed to dry out any time prior to pouring concrete.

9.6.7 The total settlement due to seismic loads is expected to be on the order of 2.34 to 3.87 inches. With the geogrid reinforcement, the seismic induced differential settlement is expected to be reduced to approximately ½ inch over 30 feet.

9.6.8 Resistance to lateral footing displacement can be computed using an allowable coefficient of friction factor of 0.35 acting between the base of foundations and the supporting native subgrade.

9.6.9 Lateral resistance for footings can alternatively be developed using an equivalent fluid passive pressure of 350 pounds per cubic foot acting against the appropriate vertical native footing faces. The frictional and passive resistance of the soil may be combined without reduction in determining the total lateral resistance. An increase of one-third is permitted when using the alternate load combination that includes wind or earthquake loads.

9.6.10 Minimum reinforcement for continuous footings should consist of 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.

9.6.11 Underground utilities running parallel to footings should not be constructed in the zone of influence of footings. The zone of influence may be taken to be the area beneath the footing and within a 1:1 plane extending out and down from the bottom edge of the footing.

9.6.12 The foundation subgrade should be sprinkled as necessary to maintain a moist condition without significant shrinkage cracks as would be expected in any concrete placement. Prior to placing rebar reinforcement, foundation excavations should be evaluated by a representative of SALEM for appropriate support characteristics and moisture content. Moisture conditioning may be required for the materials exposed at footing bottom, particularly if foundation excavations are left open for an extended period.

9.6.13 Slab thickness and reinforcement should be determined by the structural engineer based on the anticipated loading. We recommend that non-structural slabs-on-grade be at least 4 inches thick

and underlain by six (6) inches of compacted clean granular aggregate subbase material compacted to at least 95% relative compaction. Crushed Miscellaneous Base (CMB) should not be used within the building pad area.

9.6.14 Granular aggregate subbase material shall conform to ASTM D-2940, Latest Edition (Table 1, bases) with at least 95 percent passing a 1½-inch sieve and not more than 8% passing a No. 200 sieve or its approved equivalents to prevent capillary moisture rise.

9.6.15 We recommend reinforcing slabs, at a minimum, with No. 3 reinforcing bars placed 18 inches on center, each way.

9.6.16 Slabs subject to structural loading may be designed utilizing a modulus of subgrade reaction K of 140 pounds per square inch per inch. The K value was approximated based on inter-relationship of soil classification and bearing values (Portland Cement Association, Rocky Mountain Northwest).

9.6.17 The spacing of crack control joints should be designed by the project structural engineer. In order to regulate cracking of the slabs, we recommend that construction joints or control joints be provided at a maximum spacing of 15 feet in each direction for 5-inch thick slabs and 12 feet for 4-inch thick slabs.

9.6.18 Crack control joints should extend a minimum depth of one-fourth the slab thickness and should be constructed using saw-cuts or other methods as soon as practical after concrete placement. The exterior floors should be poured separately in order to act independently of the walls and foundation system.

9.6.19 It is recommended that the utility trenches within the structures be compacted, as specified in our report, to minimize the transmission of moisture through the utility trench backfill. Special attention to the immediate drainage and irrigation around the structures is recommended.

9.6.20 Moisture within the structures may be derived from water vapors, which were transformed from the moisture within the soils. This moisture vapor penetration can affect floor coverings and produce mold and mildew in the structures. To minimize moisture vapor intrusion, it is recommended that a vapor retarder be installed in accordance with manufacturer's recommendations and/or ASTM guidelines, whichever is more stringent. In addition, ventilation of the structures is recommended to reduce the accumulation of interior moisture.

9.6.21 In areas where it is desired to reduce floor dampness where moisture-sensitive coverings are anticipated, construction should have a suitable waterproof vapor retarder (a minimum of 15 mils thick polyethylene vapor retarder sheeting, Raven Industries "VaporBlock 15, Stego Industries 15 mil "StegoWrap" or W.R. Meadows Sealtight 15 mil "Perminator") incorporated into the floor slab design. The water vapor retarder should be decay resistant material complying with ASTM E96 not exceeding 0.04 perms, ASTM E154 and ASTM E1745 Class A. The vapor barrier should be placed between the concrete slab and the compacted granular aggregate subbase material. The water vapor retarder (vapor barrier) should be installed in accordance with ASTM Specification E 1643-94.

9.6.22 The concrete maybe placed directly on vapor retarder. The vapor retarder should be inspected prior to concrete placement. Cut or punctured retarder should be repaired using vapor retarder material lapped 6 inches beyond damaged areas and taped.

9.6.23 The recommendations of this report are intended to reduce the potential for cracking of slabs due to soil movement. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade may exhibit some cracking due to soil movement. This is common for project areas that contain expansive soils since designing to eliminate potential soil movement is cost prohibitive. 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.

9.6.24 Proper finishing and curing should be performed in accordance with the latest guidelines provided by the American Concrete Institute, Portland Cement Association, and ASTM.

9.7 Option 2 – Structural Slabs

9.7.1 As an alternative to the geogrid method, the building may be supported on a reinforced structural slab foundation system (e.g. mat foundation, modified mat foundation, post-tensioned slab or stiffened footings with rigid grade beams) to resist damage due to seismic-induced differential settlement.

9.7.2 The foundation can be designed utilizing allowable bearing pressure of 1,500 pounds per square foot for dead-plus-live loads. This value may be increased by 1/3 for short duration loads such as wind or seismic. The thickness and reinforcement of the structural slab should be determined by the Structural Engineer.

9.7.3 The structural slab should have a minimum depth of 12 inches below the lowest adjacent exterior grade. <u>The structural slab should be supported by at least 3 feet of Engineered Fill except in areas where slab subgrade is deeper than 10 feet below existing grade.</u>

9.7.4 <u>Any undocumented and uncompacted fills encountered during grading should be removed and replaced with engineered fill.</u>

9.7.5 Slab subgrade and Engineer Fill should be moisture conditioned to near optimum moisture content and re-compacted to a minimum of 95% of the maximum dry density based on ASTM D 1557 Test Method.

9.7.6 The total settlement due to foundation loads (static) is not expected to exceed 1 inch. Differential settlement due to static loads should be less than ½ inch over 30 feet. Most of the settlement is expected to occur during construction as the loads are applied. However, additional post-construction settlement may occur if the foundation soils are flooded or saturated.

9.7.7 The seismic-induced total settlements are expected to be on the order of 2.34 to 3.87 inches. The seismic-induced differential settlement is estimated to be one half of the total settlements. It is further recommended that flexible utility connectors be used for this project.

9.7.8 Resistance to lateral footing displacement can be computed using an allowable friction factor of 0.35 acting between the base of foundations and the supporting subgrade. Lateral resistance for footings can alternatively be developed using an equivalent fluid passive pressure of 350 pounds per cubic foot acting against the appropriate vertical slab faces. The frictional and passive resistance of the soil may be combined without reduction in determining the total lateral resistance.

9.8 Lateral Earth Pressures and Frictional Resistance

9.8.1 Active, at-rest and passive unit lateral earth pressures against footings and walls are summarized in the table below:

Lateral Pressure Conditions	Equivalent Fluid Pressure, pcf
Active Pressure, Drained	40
At-Rest Pressure, Drained	60
Passive Pressure	350
Traffic Surcharge (resultant at mid-highest)*	$0.64Q/(m^2+1)$
Related Parameters	
Allowable Coefficient of Friction	0.40
In-Place Soil Density (lbs/ft^3)	120

***Q = line load from traffic, m=x/h where x= horizontal distance between wall and traffic, h=wall height.**

9.8.2 Active pressure applies to walls, which are free to rotate. At-rest pressure applies to walls, which are restrained against rotation. The preceding lateral earth pressures assume sufficient drainage behind retaining walls to prevent the build-up of hydrostatic pressure.

9.8.3 The top one-foot of adjacent subgrade should be deleted from the passive pressure computation.

9.8.4 A safety factor consistent with the design conditions should be included in their usage.

9.8.5 For stability against lateral sliding, which is resisted solely by the passive pressure, we recommend a minimum safety factor of 1.5.

9.8.6 For stability against lateral sliding, which is resisted by the combined passive and frictional resistance, a minimum safety factor of 2.0 is recommended.

9.8.7 For lateral stability against seismic loading conditions, we recommend a minimum safety factor of 1.1.

9.8.8 For dynamic seismic lateral loading the following equation shall be used:

Dynamic Seismic Lateral Loading Equation
Dynamic Seismic Lateral Load = $\frac{3}{8}\gamma K_h H^2$
Where: γ = In-Place Soil Density
K_h = Horizontal Acceleration = $\frac{2}{3}PGA_M$
H = Wall Height

9.9 Retaining Walls

9.9.1 Retaining and/or below grade walls should be drained with either perforated pipe encased in free-draining gravel or a prefabricated drainage system. The gravel zone should have a minimum width of 12 inches wide and should extend upward to within 12 inches of the top of the wall. The upper 12 inches of backfill should consist of native soils, concrete, asphaltic-concrete or other suitable backfill to minimize surface drainage into the wall drain system. The gravel should conform to Class II permeable materials graded in accordance with the current CalTrans Standard Specifications.

9.9.2 Prefabricated drainage systems, such as Miradrain®, Enkadrain®, or an equivalent substitute, are acceptable alternatives in lieu of gravel provided they are installed in accordance with the manufacturer's recommendations. If a prefabricated drainage system is proposed, our firm should review the system for final acceptance prior to installation.

9.9.3 Drainage pipes should be placed with perforations down and should discharge in a non-erosive manner away from foundations and other improvements. The top of the perforated pipe should be placed at or below the bottom of the adjacent floor slab or pavements. The pipe should be placed in the center line of the drainage blanket and should have a minimum diameter of 4 inches. Slots should be no wider than 1/8-inch in diameter, while perforations should be no more than ¼-inch in diameter.

9.9.4 If retaining walls are less than 5 feet in height, the perforated pipe may be omitted in lieu of weep holes on 4 feet maximum spacing. The weep holes should consist of 2-inch minimum diameter holes (concrete walls) or unmortared head joints (masonry walls) and placed no higher than 18 inches above the lowest adjacent grade. Two 8-inch square overlapping patches of geotextile fabric (conforming to the CalTrans Standard Specifications for "edge drains") should be affixed to the rear wall opening of each weep hole to retard soil piping.

9.9.5 During grading and backfilling operations adjacent to any walls, heavy equipment should not be allowed to operate within a lateral distance of 5 feet from the wall, or within a lateral distance equal to the wall height, whichever is greater, to avoid developing excessive lateral pressures. Within this zone, only hand operated equipment ("whackers," vibratory plates, or pneumatic compactors) should be used to compact the backfill soils.

9.10 Temporary Excavations

9.10.1 We anticipate that the majority of the sandy site soils will be classified as Cal-OSHA "Type C" soil when encountered in excavations during site development and construction. Excavation sloping, benching, the use of trench shields, and the placement of trench spoils should conform to the latest applicable Cal-OSHA standards. The contractor should have a Cal-OSHA-approved "competent person" onsite during excavation to evaluate trench conditions and make appropriate recommendations where necessary.

9.10.2 It is the contractor's responsibility to provide sufficient and safe excavation support as well as protecting nearby utilities, structures, and other improvements which may be damaged by earth movements. 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.

9.10.3 Temporary excavations and slope faces should be protected from rainfall and erosion. Surface runoff should be directed away from excavations and slopes.

9.10.4 Open, unbraced excavations in undisturbed soils should be made according to the slopes presented in the following table:

RECOMMENDED EXCAVATION SLOPES

Depth of Excavation (ft)	Slope (Horizontal : Vertical)
0-5	1:1
5-10	2:1
10-15	4:1

9.10.5 If, due to space limitation, excavations near property lines or existing structures are performed in a vertical position, slot cuts, braced shorings or shields may be used for supporting vertical excavations. Therefore, in order to comply with the local and state safety regulations, a properly designed and installed shoring system would be required to accomplish planned excavations and installation. A Specialty Shoring Contractor should be responsible for the design and installation of such a shoring system during construction.

9.10.6 Braced shorings should be designed for a maximum pressure distribution of 26H, (where H is the depth of the excavation in feet). The foregoing does not include excess hydrostatic pressure or surcharge loading. Fifty percent of any surcharge load, such as construction equipment weight, should be added to the lateral load given herein. Equipment traffic should concurrently be limited to an area at least 3 feet from the shoring face or edge of the slope.

9.10.7 The excavation and shoring recommendations provided herein are based on soil characteristics derived from the borings within the area. Variations in soil conditions will likely be encountered during the excavations. SALEM Engineering Group, Inc. should be afforded the opportunity to

provide field review to evaluate the actual conditions and account for field condition variations not otherwise anticipated in the preparation of this recommendation. Slope height, slope inclination, or excavation depth should in no case exceed those specified in local, state, or federal safety regulation, (e.g. OSHA) standards for excavations, 29 CFR part 1926, or Assessor's regulations.

9.11 Temporary Soldier Pile Shoring System

9.11.1 The maximum cut required for construction of the underground parking garage and basement is estimated to be approximately 15 to 20 feet below exiting grade. Temporary excavations can be achieved using a soldier-pile and lagging system.

9.11.2 For design of a Soldier Pile Shoring System, it's recommended a uniform distribution of 26H be used for temporary shoring design of a restrained system (tieback or rakers). Passive pressure for temporary shorings soldier beam may be doubled (i.e. effective pile width = 2 times the pile diameter) for isolated pile condition. Pile size should be determined by the structural engineer.

9.11.3 Additional horizontal pressures from surface load should be considered. Surcharge load can be computed as $0.64Q/(m^2+1)$ where Q = line load from traffic, structures, or heavy materials, m=x/h where x= horizontal distance between shoring wall and line load, h=wall height. The resultant load is located at mid height of the wall.

9.11.4 The minimum depth of pile embedment should be 12 feet below bottom of footing or 1.4H for cantilever beams. The minimum depth of embedment should be 8 feet below bottom of footing or 0.5H for braced beams.

9.11.5 For tieback anchors, soil active wedge angle should be 35 degrees from the wall. Tieback anchor insertion angle should be a minimum of 15° from horizontal. The most common angle is between 15 to 30°. An angle steeper than 30° may be used if the ends of the anchors need to be deep to avoid encroachment of existing structures. The minimum bond length for tieback should equal to [Tendon Force / (Circumference x Shear Strength of Grout)] or 10 feet. An ultimate bond strength of post-grout (high pressure) of 1,500 psf may be used for the tieback design. The minimum overburden for the anchors should be 15 feet. Pressure grouting will be required if fissures are encountered. All anchors should be tested to 150% of the design load. At least 10% of the anchors should be tested to 200% of the design load for 30 minutes and some quantity, usually 4 anchors, should be tested for 200% of the design load for 24 hours.

9.11.6 The maximum design pressure for lagging is 65L psf, where L is the lagging clear span. Due to the property line constraints, the drainage system to be installed behind the basement wall may consist of a 6-inch wide and 24-inch high gravel pocket (equivalent to one cubic foot per foot) wrapped with filter fabric or a drainage board (e.g. Miradrain or Terradrain).

9.11.7 All void space behind lagging and shoring should be completely filled with sand/cement slurry. Care should be exercised when excavating into the on-site soils since potential of caving or sloughing of these materials is moderately high. Shoring of excavation is the responsibility of contractor.

9.12 Underground Utilities

9.12.1 Underground utility trenches should be backfilled with properly compacted material. The material excavated from the trenches should be adequate for use as backfill provided it does not contain deleterious matter, vegetation or rock larger than 3 inches in maximum dimension. Trench backfill should be placed in loose lifts not exceeding 8 inches and compacted to at least 95% relative compaction at or above optimum moisture content.

9.12.2 Bedding and pipe zone backfill typically extends from the bottom of the trench excavations to approximately 6 to 12 inches above the crown of the pipe. Pipe bedding and backfill material should conform to the requirements of the governing utility agency.

9.12.3 It is suggested that underground utilities crossing beneath new or existing structures be plugged at entry and exit locations to the building or structure to prevent water migration. Trench plugs can consist of on-site clay soils, if available, or sand cement slurry. The trench plugs should extend 2 feet beyond each side of individual perimeter foundations.

9.12.4 The contractor is responsible for removing all water-sensitive soils from the trench regardless of the backfill location and compaction requirements. The contractor should use appropriate equipment and methods to avoid damage to the utilities and/or structures during fill placement and compaction.

9.13 Surface Drainage

9.13.1 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 to important engineering properties. Proper drainage should be maintained at all times.

9.13.2 The ground immediately adjacent to the foundation shall be sloped away from the building at a slope of not less than 5 percent for a minimum distance of 10 feet.

9.13.3 Impervious surfaces within 10 feet of the buildings foundation shall be sloped a minimum of 2 percent away from the building and drainage gradients maintained to carry all surface water to collection facilities and off site. These grades should be maintained for the life of the project. Ponding of water should not be allowed adjacent to the structure. Over-irrigation within landscaped areas adjacent to the structure should not be performed.

9.13.4 Roof drains should be installed with appropriate downspout extensions out-falling on splash blocks so as to direct water a minimum of 5 feet away from the structures or be connected to the storm drain system for the development.

9.14 Pavement Design

9.14.1 Based on site soil conditions, an R-value of 25 was used for preliminary flexible asphaltic concrete pavement design. The R-value may be verified during grading of the pavement areas.

9.14.2 The pavement design recommendations provided herein are based on the State of California Department of Transportation (CALTRANS) design manual. The following table shows the recommended pavement sections for various traffic indices.

TABLE 9.14.2
ASPHALT CONCRETE PAVEMENT THICKNESSES

Traffic Index	Asphaltic Concrete	Crushed Aggregate Base*	Compacted Subgrade*
5.0 (Parking & Vehicle Drive Areas)	4.0"	4.0"	12.0"
6.0 (Heavy Truck Areas)	4.0"	7.0"	12.0"

95% compaction based on ASTM D1557 Test Method

9.14.3 The following recommendations are for light-duty and heavy-duty Portland Cement Concrete pavement sections.

TABLE 9.14.3
PORTLAND CEMENT CONCRETE PAVEMENT THICKNESSES

Traffic Index	Portland Cement Concrete*	Crushed Aggregate Base**	Compacted Subgrade**
5.0 (Light Duty)	5.0"	4.0"	12.0"
6.0 (Heavy Duty)	6.0"	6.0"	12.0"

**** Minimum Compressive Strength of 4,000 psi; Minimum Reinforcement of #4 bars at 15" O.C., Each Way***
***** 95% compaction based on ASTM D1557 Test Method***

10. PLAN REVIEW, CONSTRUCTION OBSERVATION AND TESTING

10.1 Plan and Specification Review

10.1.1 SALEM should review the project plans and specifications prior to final design submittal to assess whether our recommendations have been properly implemented and evaluate if additional analysis and/or recommendations are required.

10.2 Construction Observation and Testing Services

10.2.1 The recommendations provided in this report are based on the assumption that we will continue as Geotechnical Engineer of Record throughout the construction phase. It is important to maintain continuity of geotechnical interpretation and confirm that field conditions encountered are similar to those anticipated during design. If we are not retained for these services, we cannot assume

any responsibility for others interpretation of our recommendations, and therefore the future performance of the project.

10.2.2 SALEM should be present at the site during site preparation to observe site clearing, preparation of exposed surfaces after clearing, and placement, treatment and compaction of fill material.

10.2.3 SALEM's observations should be supplemented with periodic compaction tests to establish substantial conformance with these recommendations. Moisture content of footings and slab subgrade should be tested immediately prior to concrete placement. SALEM should observe foundation excavations prior to placement of reinforcing steel or concrete to assess whether the actual bearing conditions are compatible with the conditions anticipated during the preparation of this report.

11. LIMITATIONS AND CHANGED CONDITIONS

The analyses and recommendations submitted in this report are based upon the data obtained from the test borings drilled at the approximate locations shown on the Site Plan, Figure 2. The report does not reflect variations which may occur between borings. The nature and extent of such variations may not become evident until construction is initiated. If variations then appear, a re-evaluation of the recommendations of this report will be necessary after performing on-site observations during the excavation period and noting the characteristics of such variations. The findings and recommendations presented in this report are valid as of the present and for the proposed construction.

If site conditions change due to natural processes or human intervention on the property or adjacent to the site, or changes occur in the nature or design of the project, or if there is a substantial time lapse between the submission of this report and the start of the work at the site, the conclusions and recommendations contained in our report will not be considered valid unless the changes are reviewed by SALEM and the conclusions of our report are modified or verified in writing. The validity of the recommendations contained in this report is also dependent upon an adequate testing and observations program during the construction phase. Our firm assumes no responsibility for construction compliance with the design concepts or recommendations unless we have been retained to perform the on-site testing and review during construction. SALEM has prepared this report for the exclusive use of the owner and project design consultants.

SALEM does not practice in the field of corrosion engineering. It is recommended that a qualified corrosion engineer be consulted regarding protection of buried steel or ductile iron piping and conduit or, at a minimum, that manufacturer’s recommendations for corrosion protection be closely followed. Further, a corrosion engineer may be needed to incorporate the necessary precautions to avoid premature corrosion of concrete slabs and foundations in direct contact with native soil.

The importation of soil and or aggregate materials to the site should be screened to determine the potential for corrosion to concrete and buried metal piping. The report has been prepared in accordance with generally accepted geotechnical engineering practices in the area. No other warranties, either express or implied, are made as to the professional advice provided under the terms of our agreement and included in this report.

If you have any questions, or if we may be of further assistance, please do not hesitate to contact our office at (909) 980-6455.

Respectfully Submitted,

SALEM ENGINEERING GROUP, INC.

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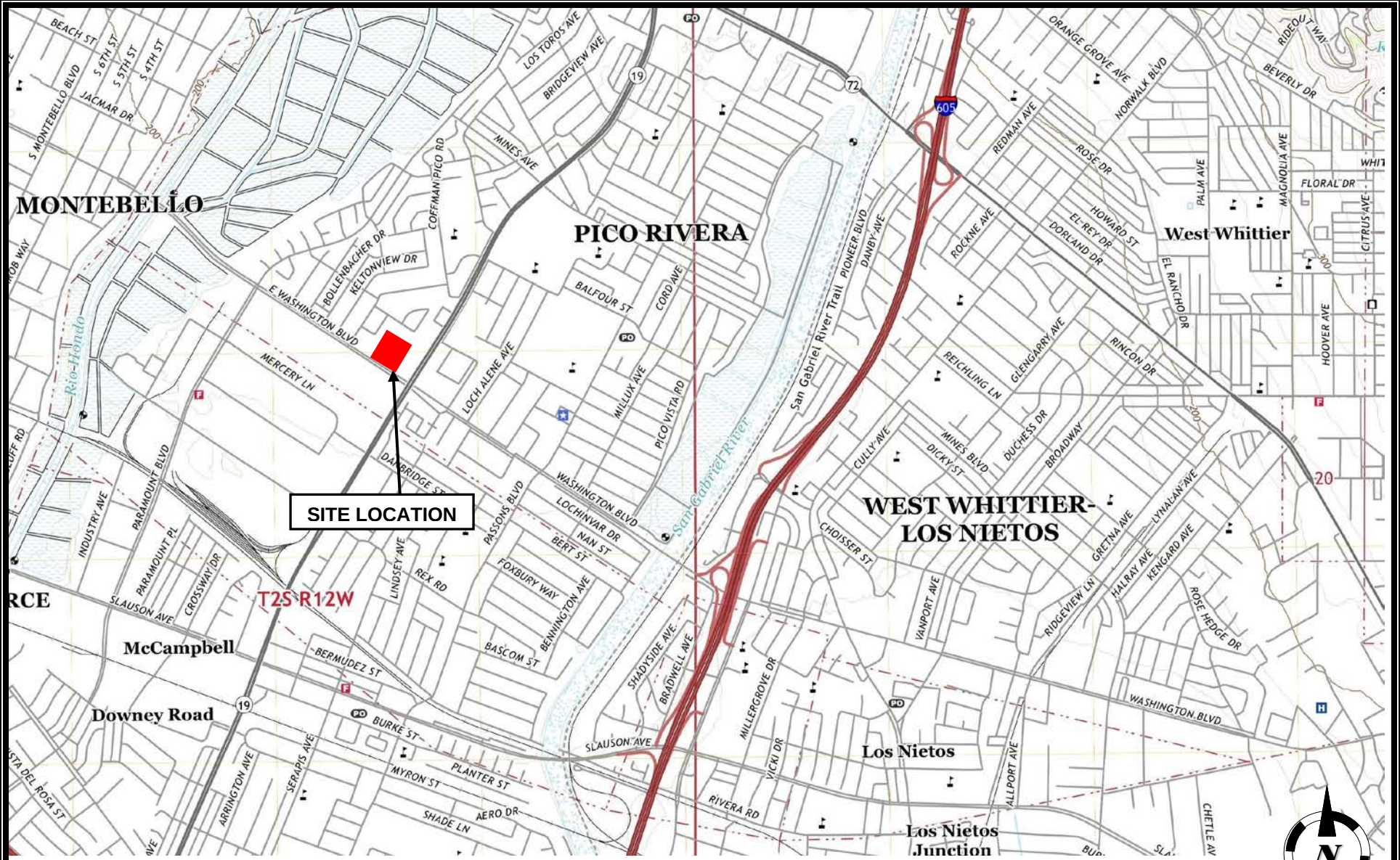


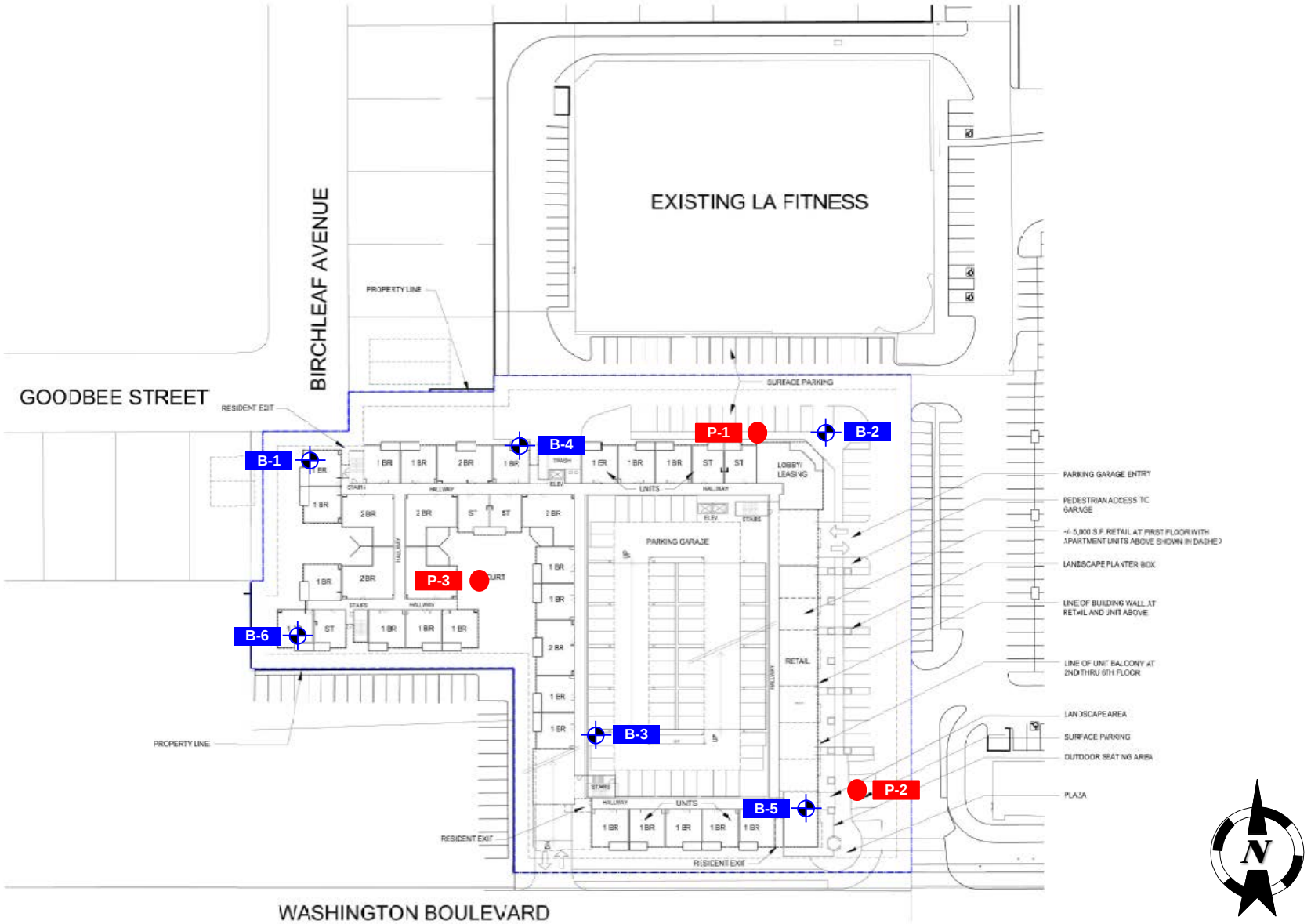
Source Image: https://ngmdb.usgs.gov/topoview

VICINITY MAP

GEOTECHNICAL ENGINEERING INVESTIGATION
Proposed Mixed-Use Building
8825 Washington Boulevard
Pico Rivera, California

SCALE:	DATE:
NOT TO SCALE	07/2020
DRAWN BY:	APPROVED BY:
JC	CJ
PROJECT NO.	FIGURE NO.
3-220-0499	1

SALEM engineering group, inc.



SITE PLAN

GEOTECHNICAL ENGINEERING INVESTIGATION
Proposed Mixed-Use Building
8825 Washington Boulevard
Pico Rivera, California

SCALE:	DATE:
NOT TO SCALE	07/2020
DRAWN BY:	APPROVED BY:
KV	CJ
PROJECT NO.	FIGURE NO.
3-220-0499	2

LEGEND:

B-1 Soil Boring Locations
P-1 Percolation Locations

All Locations Approximate

SALEM engineering group, inc.

APPENDIX

A

APPENDIX A
FIELD EXPLORATION

Fieldwork for our investigation (drilling) was conducted on July 7 and 8, 2020 and included a site visit, subsurface exploration, and soil sampling. The locations of the exploratory borings are shown on the Site Plan, Figure 2. Boring logs for our exploration are presented in figures following the text in this appendix. Borings were located in the field using existing reference points. Therefore, actual boring locations may deviate slightly.

In general, our borings were performed using a truck-mounted CME 55 drill rig equipped with 6-inch solid flight augers. Sampling in the borings was accomplished using a hydraulic 140-pound hammer with a 30-inch drop. Samples were obtained with a 3-inch outside-diameter (OD), split spoon (California Modified) sampler, and a 2-inch OD, Standard Penetration Test (SPT) sampler. The number of blows required to drive the sampler the last 12 inches (or fraction thereof) of the 18-inch sampling interval were recorded on the boring logs. The blow counts shown on the boring logs should not be interpreted as standard SPT "N" values; corrections have not been applied. Upon completion, the borings were backfilled with drill cuttings.

Subsurface conditions encountered in the exploratory borings were visually examined, classified and logged in general accordance with the American Society for Testing and Materials (ASTM) Practice for Description and Identification of Soils (Visual-Manual Procedure D2488). This system uses the Unified Soil Classification System (USCS) for soil designations. The logs depict soil and geologic conditions encountered and depths 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, drill rig penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the field logs were revised based on subsequent laboratory testing.

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Test Boring: B-1 **Page** 1 **Of:** 2

Project Number: 3-220-0499

Date: 07/07/2020

Client: Optimus Properties, Inc.

Project: Proposed Mixed-Use Building

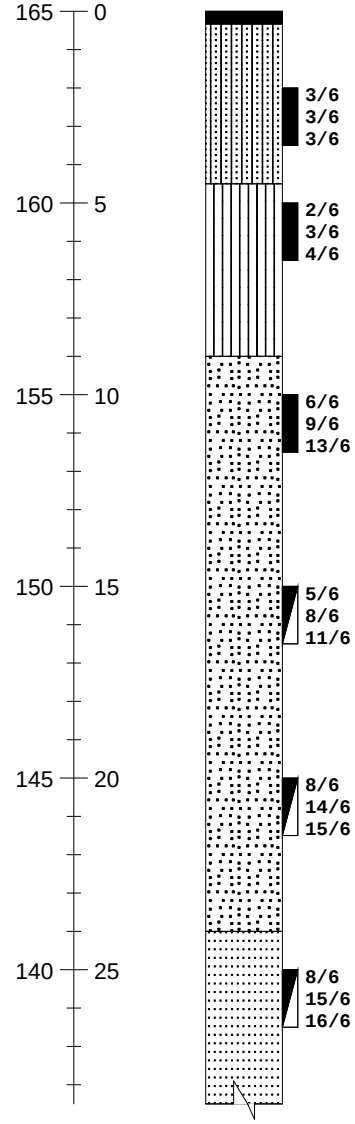
Location: 8825 Washington Boulevard, Pico Rivera, California

Drilled By: SALEM **Logged By:** EGR

Drill Type: CME 55 **Elevation:** 165'

Auger Type: 6 in. Solid Flight Auger **Initial Depth to Groundwater:** N/A

Hammer Type: Automatic Trip - 140 lb/30 in **Final Depth to Groundwater:** N/A



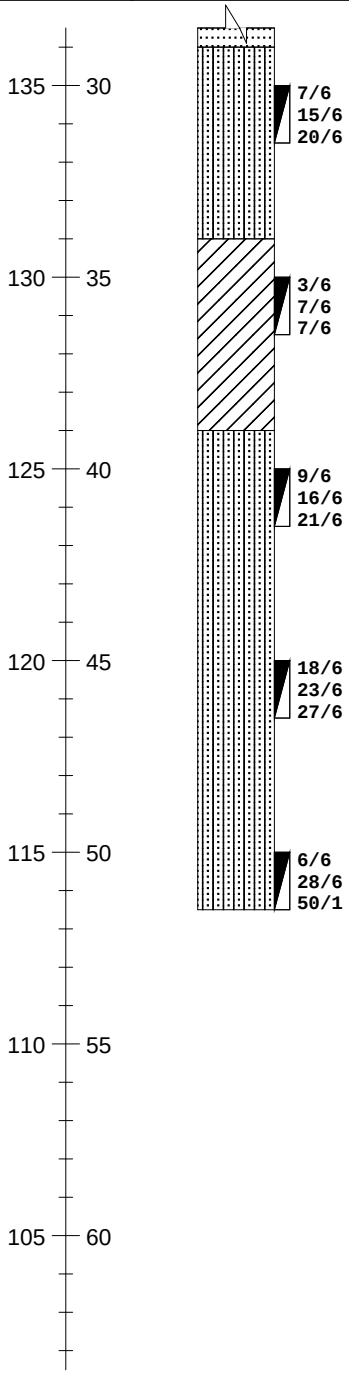
ELEVATION/ DEPTH (feet)	USCS	Soil Description	N-Values blows/ft.	Moisture Content %	Dry Density, PCF	Remarks
	AC	Asphalt Concrete w/Petromat = 4"				
	SM	*No Aggregate Base Silty SAND Loose; moist; light brown; fine grain sand.	6	3.0	103.8	
	ML	Sandy SILT Firm; very moist; dark brown; fine grain sand; trace clay.	7	22.4	90.3	
	SP	Poorly graded SAND Medium dense; damp; light brown; fine to medium grain sand.	22	1.3	99.2	Cu=2.50 Cc=1.23
		Grades as above; slightly moist; olive brown.	19	3.5	-	
		Grades as above.	29	3.3	-	Cu=3.00 Cc=1.33
	SW	Well-graded SAND Dense; moist; light brown; fine to coarse grain sand; trace gravel.	31	1.9	-	Cu=6.00 Cc=1.31

Notes:

Figure Number A-1

SALEM engineering group, inc.

Project Number: 3-220-0499
Date: 07/07/2020
Test Boring: B-1



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Soil Description	N-Values blows/ft.	Moisture Content %	Dry Density, PCF	Remarks
		SM	Silty SAND Dense; moist; light brown; fine to coarse grain sand.	35	3.5	-	
		CL	Sandy CLAY Stiff; moist; dark gray; fine grain sand.	14	30.2	-	
		SM	Silty SAND Dense; moist; dark brown; fine to medium grain sand.	37	8.8	-	
			Grades as above; very dense; slightly moist; brown.	50	2.2	-	
			Grades as above.	78/7"	4.9	-	
			End of boring at 51.5 feet BSG.				

Notes:

Figure Number A-1

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Test Boring: B-2 **Page** 1 **Of:** 1

Project Number: 3-220-0499

Date: 07/07/2020

Client: Optimus Properties, Inc.

Project: Proposed Mixed-Use Building

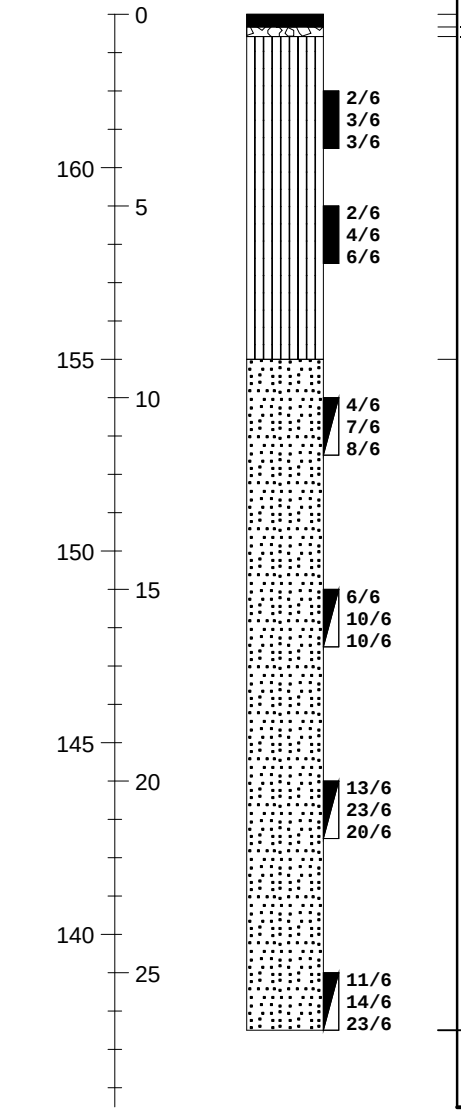
Location: 8825 Washington Boulevard, Pico Rivera, California

Drilled By: SALEM **Logged By:** EGR

Drill Type: CME 55 **Elevation:** 164'

Auger Type: 6 in. Solid Flight Auger **Initial Depth to Groundwater:** N/A

Hammer Type: Automatic Trip - 140 lb/30 in **Final Depth to Groundwater:** N/A



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Soil Description	N-Values blows/ft.	Moisture Content %	Dry Density, PCF	Remarks
		AC	Asphalt Concrete w/Petromat = 4"				
		AB	Aggregate Base = 3 in.				
		ML	Sandy SILT Firm; moist; dark gray; fine grain sand; trace clay.	6	16.8	88.3	
			Grades as above; with clay.	10	27.9	85.7	
		SP	Poorly graded SAND Medium dense; slightly moist; light brown; fine to medium grain sand.	15	1.8	-	
			Grades as above.	20	1.8	-	
			Grades as above; dense; damp; olive.	43	1.0	-	
			Grades as above; slightly moist.	37	2.3	-	
			End of boring at 26.5 feet BSG.				

Notes:

Figure Number A-2

SALEM engineering group, inc.

Test Boring: B-3 **Page** 1 **Of:** 1

Project Number: 3-220-0499

Date: 07/07/2020

Client: Optimus Properties, Inc.

Project: Proposed Mixed-Use Building

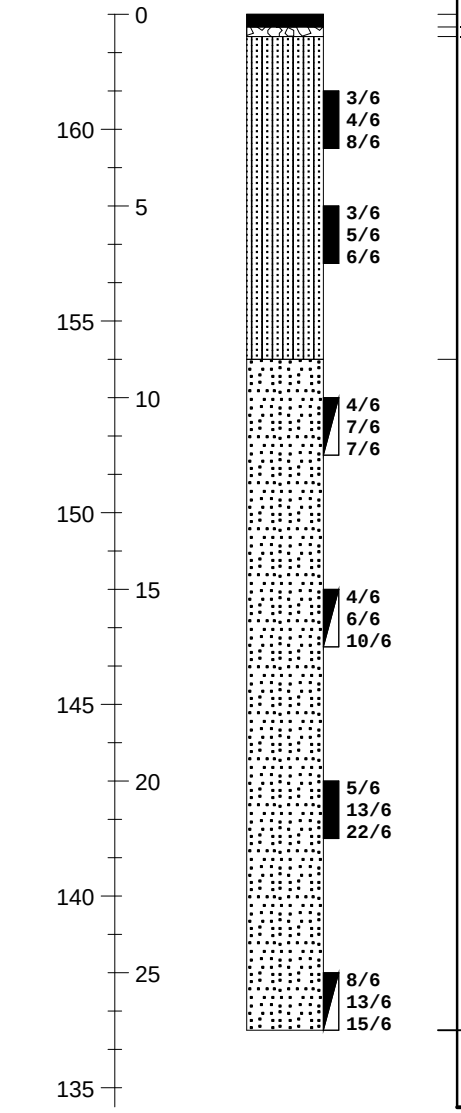
Location: 8825 Washington Boulevard, Pico Rivera, California

Drilled By: SALEM **Logged By:** EGR

Drill Type: CME 55 **Elevation:** 163'

Auger Type: 6 in. Solid Flight Auger **Initial Depth to Groundwater:** N/A

Hammer Type: Automatic Trip - 140 lb/30 in **Final Depth to Groundwater:** N/A



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Soil Description	N-Values blows/ft.	Moisture Content %	Dry Density, PCF	Remarks
		AC	Asphalt Concrete w/Petromat = 4"				
		AB	Aggregate Base = 3 in.				
		SM	Silty SAND Loose; moist; olive; fine to coarse grain sand.	12	6.2	100.2	
			Grades as above; with clay.	11	13.5	89.7	
		SP	Poorly graded SAND Medium dense; slightly moist; light brown; fine to medium grain sand.	14	1.3	-	
			Grades as above.	16	1.3	-	
			Grades as above.	35	1.3	109.7	Cu=2.86 Cc=1.40
			Grades as above.	28	1.5	-	
			End of boring at 26.5 feet BSG.				

Notes:

Figure Number A-3

SALEM
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Test Boring: B-4 **Page** 1 **Of:** 1

Project Number: 3-220-0499

Date: 07/07/2020

Client: Optimus Properties, Inc.

Project: Proposed Mixed-Use Building

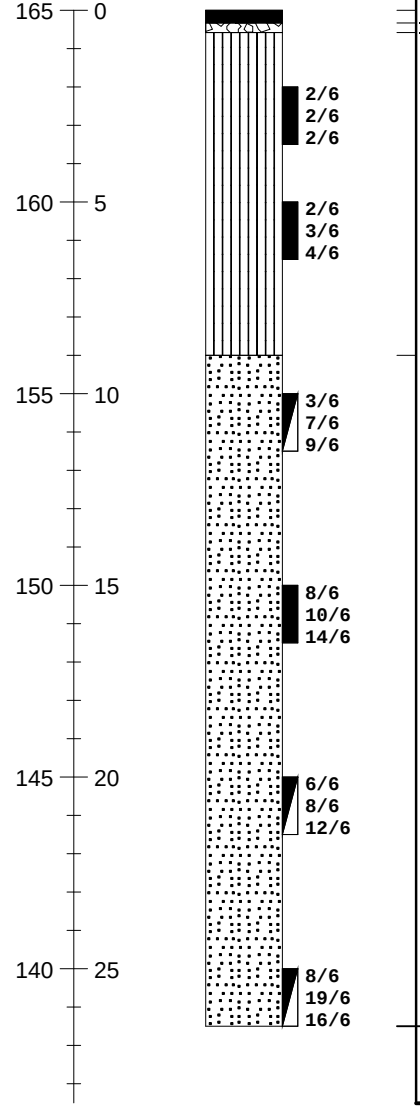
Location: 8825 Washington Boulevard, Pico Rivera, California

Drilled By: SALEM **Logged By:** EGR

Drill Type: CME 55 **Elevation:** 165'

Auger Type: 6 in. Solid Flight Auger **Initial Depth to Groundwater:** N/A

Hammer Type: Automatic Trip - 140 lb/30 in **Final Depth to Groundwater:** N/A



ELEVATION/ DEPTH (feet)	USCS	Soil Description	N-Values blows/ft.	Moisture Content %	Dry Density, PCF	Remarks
	AC	Asphalt Concrete w/Petromat = 4"				
	AB	Aggregate Base = 3 in.				
	ML	Sandy SILT Soft; moist; dark brown; fine grain sand; with clay.	4	25.5	79.8	
		Grades as above; firm; trace clay.	7	17.6	93.4	
	SP	Poorly graded SAND Medium dense; slightly moist; light brown; fine to medium grain sand.	16	1.7	-	
		Grades as above.	24	2.0	94.6	Cu=2.33 Cc=0.76
		Grades as above.	20	1.9	-	
		Grades as above; dense.	35	2.1	-	
		End of boring at 26.5 feet BSG.				

Notes:

Figure Number A-4

SALEM engineering group, inc.

Test Boring: B-5 **Page** 1 **Of:** 2

Project Number: 3-220-0499

Date: 07/07/2020

Client: Optimus Properties, Inc.

Project: Proposed Mixed-Use Building

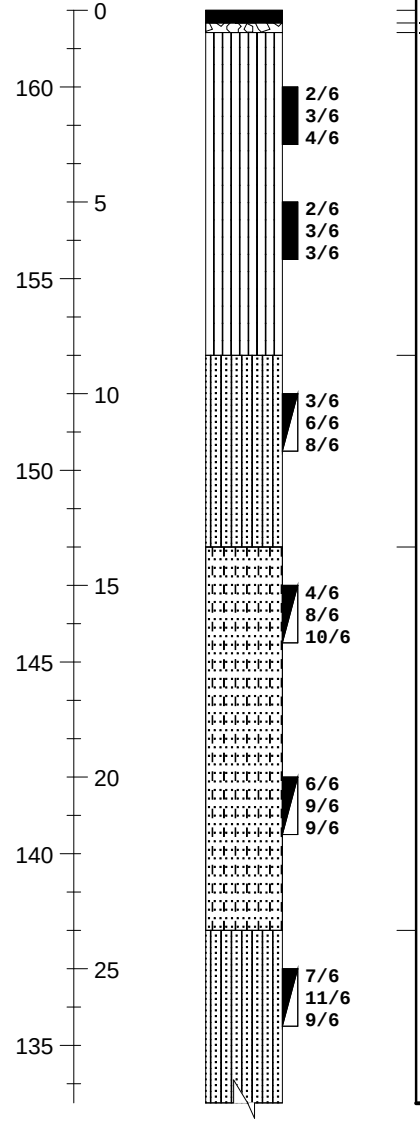
Location: 8825 Washington Boulevard, Pico Rivera, California

Drilled By: SALEM **Logged By:** EGR

Drill Type: CME 55 **Elevation:** 162'

Auger Type: 6 in. Solid Flight Auger **Initial Depth to Groundwater:** N/A

Hammer Type: Automatic Trip - 140 lb/30 in **Final Depth to Groundwater:** N/A



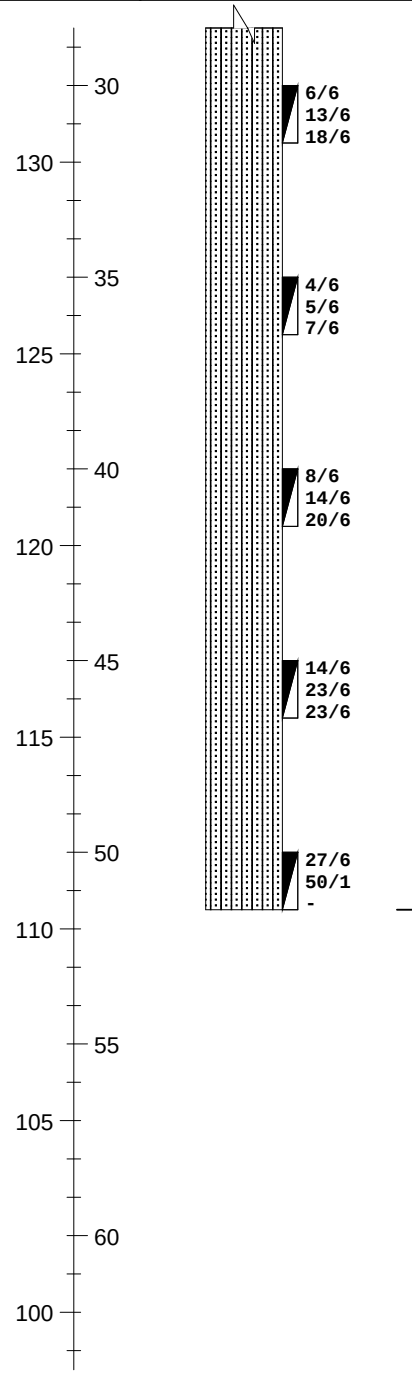
ELEVATION/ DEPTH (feet)	USCS	Soil Description	N-Values blows/ft.	Moisture Content %	Dry Density, PCF	Remarks
	AC	Asphalt Concrete w/Petromat = 4"				
	AB	Aggregate Base = 3 in.				
	ML	SILT with Sand Firm; very moist; dark brown; fine grain sand.	7	21.1	79.6	
	ML	SILT Firm; wet; dark gray; fine grain sand.	6	41.2	77.5	
	SM	Silty SAND Medium dense; moist; light brown; fine to coarse grain sand.	14	3.7	-	
	SW-SM	Well-graded SAND with Silt Medium dense; slightly moist; brown; fine to coarse grain sand.	18	2.0	-	
		Grades as above.	18	3.8	-	
	SM	Silty SAND Medium dense; slightly moist; light brown; fine to medium grain sand.	20	3.1	-	

Notes:

Figure Number A-5

SALEM engineering group, inc.

Project Number: 3-220-0499
Date: 07/07/2020
Test Boring: B-5



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Soil Description	N-Values blows/ft.	Moisture Content %	Dry Density, PCF	Remarks
			Grades as above; dense.	31	3.9	-	
			Grades as above; medium dense; moist; brown.	12	6.0	-	
			Grades as above; dense.	34	9.9	-	
			Grades as above; light brown.	46	3.5	-	
			Grades as above; very dense.	50/1"	4.0	-	
			End of boring at 51.5 feet BSG.				

Notes:

Figure Number A-5

SALEM
engineering group, inc.

Test Boring: B-6 **Page** 1 **Of:** 1

Project Number: 3-220-0499

Date: 07/07/2020

Client: Optimus Properties, Inc.

Project: Proposed Mixed-Use Building

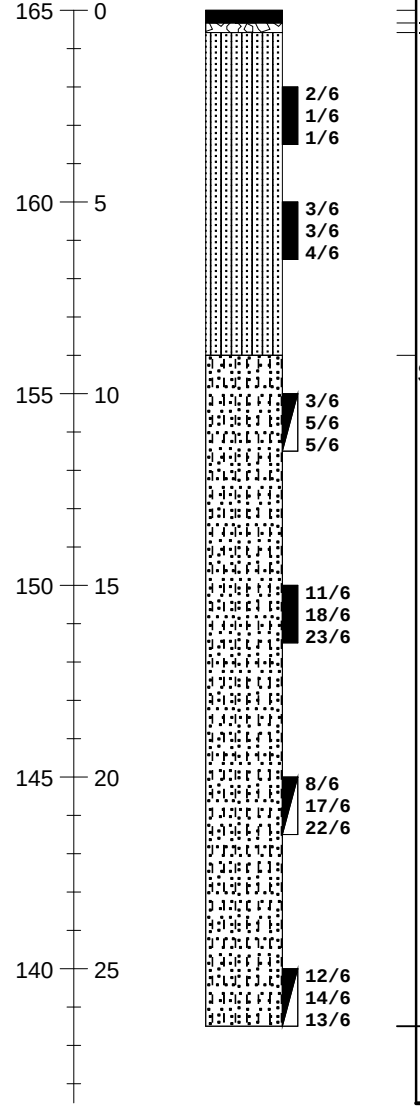
Location: 8825 Washington Boulevard, Pico Rivera, California

Drilled By: SALEM **Logged By:** EGR

Drill Type: CME 55 **Elevation:** 165'

Auger Type: 6 in. Solid Flight Auger **Initial Depth to Groundwater:** N/A

Hammer Type: Automatic Trip - 140 lb/30 in **Final Depth to Groundwater:** N/A



ELEVATION/ DEPTH (feet)	USCS	Soil Description	N-Values blows/ft.	Moisture Content %	Dry Density, PCF	Remarks
	AC	Asphalt Concrete w/Petromat = 4"				
	AB	Aggregate Base = 3 in.				
	SM	Silty SAND Very loose; moist; light brown; fine grain sand.	2	8.0	89.8	
		Grades as above; loose; brown.	7	12.4	90.7	
	SP-SM	Poorly graded SAND with Silt Loose; slightly moist; light brown; fine to medium grain sand.	10	1.7	-	
		Grades as above; dense.	41	1.5	99.1	Cu=3.00 Cc=0.93
		Grades as above; damp; with gravel.	39	1.0	-	
		Grades as above; medium dense; slightly moist.	27	2.2	-	
		End of boring at 26.5 feet BSG.				

Notes:

Figure Number A-6

KEY TO SYMBOLS

Symbol	Description
Strata symbols	
	Asphaltic Concrete
	Silty sand
	Silt
	Poorly graded sand
	Well graded sand
	Lean Clay
	Aggregate Base
	Well graded sand with silt
	Poorly graded sand with silt
Misc. Symbols	
	Boring continues
Soil Samplers	
	California sampler

Symbol	Description
	Standard penetration test

Notes:

Granular Soils
Blows Per Foot (Uncorrected)

	MCS	SPT
Very loose	<5	<4
Loose	5-15	4-10
Medium dense	16-40	11-30
Dense	41-65	31-50
Very dense	>65	>50

Cohesive Soils
Blows Per Foot (Uncorrected)

	MCS	SPT
Very soft	<3	<2
Soft	3-5	2-4
Firm	6-10	5-8
Stiff	11-20	9-15
Very Stiff	21-40	16-30
Hard	>40	>30

MCS = Modified California Sampler
SPT = Standard Penetration Test Sampler

Percolation Test Worksheet

Project: Proposed Mixed-Use Building
8825 Washington Boulevard
Pico Rivera, California

Job No.: 3-220-0499
Date Drilled: 7/7/2020
Soil Classification: SAND (SP)

Vol. in 1" Wtr Col. (in^3): 28.3

Hole Dia.: 6 in.
Pipe Dia.: 3 in.

Test Hole No.: P-1
Tested by: EGR
Drilled Hole Depth: 14.5 ft.

Presoaking Date: 7/7/2020
Test Date: 7/8/2020

Pipe stickup: 0.5 ft

Time Start	Time Finish	Depth of Test Hole (ft)#	Refill-Yes or No	Elapsed Time (hrs:min)	Initial Water Level# (ft)	Final Water Level# (ft)	Δ Water Level (in.)	Δ Min.	Volume of Water Discharged (in^3)	Test Area (sidewalls & bottom) (in^2)		Measured Perc Rate (in/hr)
8:00	8:10	15.0	Y	0:10	14.00	14.98	11.76	10	332.51	143.6		13.89
8:10	8:11	15.0	N	0:01	14.98	drained		1				
water reamined in the hole after 10 minutes but drained before 30 minutes, the time interval between readings is 10 minutes												
8:12	8:22	15.0	Y	0:10	13.00	14.85	22.20	10	627.69	271.4		13.88
8:23	8:33	15.0	Y	0:10	13.00	14.80	21.60	10	610.73	277.1		13.22
8:34	8:44	15.0	Y	0:10	13.00	14.75	21.00	10	593.76	282.7		12.60
8:45	8:55	15.0	Y	0:10	13.00	14.75	21.00	10	593.76	282.7		12.60
8:56	9:06	15.0	Y	0:10	13.00	14.70	20.40	10	576.80	288.4		12.00
9:07	9:17	15.0	Y	0:10	13.00	14.70	20.40	10	576.80	288.4		12.00
9:18	9:28	15.0	Y	0:10	13.00	14.70	20.40	10	576.80	288.4		12.00
9:29	9:39	15.0	Y	0:10	13.00	14.70	20.40	10	576.80	288.4		12.00
Recommended for Design:							**Percolation Rate***		**576.80**			**12.00**

* Average of last 3 readings

Percolation Test Worksheet

Project: Proposed Mixed-Use Building
8825 Washington Boulevard
Pico Rivera, California

Job No.: 3-220-0499
Date Drilled: 7/7/2020
Soil Classification: SAND with Silt (SW-SM)

Vol. in 1" Wtr Col. (in^3): 28.3

Hole Dia.: 6 in.
Pipe Dia.: 3 in.

Test Hole No.: P-2
Tested by: EGR
Drilled Hole Depth: 14.4 ft.

Presoaking Date: 7/7/2020
Test Date: 7/8/2020

Pipe stickup: 0.3 ft

Time Start	Time Finish	Depth of Test Hole (ft)#	Refill-Yes or No	Elapsed Time (hrs:min)	Initial Water Level# (ft)	Final Water Level# (ft)	Δ Water Level (in.)	Δ Min.	Volume of Water Discharged (in^3)	Test Area (sidewalls & bottom) (in^2)		Measured Perc Rate (in/hr)
9:45	9:55	14.7	Y	0:10	13.70	14.65	11.40	10	322.33	147.0		13.15
9:55	9:58	14.7	N	0:03	14.65	drained		3				
water reamined in the hole after 10 minutes but drained before 30 minutes, the time interval between readings is 10 minutes												
10:00	10:10	14.7	Y	0:10	13.00	14.50	18.00	10	508.94	243.2		12.56
10:11	10:21	14.7	Y	0:10	13.00	14.45	17.40	10	491.97	248.8		11.86
10:22	10:32	14.7	Y	0:10	13.00	14.45	17.40	10	491.97	248.8		11.86
10:33	10:43	14.7	Y	0:10	13.00	14.40	16.80	10	475.01	254.5		11.20
10:44	10:54	14.7	Y	0:10	13.00	14.40	16.80	10	475.01	254.5		11.20
10:55	11:05	14.7	Y	0:10	13.00	14.40	16.80	10	475.01	254.5		11.20
11:06	11:16	14.7	Y	0:10	13.00	14.40	16.80	10	475.01	254.5		11.20
11:17	11:27	14.7	Y	0:10	13.00	14.40	16.80	10	475.01	254.5		11.20
Recommended for Design:						**Percolation Rate***			**480.66**			**11.20**

* Average of last 3 readings

Percolation Test Worksheet

Project: Proposed Mixed-Use Building
8825 Washington Boulevard
Pico Rivera, California

Job No.: 3-220-0499
Date Drilled: 7/7/2020
Soil Classification: SAND (SP)

Vol. in 1" Wtr Col. (in^3): 28.3

Hole Dia.: 6 in.
Pipe Dia.: 3 in.

Test Hole No.: P-2
Tested by: EGR
Drilled Hole Depth: 14.4 ft.

Presoaking Date: 7/7/2020
Test Date: 7/8/2020

Pipe stickup: 0.6 ft

Time Start	Time Finish	Depth of Test Hole (ft)#	Refill-Yes or No	Elapsed Time (hrs:min)	Initial Water Level# (ft)	Final Water Level# (ft)	Δ Water Level (in.)	Δ Min.	Volume of Water Discharged (in^3)	Test Area (sidewalls & bottom) (in^2)		Measured Perc Rate (in/hr)
11:35	11:45	15.0	Y	0:10	14.00	14.95	11.40	10	322.33	147.0		13.15
11:45	11:47	15.0	N	0:02	14.95	drained		2				
water reamined in the hole after 10 minutes but drained before 30 minutes, the time interval between readings is 10 minutes												
11:48	11:58	15.0	Y	0:10	13.00	14.80	21.60	10	610.73	277.1		13.22
11:59	12:09	15.0	Y	0:10	13.00	14.75	21.00	10	593.76	282.7		12.60
12:10	12:20	15.0	Y	0:10	13.00	14.70	20.40	10	576.80	288.4		12.00
12:21	12:31	15.0	Y	0:10	13.00	14.70	20.40	10	576.80	288.4		12.00
12:32	12:42	15.0	Y	0:10	13.00	14.65	19.80	10	559.83	294.1		11.42
12:43	12:53	15.0	Y	0:10	13.00	14.65	19.80	10	559.83	294.1		11.42
12:54	13:04	15.0	Y	0:10	13.00	14.65	19.80	10	559.83	294.1		11.42
13:05	13:15	15.0	Y	0:10	13.00	14.65	19.80	10	559.83	294.1		11.42
Recommended for Design:						**Percolation Rate***			**571.14**			**11.81**

* Average of last 3 readings

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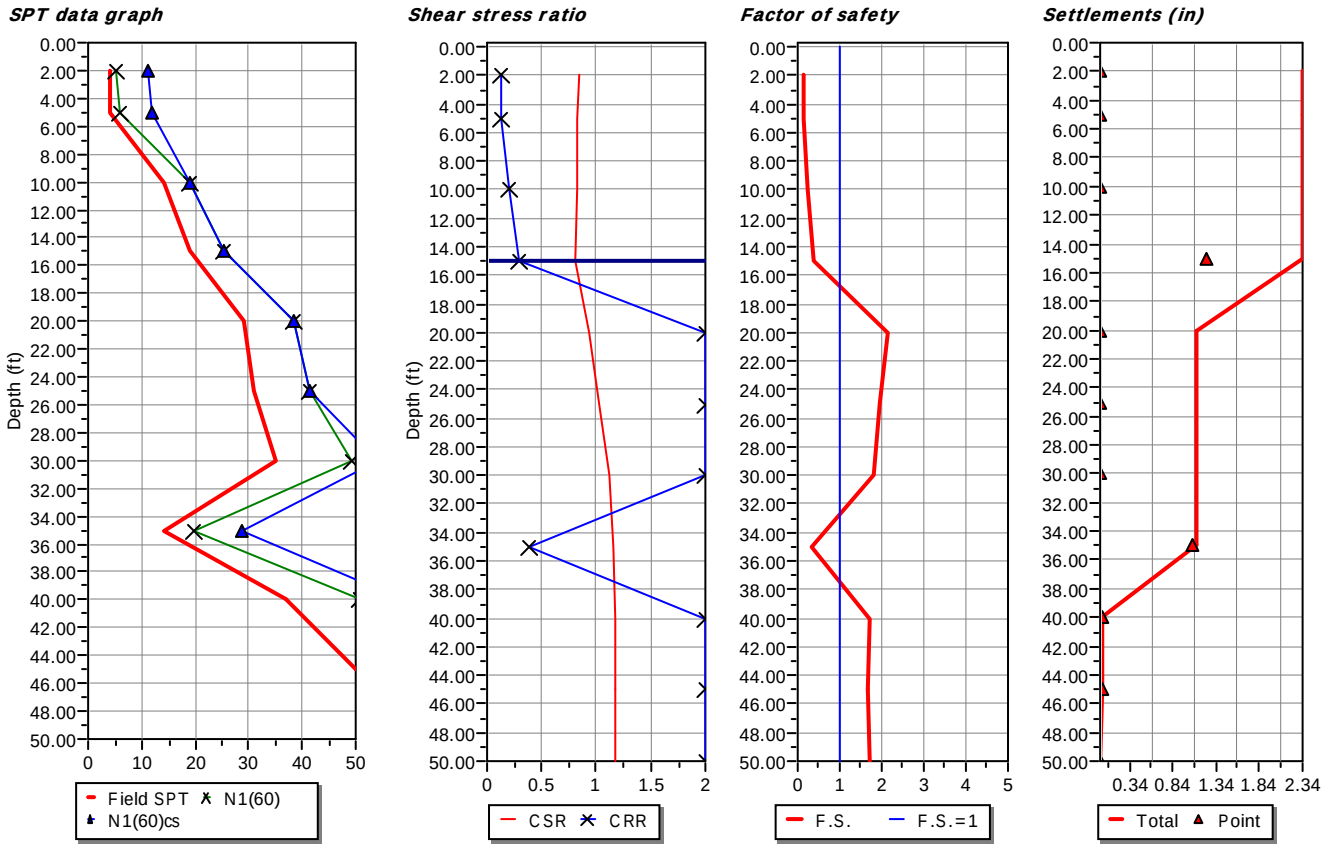
LIQUEFACTION ANALYSIS REPORT

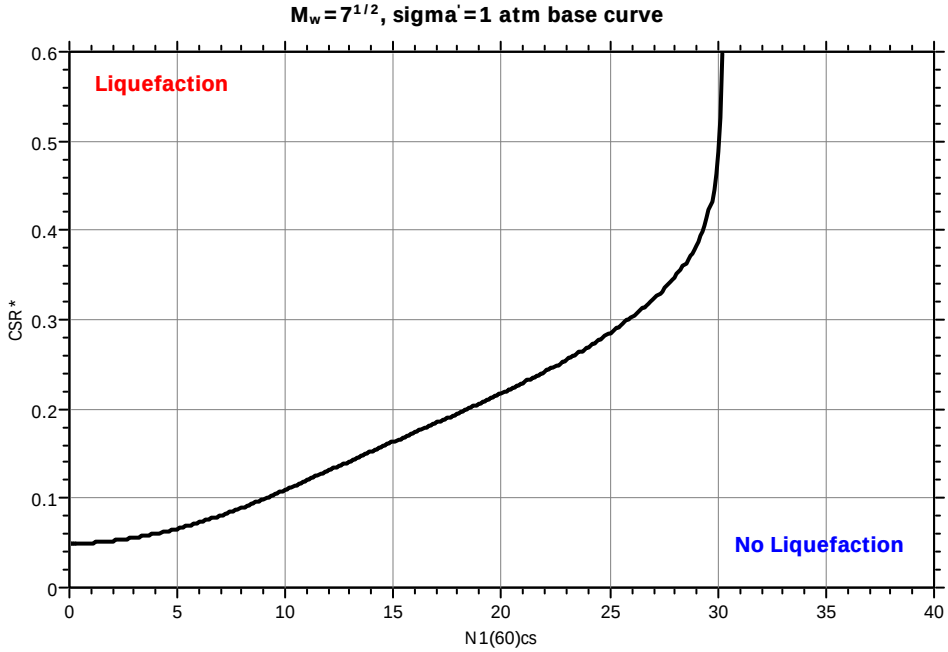
Project title : 3-220-0499

Project subtitle : B-1

Input parameters and analysis data

In-situ data type:	Standard Penetration Test	Depth to water table:	15.00 ft
Analysis type:	Deterministic	Earthquake magnitude M_w:	7.90
Analysis method:	NCEER 1998	Peak ground accelaration:	0.87 g
Fines correction method:	Idriss & Seed	User defined F.S.:	1.30





:: Field input data ::

Point ID	Depth (ft)	Field N_{SPT} (blows/feet)	Unit weight (pcf)	Fines content (%)
1	2.00	4.00	110.00	40.00
2	5.00	4.00	110.00	65.00
3	10.00	14.00	110.00	2.00
4	15.00	19.00	110.00	4.00
5	20.00	29.00	110.00	4.00
6	25.00	31.00	110.00	4.00
7	30.00	35.00	110.00	15.00
8	35.00	14.00	110.00	70.00
9	40.00	37.00	110.00	20.00
10	45.00	50.00	110.00	15.00
11	50.00	78.00	110.00	13.00

Depth : Depth from free surface, at which SPT was performed (ft)
Field SPT : SPT blows measured at field (blows/feet)
Unit weight : Bulk unit weight of soil at test depth (pcf)
Fines content : Percentage of fines in soil (%)

:: Cyclic Stress Ratio calculation (CSR fully adjusted and normalized) ::

Point ID	Depth (ft)	Sigma (tsf)	u (tsf)	Sigma' (tsf)	r_d	CSR	MSF	$CSR_{eq,M=7.5}$	K_{sigma}	CSR^*
1	2.00	0.11	0.00	0.11	1.00	0.56	0.88	0.64	1.00	0.64
2	5.00	0.28	0.00	0.28	0.99	0.56	0.88	0.64	1.00	0.64
3	10.00	0.55	0.00	0.55	0.98	0.55	0.88	0.63	1.00	0.63
4	15.00	0.83	0.00	0.83	0.97	0.55	0.88	0.62	1.00	0.62
5	20.00	1.10	0.16	0.94	0.95	0.63	0.88	0.72	1.00	0.72
6	25.00	1.38	0.31	1.06	0.94	0.69	0.88	0.79	1.00	0.79
7	30.00	1.65	0.47	1.18	0.93	0.73	0.88	0.84	0.98	0.86
8	35.00	1.93	0.62	1.30	0.89	0.75	0.88	0.85	0.96	0.89
9	40.00	2.20	0.78	1.42	0.85	0.74	0.88	0.85	0.94	0.90
10	45.00	2.48	0.94	1.54	0.81	0.74	0.88	0.84	0.93	0.91
11	50.00	2.75	1.09	1.66	0.77	0.72	0.88	0.82	0.91	0.90

Depth : Depth from free surface, at which SPT was performed (ft)
Sigma : Total overburden pressure at test point, during earthquake (tsf)
u : Water pressure at test point, during earthquake (tsf)
Sigma' : Effective overburden pressure, during earthquake (tsf)
r_d : Nonlinear shear mass factor
CSR : Cyclic Stress Ratio
MSF : Magnitude Scaling Factor
$CSR_{eq,M=7.5}$ CSR adjusted for M=7.5
K_{sigma} Effective overburden stress factor
CSR^* CSR fully adjusted

:: Cyclic Resistance Ratio calculation $CRR_{7.5}$ ::

Point ID	Field SPT	C_n	C_e	C_b	C_r	C_s	$N_{1(60)}$	DeltaN	$N_{1(60)cs}$	$CRR_{7.5}$
1	4.00	1.70	0.86	1.00	0.75	1.20	5.27	6.05	11.32	0.12
2	4.00	1.70	0.90	1.00	0.80	1.20	5.89	6.18	12.07	0.13
3	14.00	1.38	0.97	1.00	0.85	1.20	19.12	0.00	19.12	0.21
4	19.00	1.13	1.04	1.00	0.95	1.20	25.37	0.00	25.37	0.29
5	29.00	1.05	1.11	1.00	0.95	1.20	38.61	0.00	38.61	2.00
6	31.00	0.99	1.18	1.00	0.95	1.20	41.32	0.00	41.32	2.00
7	35.00	0.94	1.25	1.00	1.00	1.20	49.31	4.87	54.18	2.00
8	14.00	0.90	1.32	1.00	1.00	1.20	19.84	8.97	28.81	0.38
9	37.00	0.86	1.33	1.00	1.00	1.20	50.78	7.65	58.42	2.00
10	50.00	0.82	1.33	1.00	1.00	1.20	65.91	5.67	71.58	2.00
11	78.00	0.79	1.33	1.00	1.00	1.20	99.06	5.54	104.61	2.00

:: Cyclic Resistance Ratio calculation $CRR_{7.5}$ ::

Point ID	Field SPT	C_n	C_e	C_b	C_r	C_s	$N_{1(60)}$	DeltaN	$N_{1(60)cs}$	$CRR_{7.5}$

C_n : Overburden corretion factor
C_e : Energy correction factor
C_b : Borehole diameter correction factor
C_r : Rod length correction factor
C_s : Liner correction factor
$N_{1(60)}$: Corrected N_{SPT}
DeltaN : Addition to corrected N_{SPT} value due to the presence of fines
$N_{1(60)cs}$: Corected $N_{1(60)}$ value for fines
$CRR_{7.5)}$: Cyclic resistance ratio for M=7.5

:: Settlements calculation for saturated sands ::

Point ID	$N_{1(60)}$	N_1	FS_L	e_v (%)	Settle. (in)
1	11.32	9.44	0.15	3.63	0.00
2	12.07	10.06	0.16	3.49	0.00
3	19.12	15.94	0.25	2.59	0.00
4	25.37	21.14	0.36	2.05	1.23
5	38.61	32.18	2.14	0.00	0.00
6	41.32	34.44	1.95	0.00	0.00
7	54.18	45.15	1.79	0.01	0.01
8	28.81	24.01	0.32	1.79	1.07
9	58.42	48.69	1.70	0.02	0.01
10	71.58	59.65	1.69	0.02	0.01
11	104.61	87.17	1.70	0.02	0.01

Total settlement : 2.34

$N_{1,(60)}$: Stress normalized and corrected SPT blow count
N_1: Japanese equivalent corrected value
FS_L: Calculated factor of safety
e_v: Post-liquefaction volumentric strain (%)
Settle.: Calculated settlement (in)

:: Liquefaction potential according to Iwasaki ::

Point ID	F	w_z	I_L
1	0.85	9.70	5.04
2	0.84	9.24	7.11
3	0.75	8.48	9.65
4	0.64	7.71	7.53
5	0.00	6.95	0.00
6	0.00	6.19	0.00
7	0.00	5.43	0.00
8	0.68	4.67	4.80
9	0.00	3.90	0.00
10	0.00	3.14	0.00
11	0.00	2.38	0.00

Overall potential I_L : 34.12

I_L = 0.00 - No liquefaction
I_L between 0.00 and 5 - Liquefaction not probable
I_L between 5 and 15 - Liquefaction probable
I_L > 15 - Liquefaction certain

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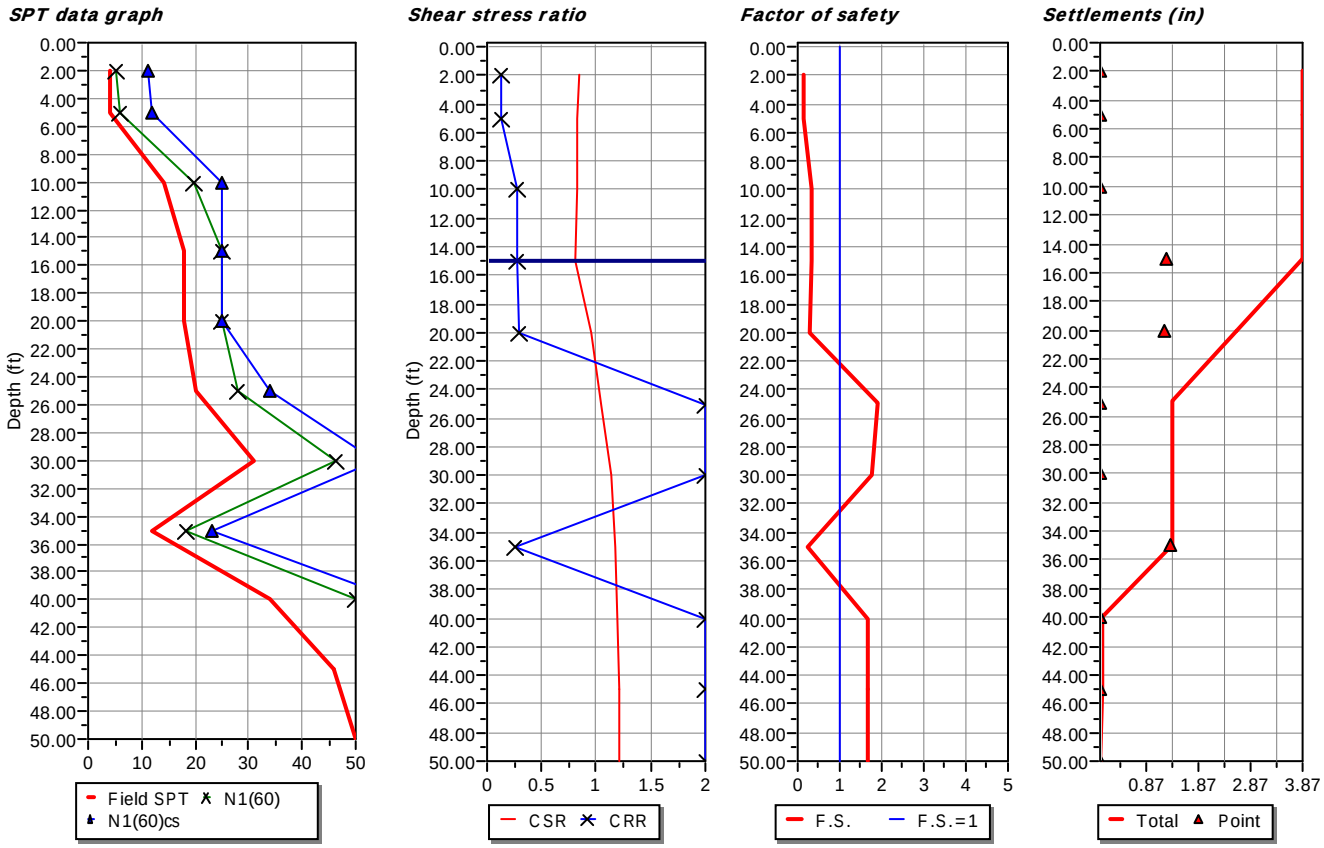
LIQUEFACTION ANALYSIS REPORT

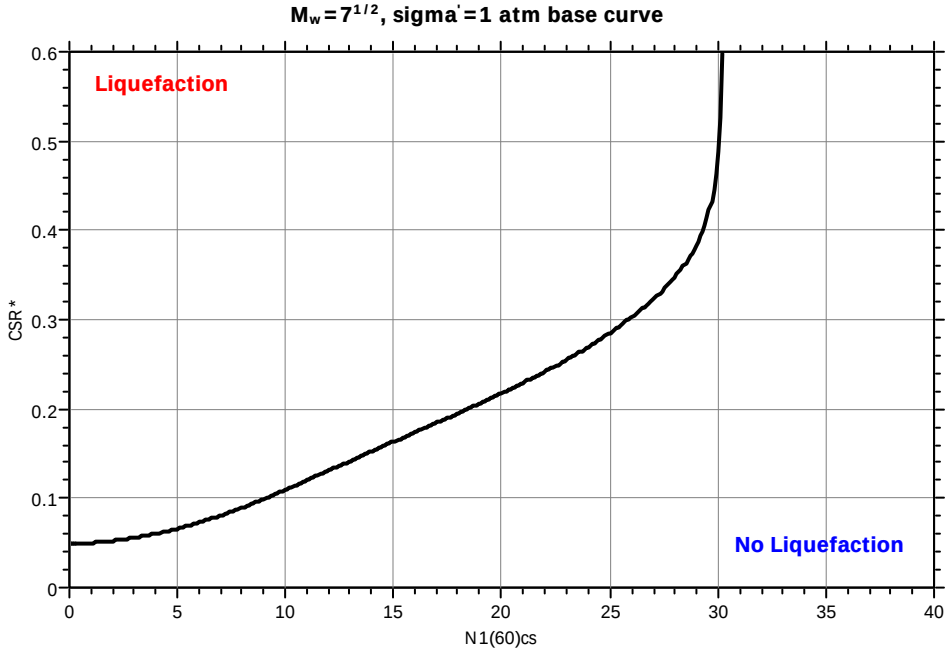
Project title : 3-220-0499

Project subtitle : B-5

Input parameters and analysis data

In-situ data type:	Standard Penetration Test	Depth to water table:	15.00 ft
Analysis type:	Deterministic	Earthquake magnitude M_w:	7.90
Analysis method:	NCEER 1998	Peak ground accelaration:	0.87 g
Fines correction method:	Idriss & Seed	User defined F.S.:	1.30





:: Field input data ::

Point ID	Depth (ft)	Field N_{SPT} (blows/feet)	Unit weight (pcf)	Fines content (%)
1	2.00	4.00	100.00	78.00
2	5.00	4.00	110.00	70.00
3	10.00	14.00	100.00	20.00
4	15.00	18.00	100.00	5.00
5	20.00	18.00	100.00	5.00
6	25.00	20.00	100.00	20.00
7	30.00	31.00	100.00	20.00
8	35.00	12.00	100.00	20.00
9	40.00	34.00	100.00	20.00
10	45.00	46.00	100.00	20.00
11	50.00	50.00	100.00	20.00

Depth : Depth from free surface, at which SPT was performed (ft)
Field SPT : SPT blows measured at field (blows/feet)
Unit weight : Bulk unit weight of soil at test depth (pcf)
Fines content : Percentage of fines in soil (%)

:: Cyclic Stress Ratio calculation (CSR fully adjusted and normalized) ::

Point ID	Depth (ft)	Sigma (tsf)	u (tsf)	Sigma' (tsf)	r_d	CSR	MSF	$CSR_{eq,M=7.5}$	K_{sigma}	CSR^*
1	2.00	0.10	0.00	0.10	1.00	0.56	0.88	0.64	1.00	0.64
2	5.00	0.27	0.00	0.27	0.99	0.56	0.88	0.64	1.00	0.64
3	10.00	0.52	0.00	0.52	0.98	0.55	0.88	0.63	1.00	0.63
4	15.00	0.77	0.00	0.77	0.97	0.55	0.88	0.62	1.00	0.62
5	20.00	1.02	0.16	0.86	0.95	0.64	0.88	0.73	1.00	0.73
6	25.00	1.27	0.31	0.95	0.94	0.71	0.88	0.81	1.00	0.81
7	30.00	1.52	0.47	1.05	0.93	0.76	0.88	0.87	1.00	0.87
8	35.00	1.77	0.62	1.14	0.89	0.78	0.88	0.89	0.98	0.91
9	40.00	2.02	0.78	1.23	0.85	0.78	0.88	0.90	0.97	0.93
10	45.00	2.27	0.94	1.33	0.81	0.78	0.88	0.89	0.95	0.94
11	50.00	2.52	1.09	1.42	0.77	0.77	0.88	0.88	0.94	0.93

Depth : Depth from free surface, at which SPT was performed (ft)
Sigma : Total overburden pressure at test point, during earthquake (tsf)
u : Water pressure at test point, during earthquake (tsf)
Sigma' : Effective overburden pressure, during earthquake (tsf)
r_d : Nonlinear shear mass factor
CSR : Cyclic Stress Ratio
MSF : Magnitude Scaling Factor
$CSR_{eq,M=7.5}$ CSR adjusted for M=7.5
K_{sigma} Effective overburden stress factor
CSR^* CSR fully adjusted

:: Cyclic Resistance Ratio calculation $CRR_{7.5}$ ::

Point ID	Field SPT	C_n	C_e	C_b	C_r	C_s	$N_{1(60)}$	DeltaN	$N_{1(60)cs}$	$CRR_{7.5}$
1	4.00	1.70	0.86	1.00	0.75	1.20	5.27	6.05	11.32	0.12
2	4.00	1.70	0.90	1.00	0.80	1.20	5.89	6.18	12.07	0.13
3	14.00	1.42	0.97	1.00	0.85	1.20	19.76	5.18	24.95	0.28
4	18.00	1.17	1.04	1.00	0.95	1.20	24.96	0.00	24.96	0.28
5	18.00	1.10	1.11	1.00	0.95	1.20	25.12	0.00	25.12	0.29
6	20.00	1.05	1.18	1.00	0.95	1.20	28.16	5.85	34.01	2.00
7	31.00	1.00	1.25	1.00	1.00	1.20	46.41	7.30	53.71	2.00
8	12.00	0.96	1.32	1.00	1.00	1.20	18.16	5.06	23.22	0.26
9	34.00	0.92	1.33	1.00	1.00	1.20	50.03	7.59	57.62	2.00
10	46.00	0.89	1.33	1.00	1.00	1.20	65.26	8.80	74.05	2.00
11	50.00	0.86	1.33	1.00	1.00	1.20	68.55	9.06	77.61	2.00

:: Cyclic Resistance Ratio calculation $CRR_{7.5}$ ::

Point ID	Field SPT	C_n	C_e	C_b	C_r	C_s	$N_{1(60)}$	DeltaN	$N_{1(60)cs}$	$CRR_{7.5}$

C_n : Overburden corretion factor
C_e : Energy correction factor
C_b : Borehole diameter correction factor
C_r : Rod length correction factor
C_s : Liner correction factor
$N_{1(60)}$: Corrected N_{SPT}
DeltaN : Addition to corrected N_{SPT} value due to the presence of fines
$N_{1(60)cs}$: Corected $N_{1(60)}$ value for fines
$CRR_{7.5)}$: Cyclic resistance ratio for M=7.5

:: Settlements calculation for saturated sands ::

Point ID	$N_{1(60)}$	N_1	FS_L	e_v (%)	Settle. (in)
1	11.32	9.44	0.15	3.63	0.00
2	12.07	10.06	0.16	3.49	0.00
3	24.95	20.79	0.35	2.08	0.00
4	24.96	20.80	0.35	2.08	1.25
5	25.12	20.94	0.30	2.07	1.24
6	34.01	28.34	1.90	0.01	0.00
7	53.71	44.76	1.77	0.01	0.01
8	23.22	19.35	0.22	2.22	1.33
9	57.62	48.02	1.66	0.02	0.01
10	74.05	61.71	1.65	0.02	0.01
11	77.61	64.67	1.65	0.02	0.01

Total settlement : 3.87

$N_{1,(60)}$: Stress normalized and corrected SPT blow count
N_1: Japanese equivalent corrected value
FS_L: Calculated factor of safety
e_v: Post-liquefaction volumentric strain (%)
Settle.: Calculated settlement (in)

:: Liquefaction potential according to Iwasaki ::

Point ID	F	w_z	I_L
1	0.85	9.70	5.04
2	0.84	9.24	7.11
3	0.65	8.48	8.44
4	0.65	7.71	7.63
5	0.70	6.95	7.38
6	0.00	6.19	0.00
7	0.00	5.43	0.00
8	0.78	4.67	5.55
9	0.00	3.90	0.00
10	0.00	3.14	0.00
11	0.00	2.38	0.00

Overall potential I_L : 41.15

I_L = 0.00 - No liquefaction
I_L between 0.00 and 5 - Liquefaction not probable
I_L between 5 and 15 - Liquefaction probable
I_L > 15 - Liquefaction certain

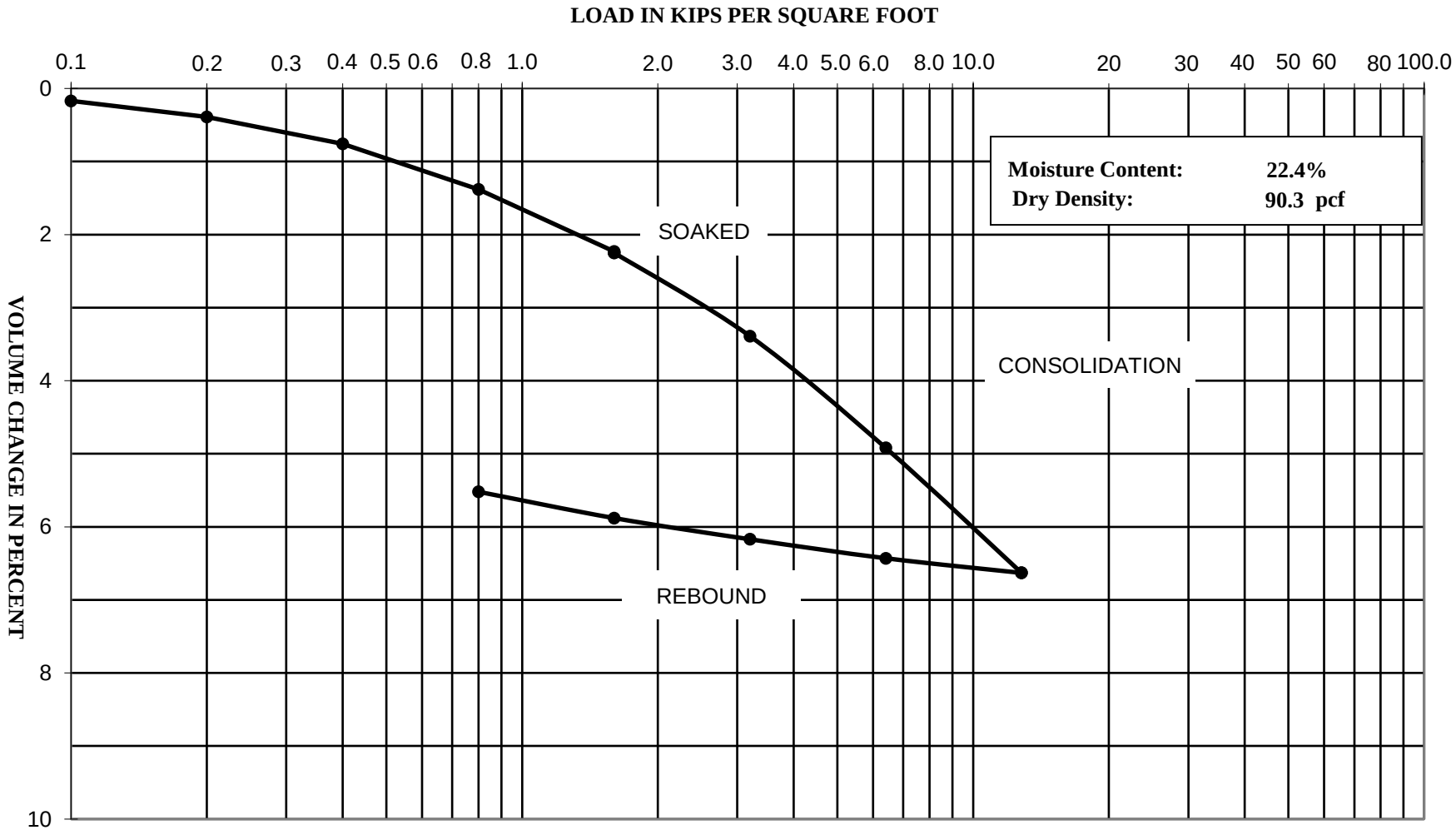
APPENDIX

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), Caltrans, or other suggested procedures. Selected samples were tested for in-situ dry density and moisture content, corrosivity, consolidation, shear strength, maximum density and optimum moisture content, and grain size distribution. The results of the laboratory tests are summarized in the following figures.

CONSOLIDATION - PRESSURE TEST DATA
ASTM D2435



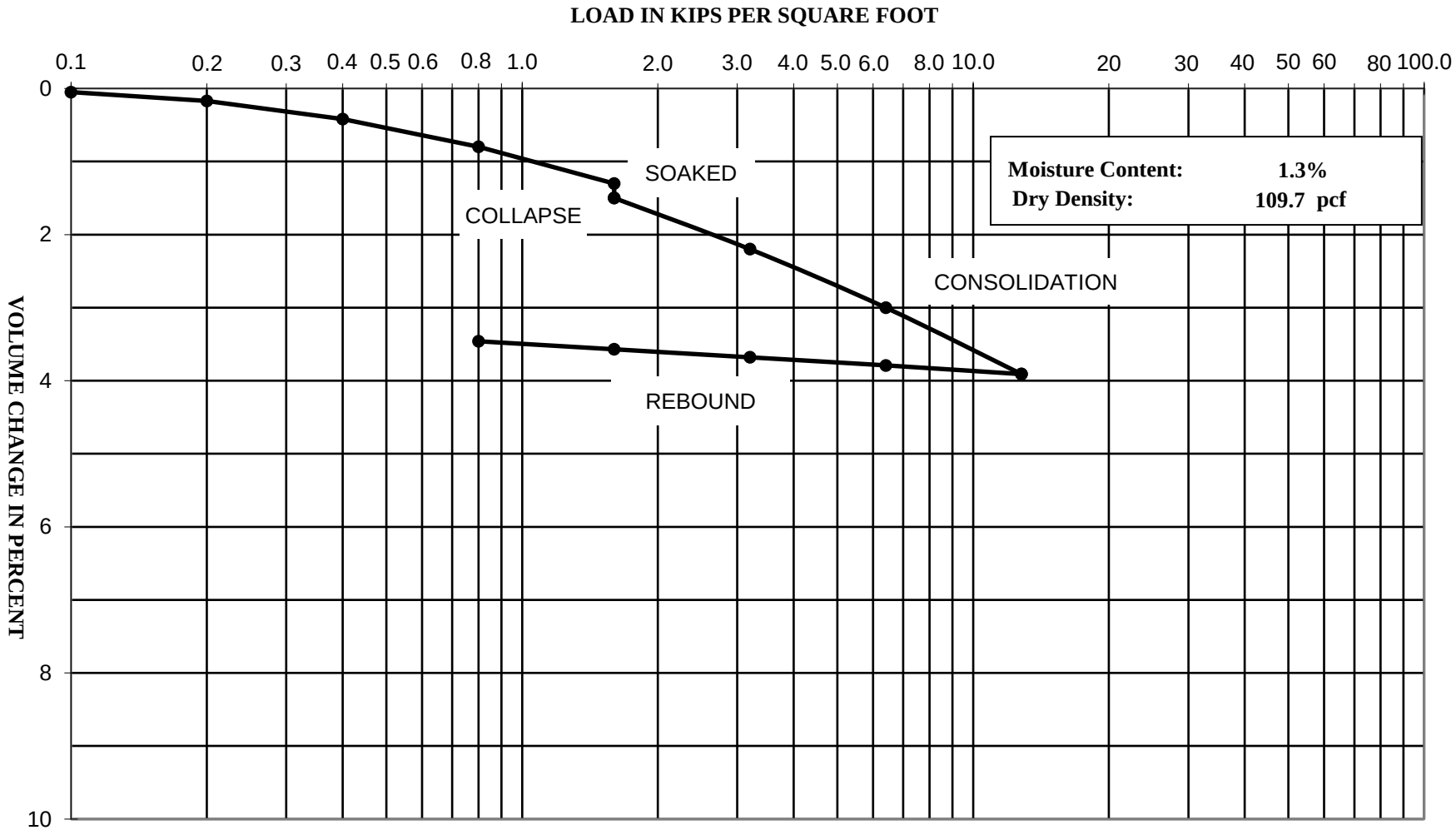
Project Name: Proposed Mixed-Use Building - Pico Rivera, CA

Project Number: 3-220-0499

Boring: B-1 @ 5'

SALEM engineering group, inc.

CONSOLIDATION - PRESSURE TEST DATA
ASTM D2435



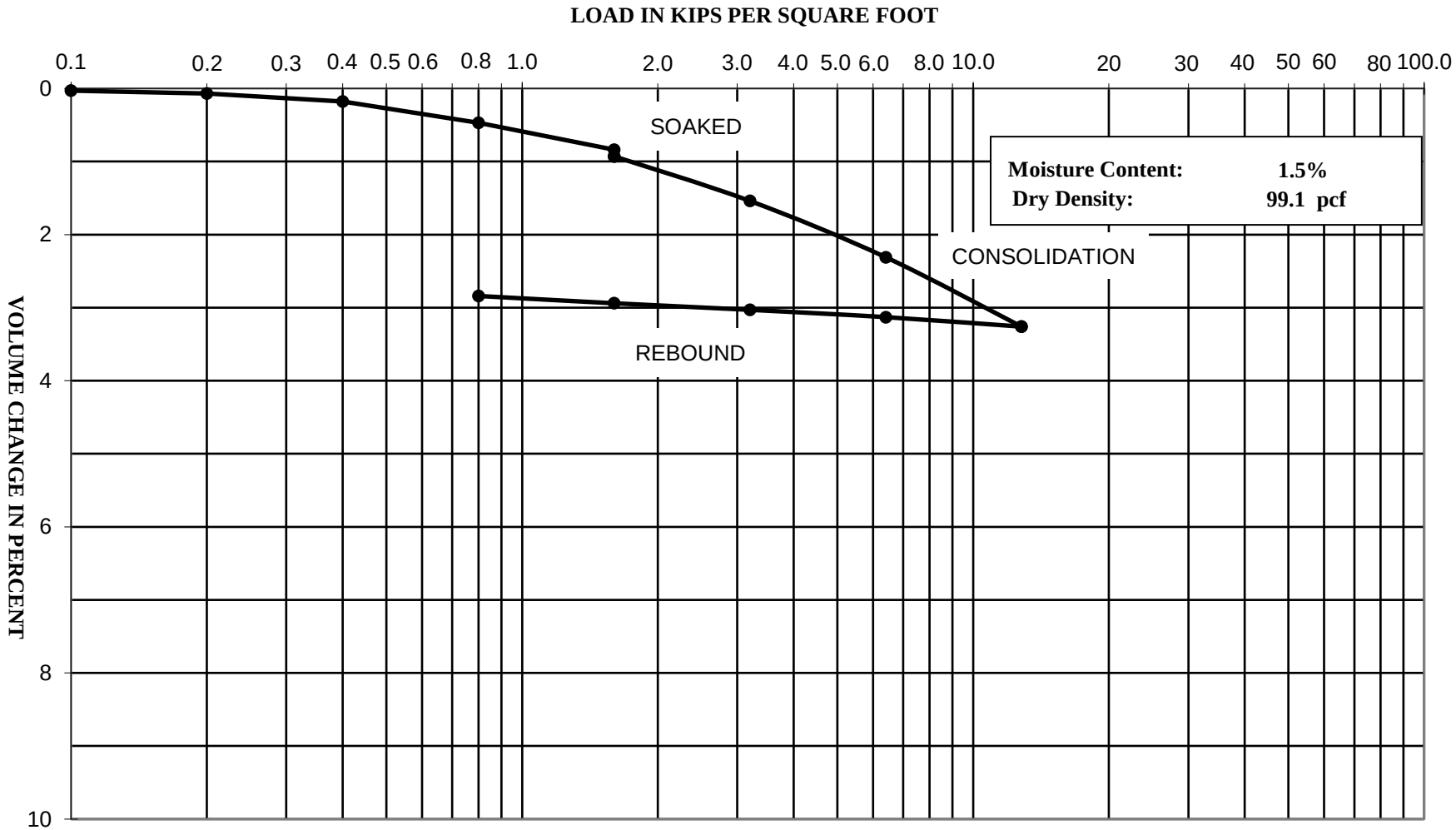
Project Name: Proposed Mixed-Use Building - Pico Rivera, CA

Project Number: 3-220-0499

Boring: B-3 @ 20'

SALEM engineering group, inc.

CONSOLIDATION - PRESSURE TEST DATA
ASTM D2435



Project Name: Proposed Mixed-Use Building - Pico Rivera, CA

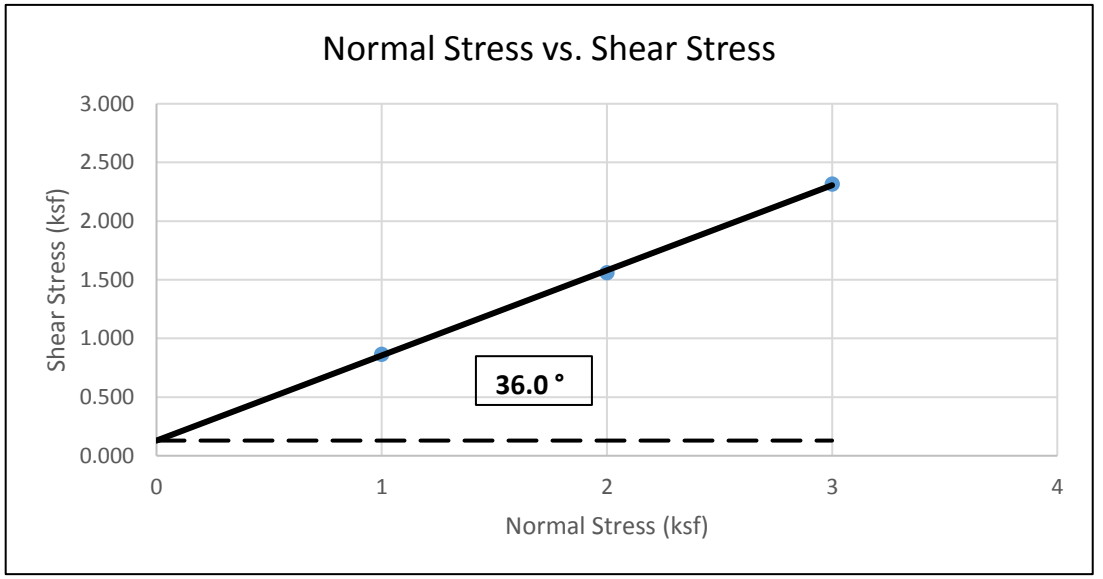
Project Number: 3-220-0499

Boring: B-6 @ 15'

SALEM engineering group, inc.

Direct Shear Test (ASTM D3080)

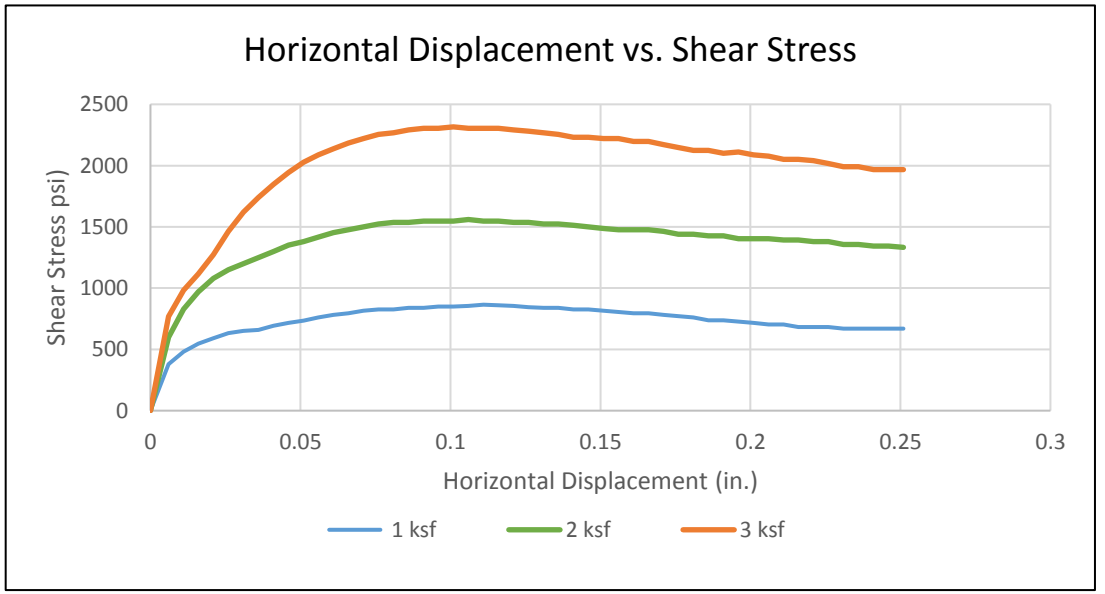
Project Name:	Proposed Mixed-Use Building - Pico Rivera, CA
Project Number:	3-220-0499
Client:	Optimus Properties, Inc.
Sample Location:	B-1 @ 10'
Sample Type:	Undisturbed Ring
Soil Classification:	Poorly graded SAND (SP)
Tested By:	M. Noorzay
Reviewed By:	CJ
Date:	7/20/2020
Equipment Used:	Geomatic Direct Shear Machine



	Sample 1	Sample 2	Sample 3
Normal Stress (ksf)	1.000	2.000	3.000
Shear Rate (in/min)	0.004		
Peak Shear Stress (ksf)	0.865	1.560	2.316
Residual Shear Stress (ksf)	0.000	0.000	0.000

Initial Height of Sample (in)	1.000	1.000	1.000
Height of Sample before Shear (in.)	1	1	1
Diameter of Sample (in)	2.416	2.416	2.416
Initial Moisture Content (%)	1.3		
Final Moisture Content (%)	32.4	24.5	23.9
Dry Density (pcf)	91.1	94.2	94.4

Peak Shear Strength Values	
Slope	0.73
Friction Angle	36.0
Cohesion (psf)	129



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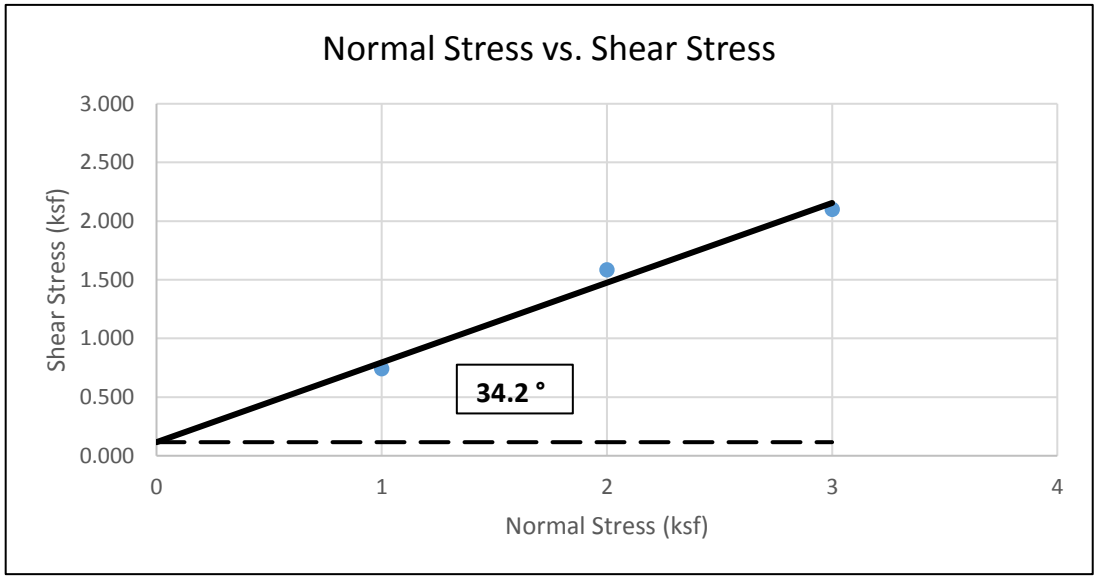
SALEM engineering group, inc.

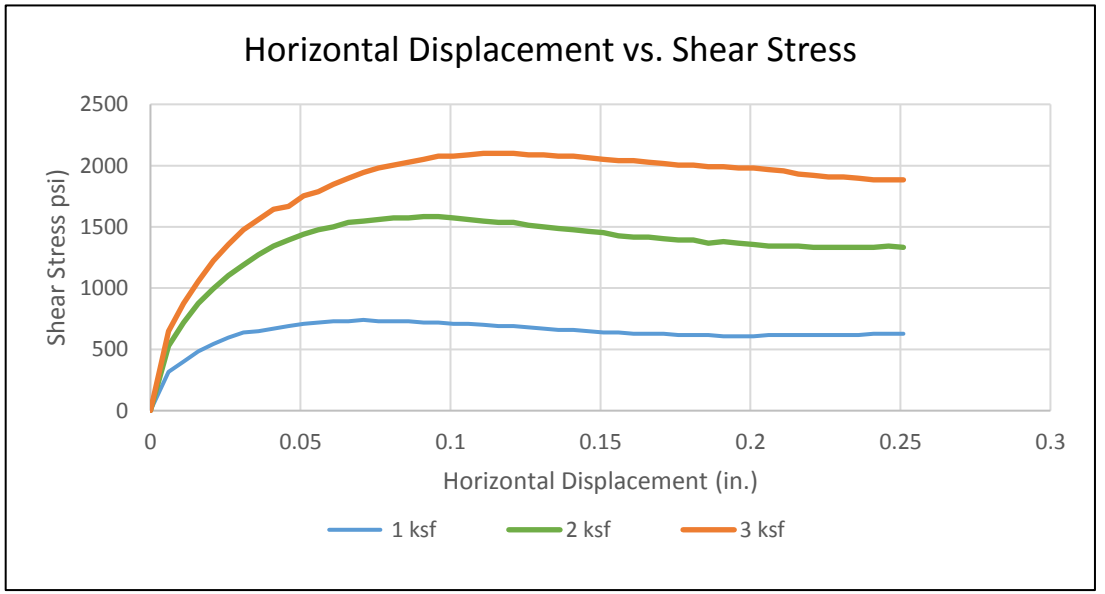
Direct Shear Test (ASTM D3080)

Project Name:	Proposed Mixed-Use Building - Pico Rivera, CA
Project Number:	3-220-0499
Client:	Optimus Properties, Inc.
Sample Location:	B-4 @ 15'
Sample Type:	Undisturbed Ring
Soil Classification:	Poorly graded SAND (SP)
Tested By:	M. Noorzay
Reviewed By:	CJ
Date:	7/23/2020
Equipment Used:	Geomatic Direct Shear Machine



	Sample 1	Sample 2	Sample 3
Normal Stress (ksf)	1.000	2.000	3.000
Shear Rate (in/min)	0.004		
Peak Shear Stress (ksf)	0.741	1.584	2.100
Residual Shear Stress (ksf)	0.000	0.000	0.000

Initial Height of Sample (in)	1.000	1.000	1.000
Height of Sample before Shear (in.)	1	1	1
Diameter of Sample (in)	2.416	2.416	2.416
Initial Moisture Content (%)	2.0		
Final Moisture Content (%)	26.0	24.8	25.0
Dry Density (pcf)	93.3	93.2	94.1



Peak Shear Strength Values	
Slope	0.68
Friction Angle	34.2
Cohesion (psf)	116

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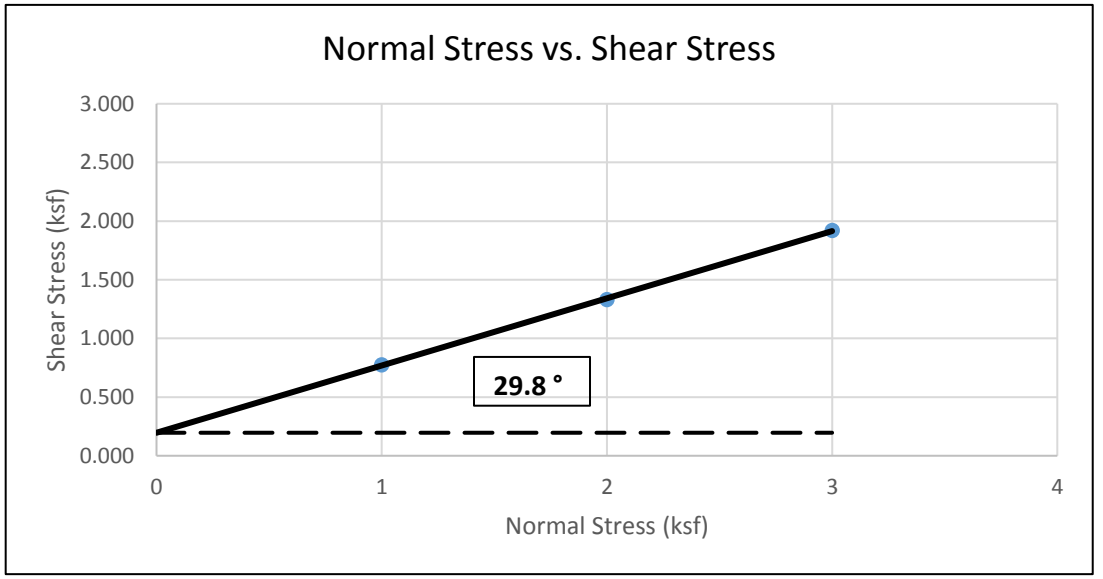
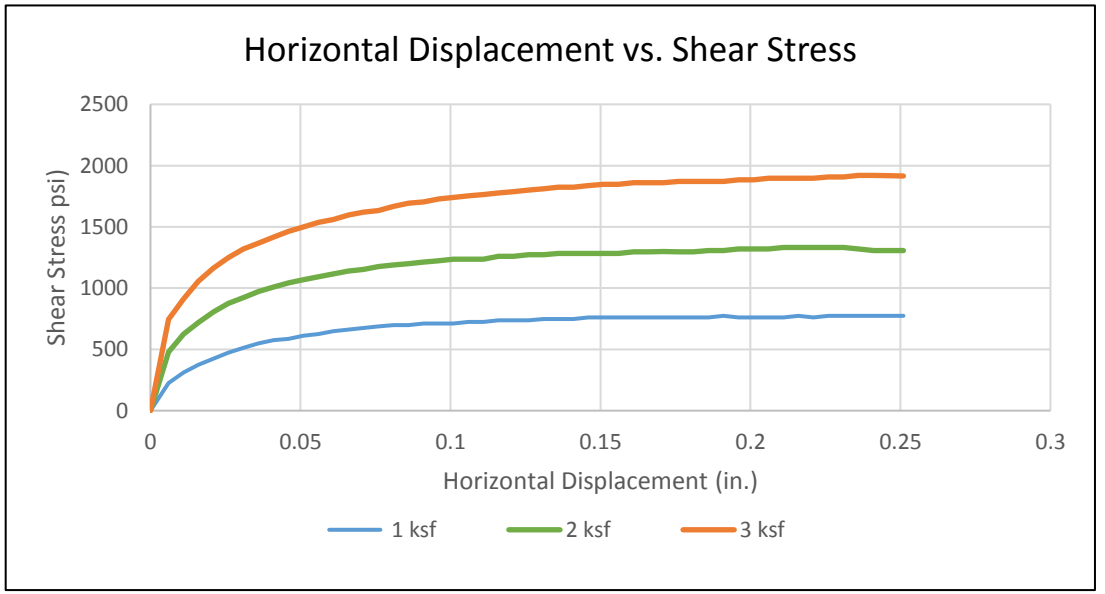
SALEM engineering group, inc.

Direct Shear Test (ASTM D3080)

Project Name:	Proposed Mixed-Use Building - Pico Rivera, CA
Project Number:	3-220-0499
Client:	Optimus Properties, Inc.
Sample Location:	B-5 @ 2'
Sample Type:	Undisturbed Ring
Soil Classification:	SILT with Sand (ML)
Tested By:	M. Noorzay
Reviewed By:	CJ
Date:	7/21/2020
Equipment Used:	Geomatic Direct Shear Machine



	Sample 1	Sample 2	Sample 3
Normal Stress (ksf)	1.000	2.000	3.000
Shear Rate (in/min)	0.004		
Peak Shear Stress (ksf)	0.774	1.332	1.920
Residual Shear Stress (ksf)	0.000	0.000	0.000



Initial Height of Sample (in)	1.000	1.000	1.000
Height of Sample before Shear (in.)	1	1	1
Diameter of Sample (in)	2.416	2.416	2.416
Initial Moisture Content (%)	20.3		
Final Moisture Content (%)	36.1	35.7	36.5
Dry Density (pcf)	80.3	80.5	79.3

Peak Shear Strength Values	
Slope	0.57
Friction Angle	29.8
Cohesion (psf)	196

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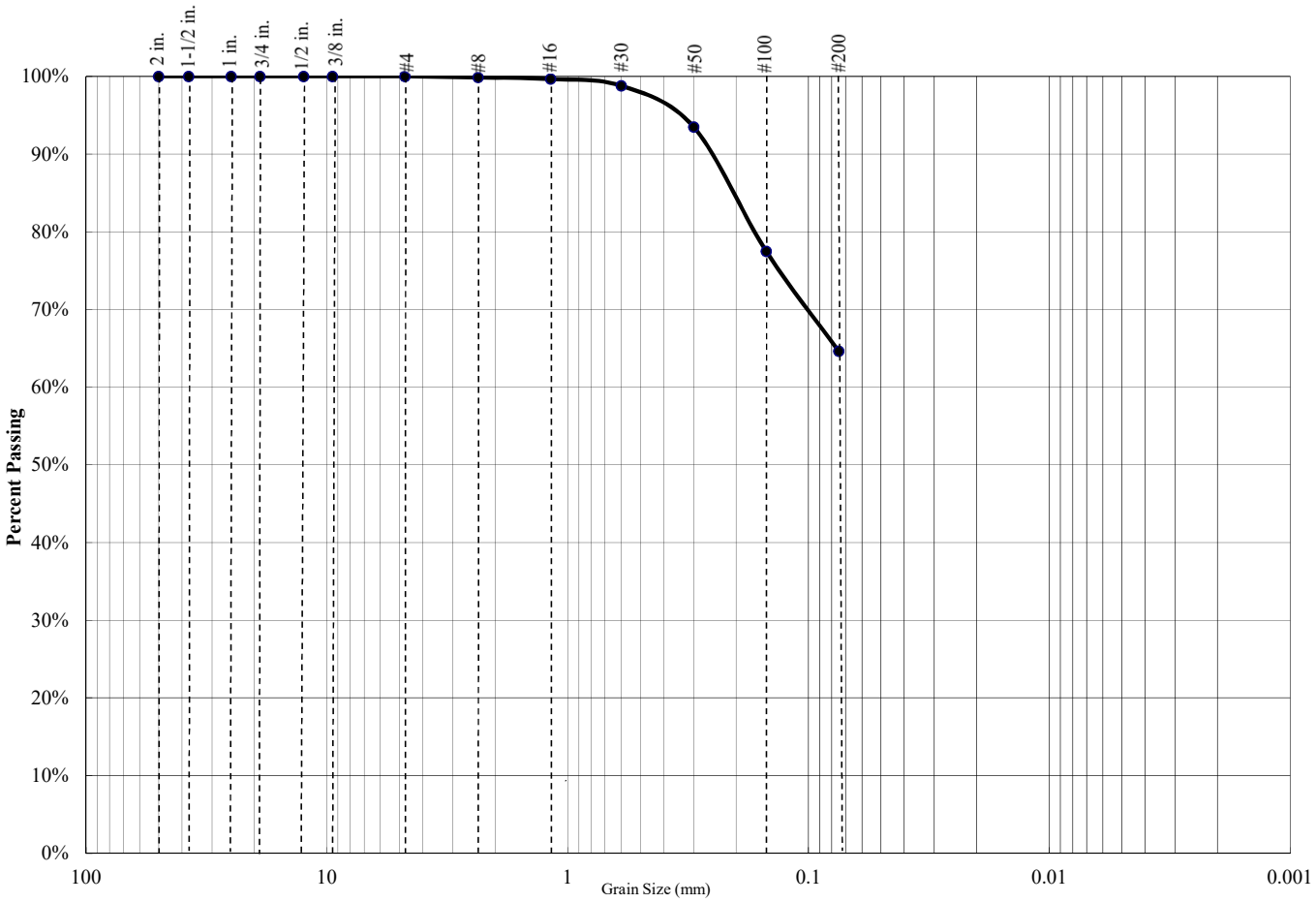
SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
0%	35%	65%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	100.0%
#4	100.0%
#8	99.9%
#16	99.7%
#30	98.8%
#50	93.5%
#100	77.5%
#200	64.6%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=		D_{50}=	
D_{30}=		D_{15}=		D_{10}=	
C_u=	N/A	C_c=	N/A		

USCS CLASSIFICATION
Sandy SILT (ML)

Project Name: Proposed Mixed-Use Building - Pico Rivera, CA

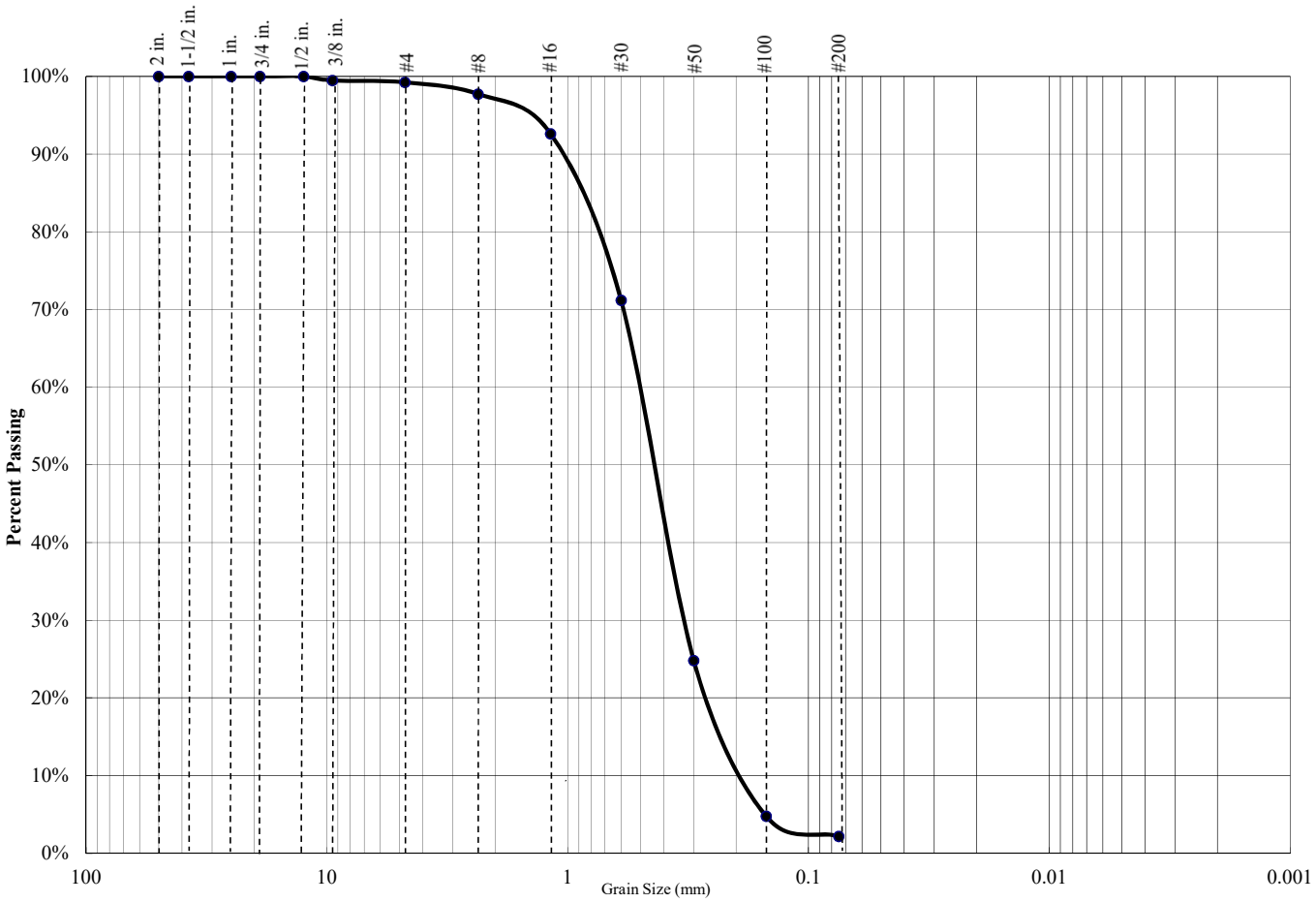
Project Number: 3-220-0499

Boring: B-1 @ 5'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
1%	97%	2%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	99.5%
#4	99.2%
#8	97.7%
#16	92.6%
#30	71.2%
#50	24.8%
#100	4.8%
#200	2.2%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=	0.5	D_{50}=	
D_{30}=	0.35	D_{15}=		D_{10}=	0.2
C_u=	2.50	C_c=	1.23		

USCS CLASSIFICATION
Poorly graded SAND (SP)

Project Name: Proposed Mixed-Use Building - Pico Rivera, CA

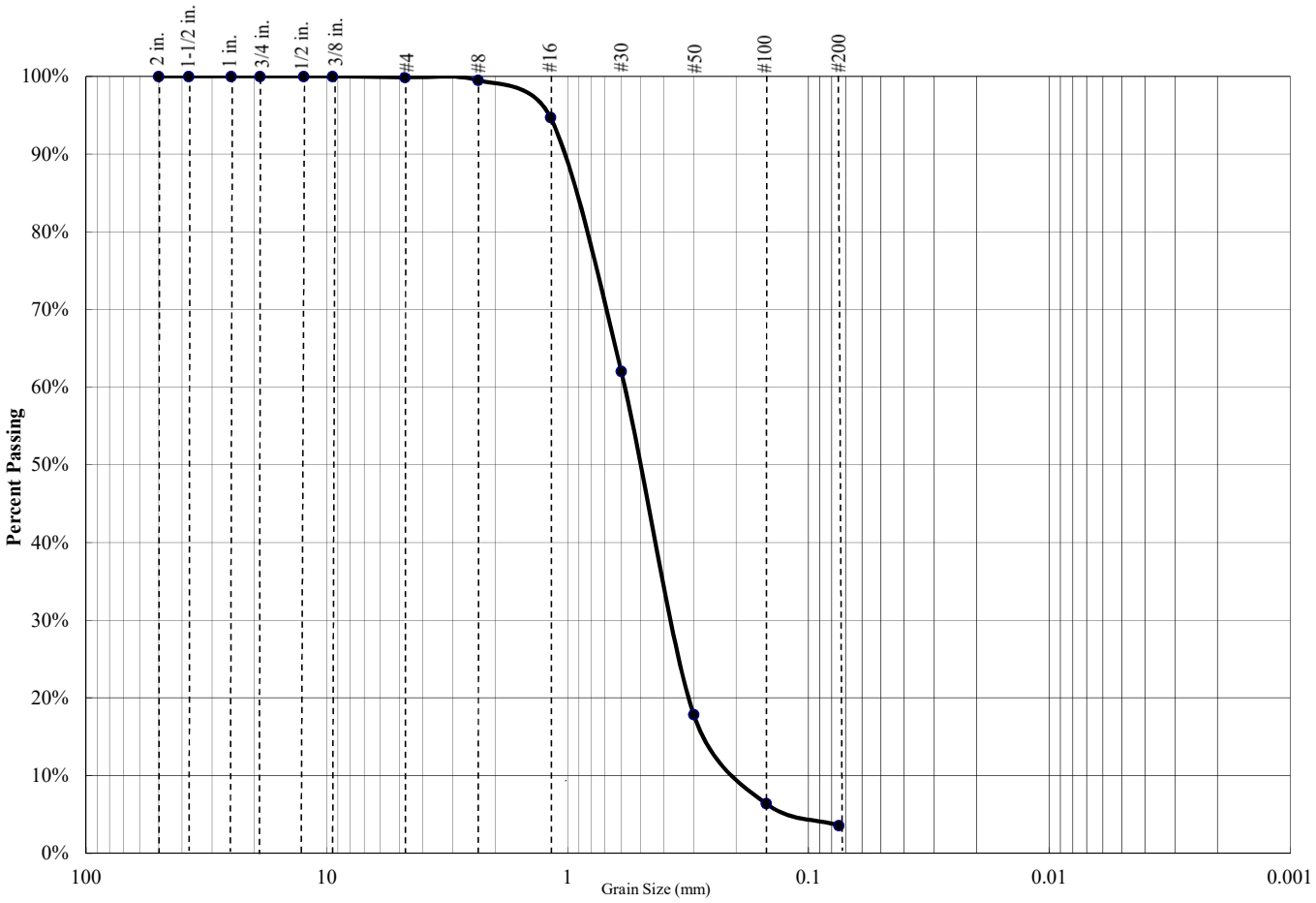
Project Number: 3-220-0499

Boring: B-1 @ 10'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
0%	96%	4%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	100.0%
#4	99.9%
#8	99.5%
#16	94.7%
#30	62.1%
#50	17.9%
#100	6.4%
#200	3.6%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=	0.6	D_{50}=	
D_{30}=	0.4	D_{15}=		D_{10}=	0.2
C_u=	3.00	C_c=	1.33		

USCS CLASSIFICATION
Poorly graded SAND (SP)

Project Name: Proposed Mixed-Use Building - Pico Rivera, CA

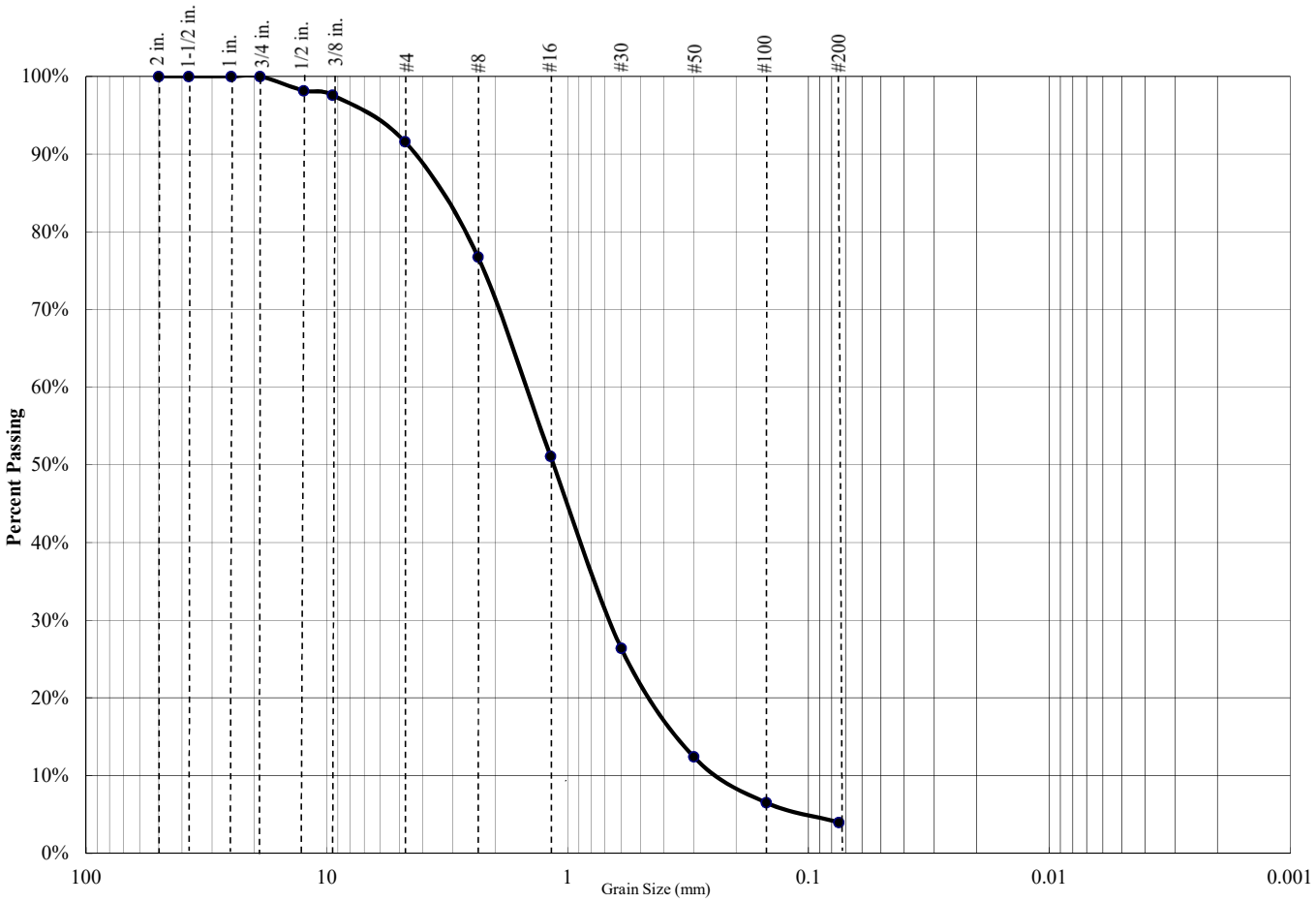
Project Number: 3-220-0499

Boring: B-1 @ 20'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
8%	88%	4%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	98.2%
3/8 inch	97.6%
#4	91.6%
#8	76.8%
#16	51.1%
#30	26.4%
#50	12.4%
#100	6.5%
#200	4.0%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=	1.5	D_{50}=	
D_{30}=	0.7	D_{15}=		D_{10}=	0.25
C_u=	6.00	C_c=	1.31		

USCS CLASSIFICATION
Well-graded SAND (SW)

Project Name: Proposed Mixed-Use Building - Pico Rivera, CA

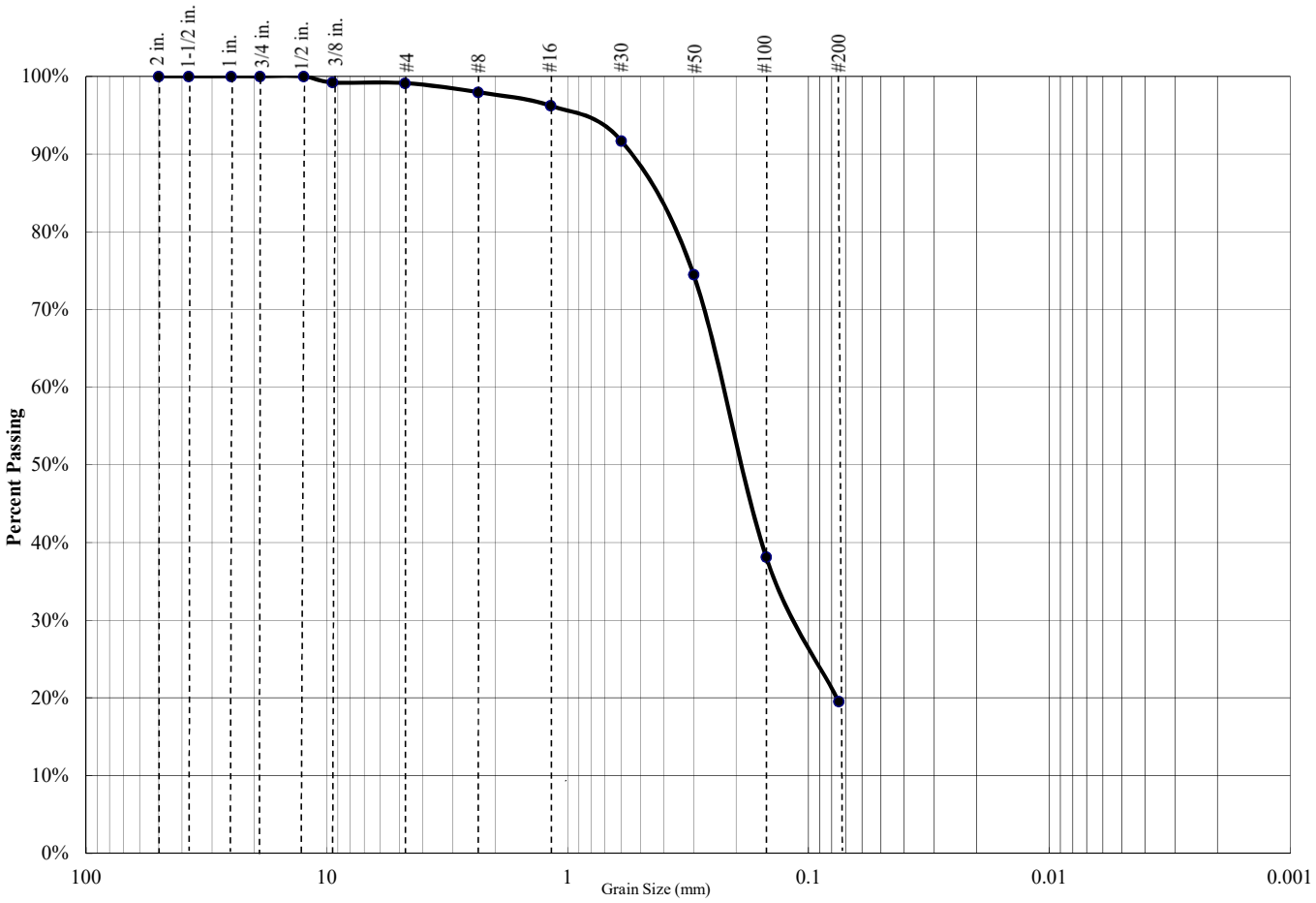
Project Number: 3-220-0499

Boring: B-1 @ 25'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
1%	80%	20%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	99.2%
#4	99.1%
#8	98.0%
#16	96.2%
#30	91.7%
#50	74.5%
#100	38.2%
#200	19.5%

Atterberg Limits		
PL=	**LL=**	**PI=**

Coefficients					
D_{85}=		**D_{60}=**		**D_{50}=**	
D_{30}=		**D_{15}=**		**D_{10}=**	
C_u=	N/A	**C_c=**	N/A		

USCS CLASSIFICATION
Silty SAND (SM)

Project Name: Proposed Mixed-Use Building - Pico Rivera, CA

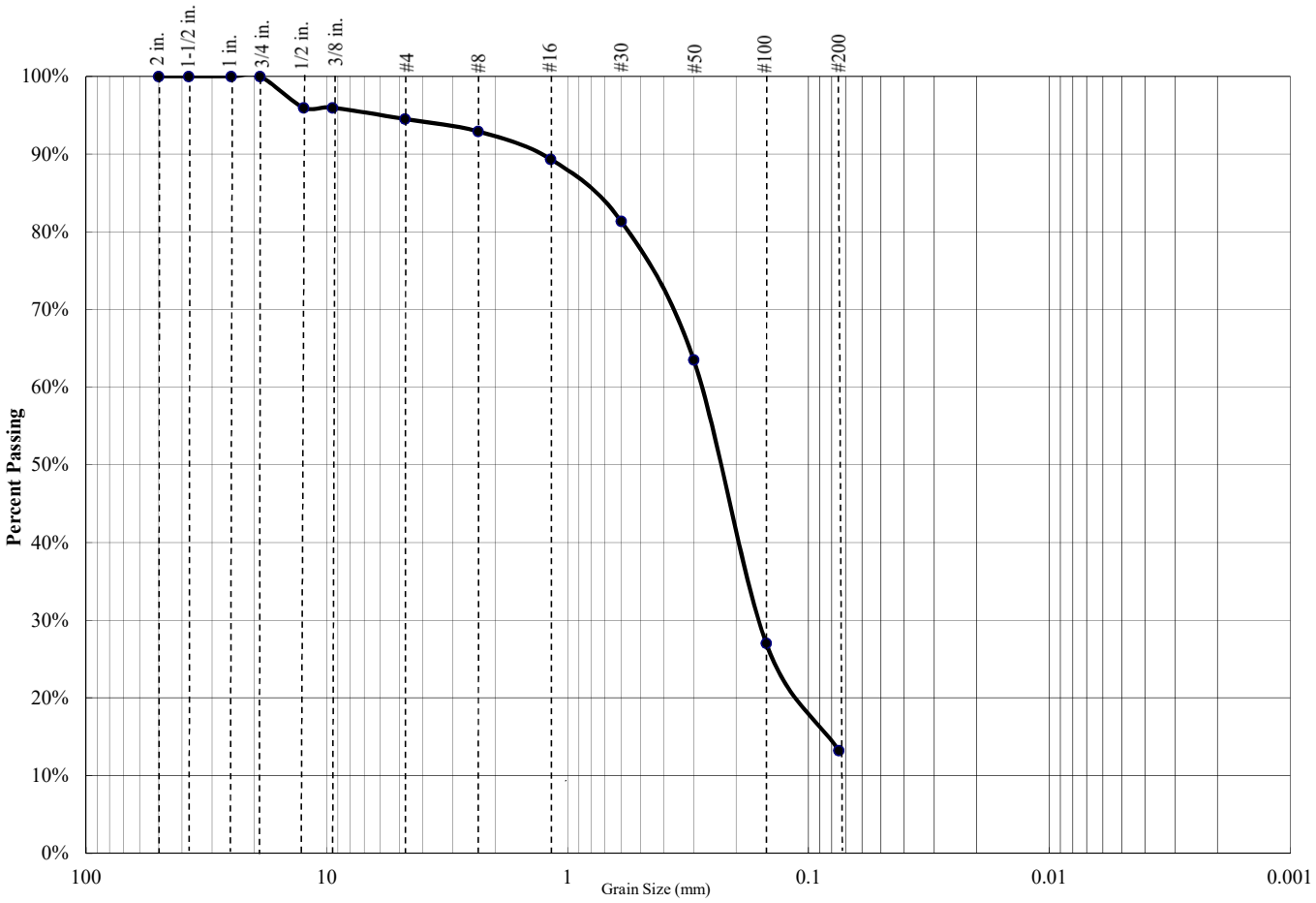
Project Number: 3-220-0499

Boring: B-1 @ 40'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
5%	81%	13%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	96.0%
3/8 inch	96.0%
#4	94.5%
#8	92.9%
#16	89.4%
#30	81.3%
#50	63.5%
#100	27.0%
#200	13.2%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=		D_{50}=	
D_{30}=		D_{15}=		D_{10}=	
C_u=	N/A	C_c=	N/A		

USCS CLASSIFICATION
Silty SAND (SM)

Project Name: Proposed Mixed-Use Building - Pico Rivera, CA

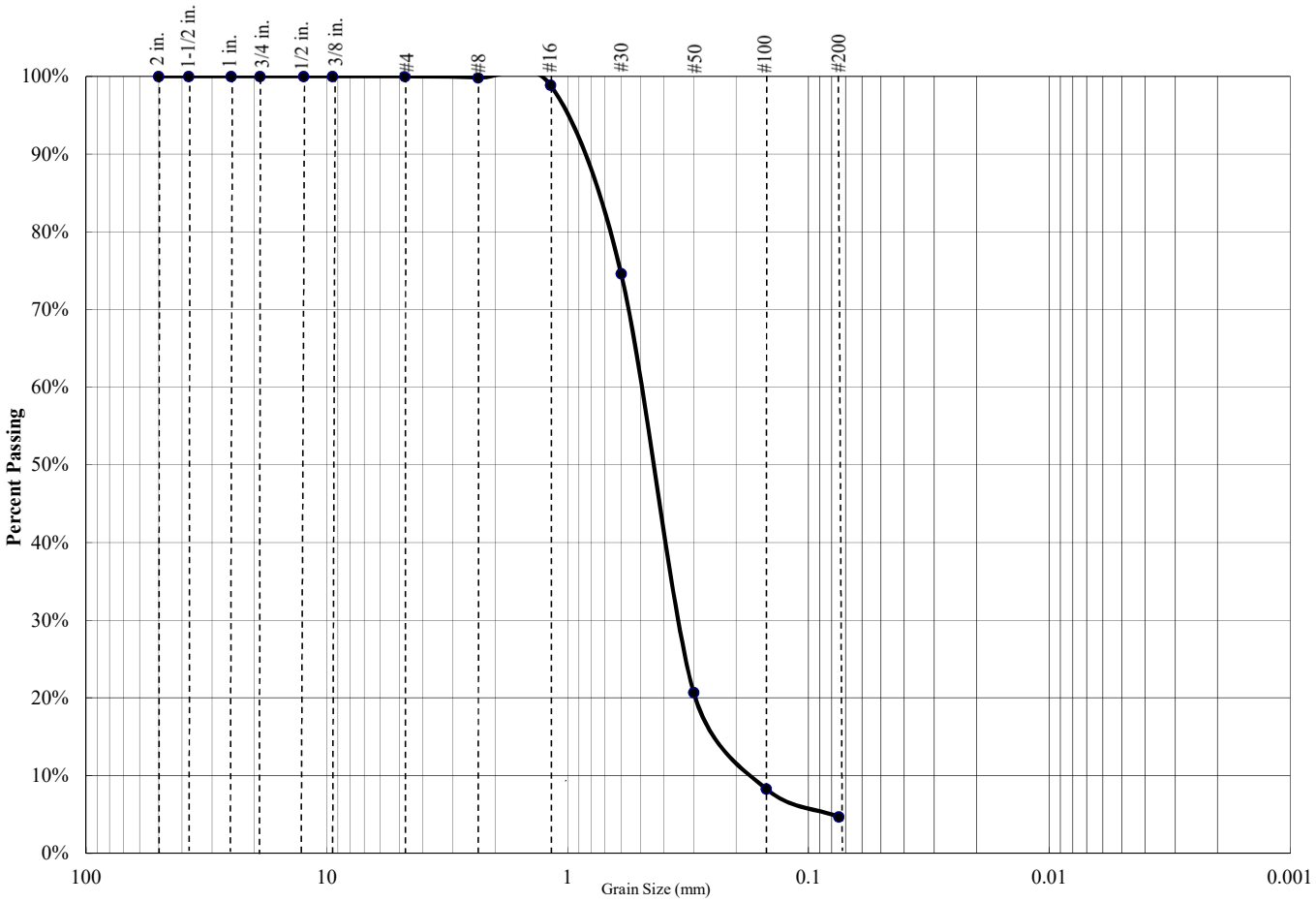
Project Number: 3-220-0499

Boring: B-1 @ 50'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
0%	95%	5%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	100.0%
#4	100.0%
#8	99.8%
#16	98.9%
#30	74.6%
#50	20.7%
#100	8.3%
#200	4.7%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=	0.5	D_{50}=	
D_{30}=	0.35	D_{15}=		D_{10}=	0.175
C_u=	2.86	C_c=	1.40		

USCS CLASSIFICATION
Poorly graded SAND (SP)

Project Name: Proposed Mixed-Use Building - Pico Rivera, CA

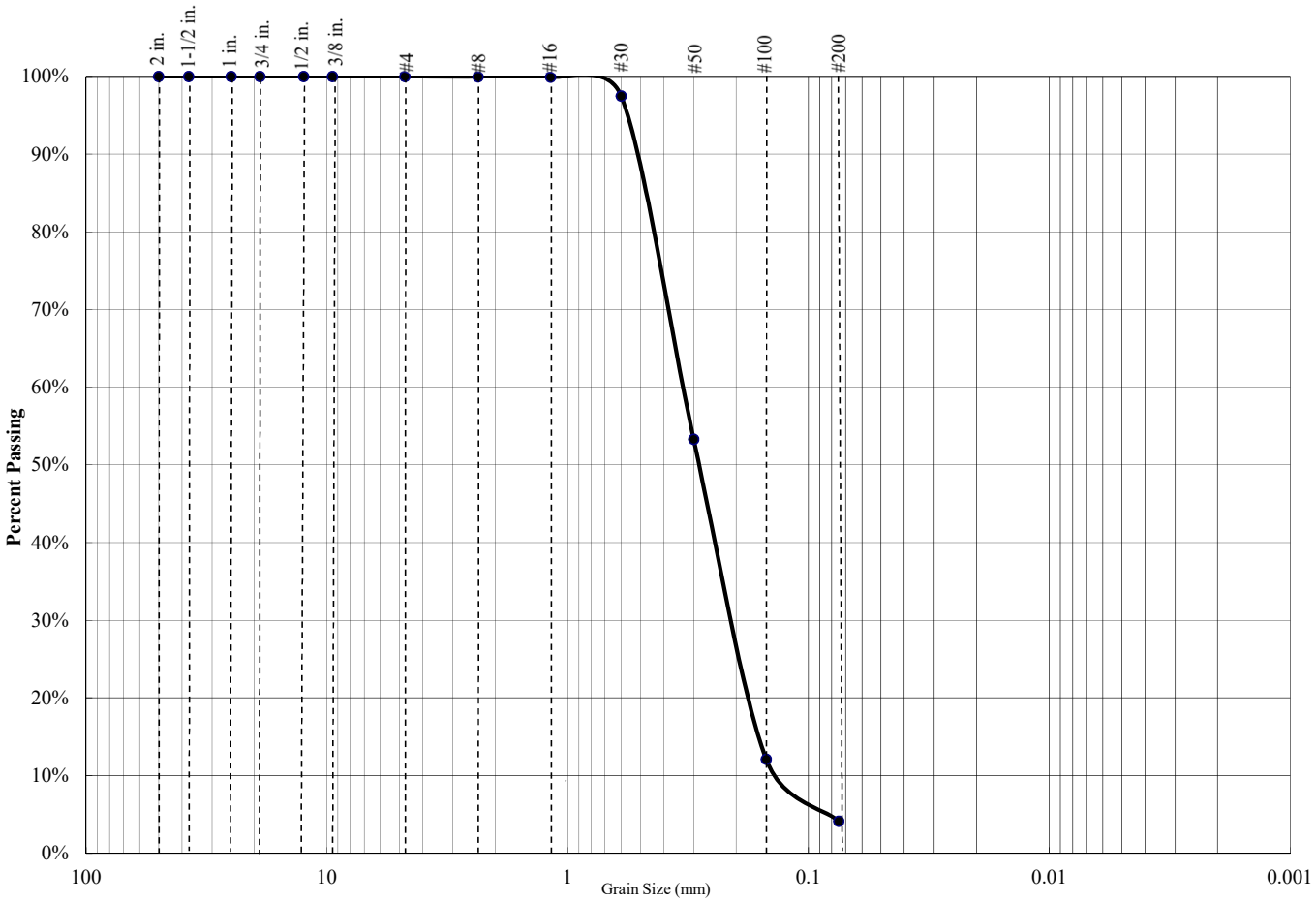
Project Number: 3-220-0499

Boring: B-3 @ 20'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
0%	96%	4%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	100.0%
#4	100.0%
#8	100.0%
#16	99.9%
#30	97.5%
#50	53.3%
#100	12.1%
#200	4.2%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=	0.35	D_{50}=	
D_{30}=	0.2	D_{15}=		D_{10}=	0.15
C_u=	2.33	C_c=	0.76		

USCS CLASSIFICATION
Poorly graded SAND (SP)

Project Name: Proposed Mixed-Use Building - Pico Rivera, CA

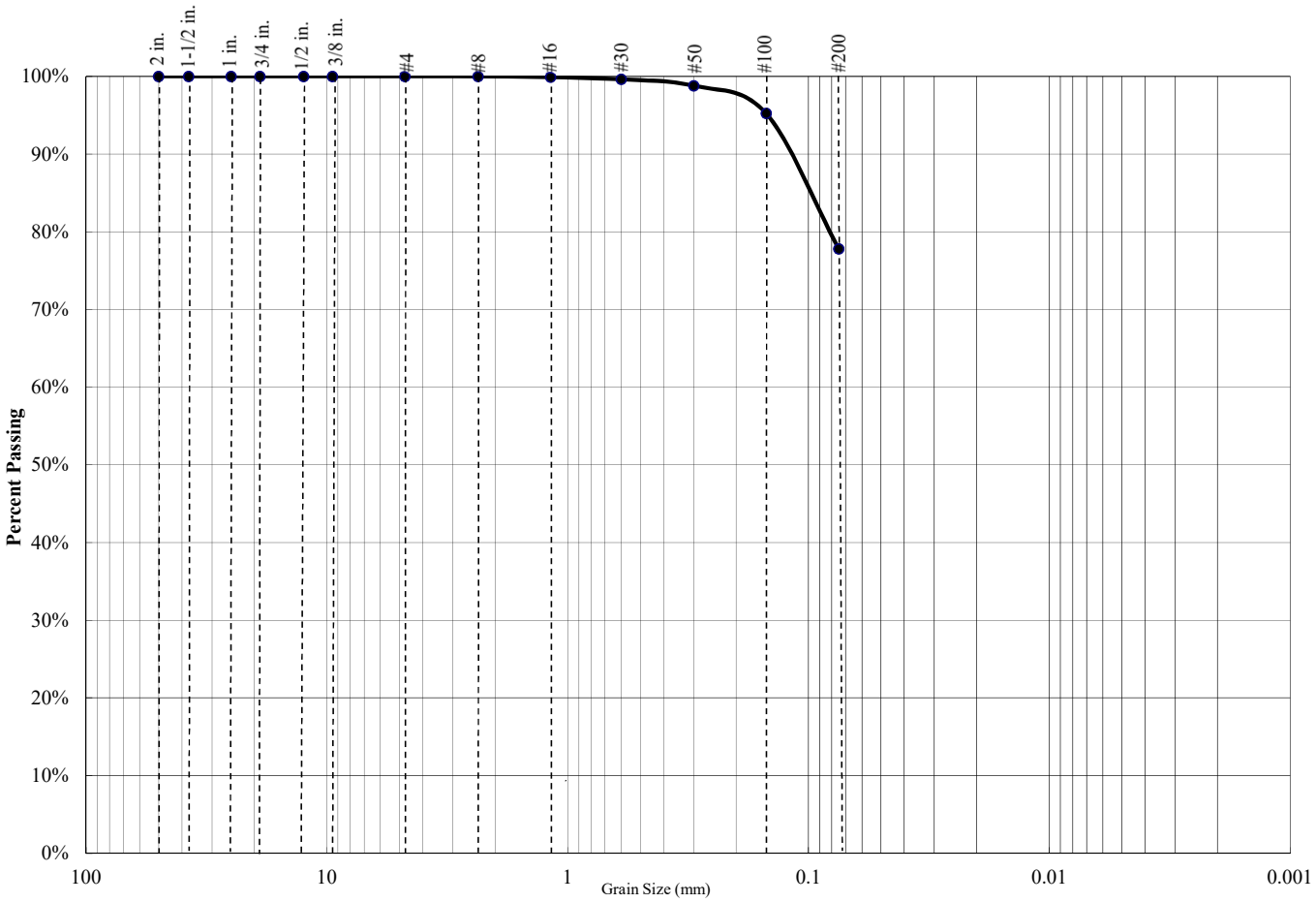
Project Number: 3-220-0499

Boring: B-4 @ 15'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
0%	22%	78%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	100.0%
#4	100.0%
#8	100.0%
#16	99.9%
#30	99.6%
#50	98.8%
#100	95.2%
#200	77.8%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=		D_{50}=	
D_{30}=		D_{15}=		D_{10}=	
C_u=	N/A	C_c=	N/A		

USCS CLASSIFICATION
SILT with Sand (ML)

Project Name: Proposed Mixed-Use Building - Pico Rivera, CA

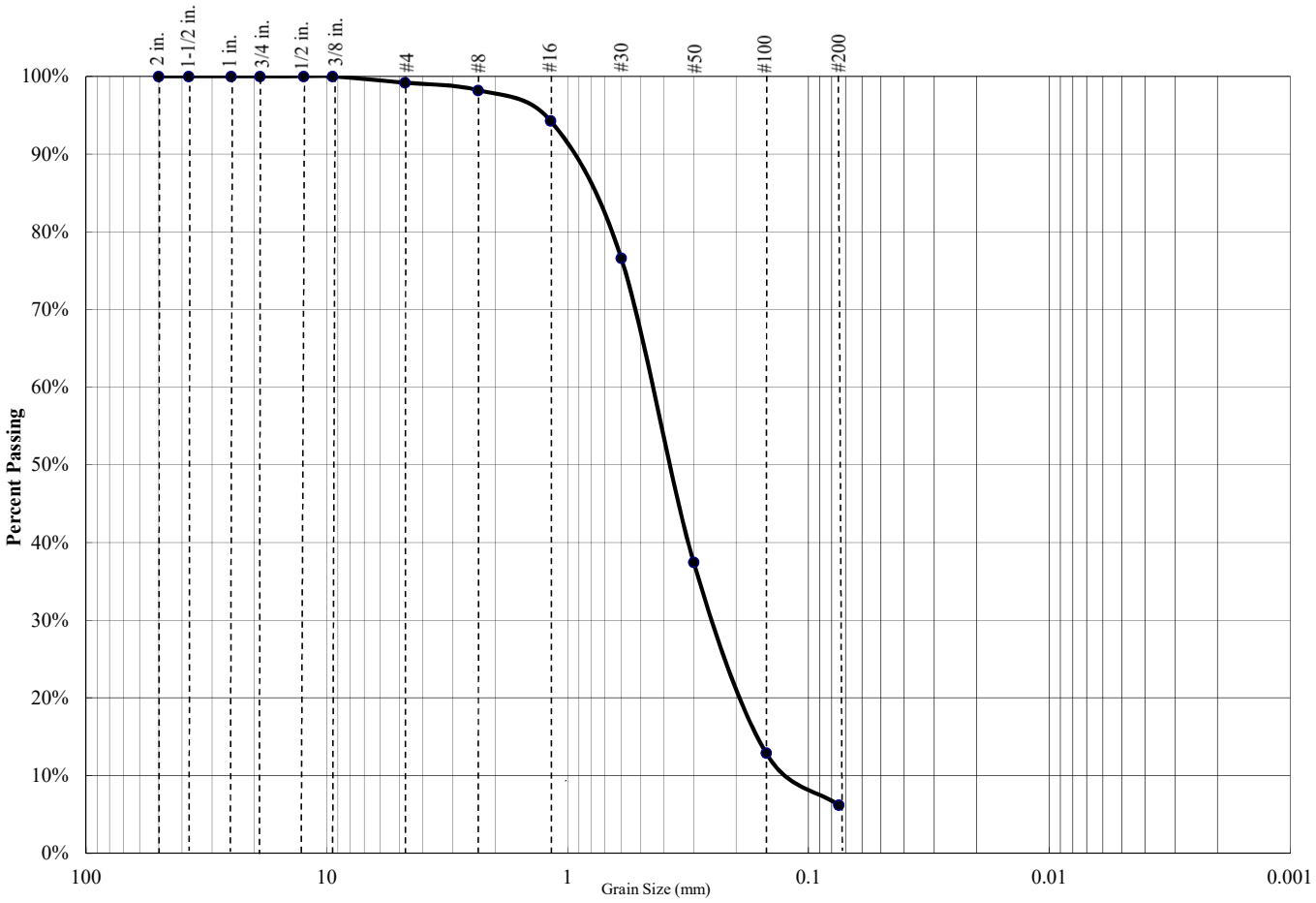
Project Number: 3-220-0499

Boring: B-5 @ 2'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
1%	93%	6%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	100.0%
#4	99.2%
#8	98.2%
#16	94.3%
#30	76.6%
#50	37.5%
#100	12.9%
#200	6.2%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=	0.45	D_{50}=	
D_{30}=	0.25	D_{15}=		D_{10}=	0.15
C_u=	3.00	C_c=	0.93		

USCS CLASSIFICATION
Poorly graded SAND with Silt (SP-SM)

Project Name: Proposed Mixed-Use Building - Pico Rivera, CA

Project Number: 3-220-0499

Boring: B-6 @ 15'

SALEM engineering group, inc.

CHEMICAL ANALYSIS

SO_4 - Modified CTM 417 & Cl - Modified CTM 417/422

Project Name: Proposed Mixed-Use Building - Pico Rivera, CA
Project Number: 3-220-0499
Date Sampled: 7/7/2020 - 7/8/2020 Date Tested: 7/22/2020
Sampled By: EGR Tested By: MN
Soil Description: Light Brown Silty SAND (SM)

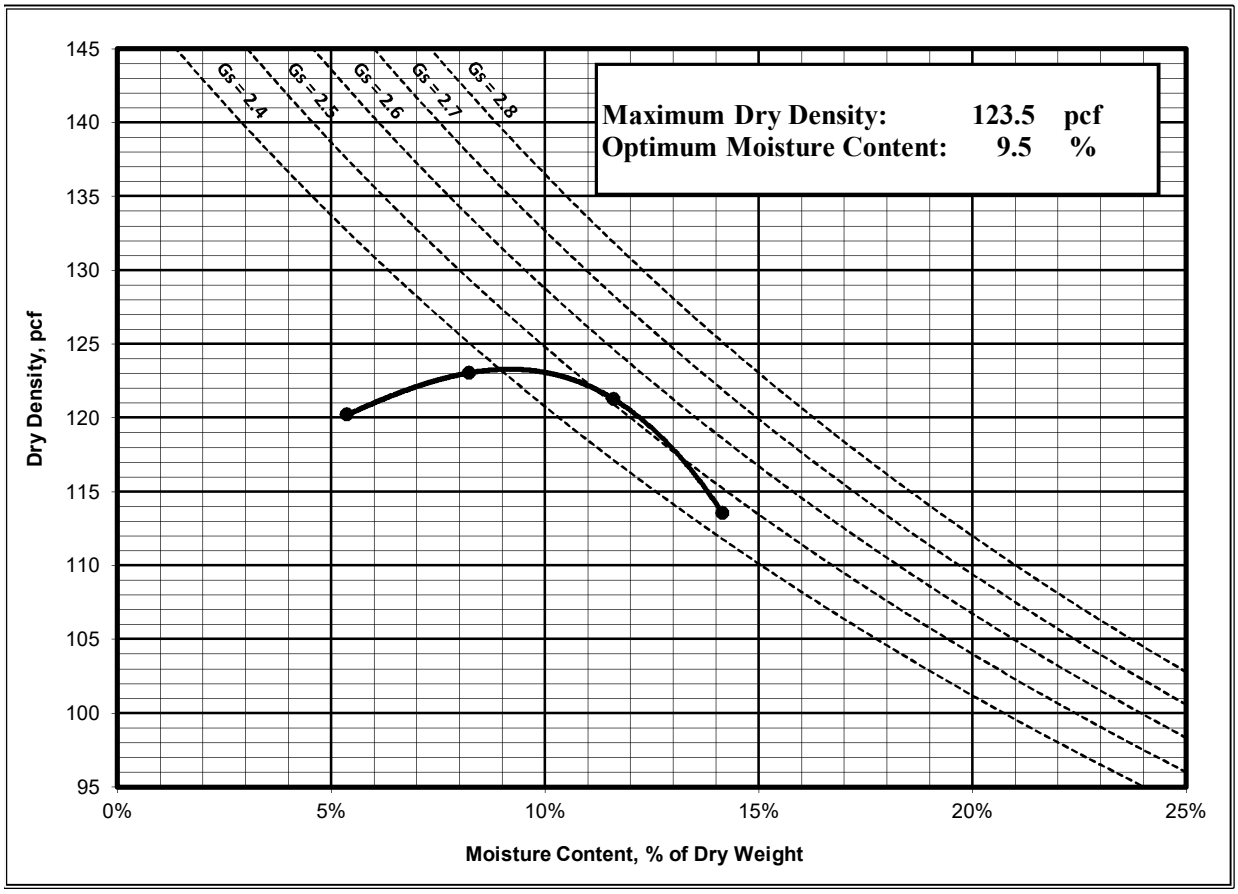
Sample Number	Sample Location	Soluble Sulfate SO_4-S	Soluble Chloride Cl	pH
1a.	B-1 @ 1'-4'	<50 mg/kg	24 mg/kg	8.0
1b.	B-1 @ 1'-4'	<50 mg/kg	24 mg/kg	8.0
1c.	B-1 @ 1'-4'	<50 mg/kg	24 mg/kg	8.0
Average:		**<50 mg/kg**	**24 mg/kg**	**8.0**

SALEM
engineering group, inc.

Laboratory Compaction Curve
ASTM D1557

Project Name: Proposed Mixed-Use Building - Pico Rivera, CA
Project Number: 3-220-0499
Date Sampled: 7/7/2020 - 7/8/2020 Date Tested: 7/23/2020
Sampled By: EGR Tested By: MN
Sample Location: B-1 @ 1'-4'
Soil Description: Light Brown Silty SAND (SM)
Test Method: Method A

	1	2	3	4
Weight of Moist Specimen & Mold, (g)	3928.7	4026.9	4059.9	3973.2
Weight of Compaction Mold, (g)	2013.7	2013.7	2013.7	2013.7
Weight of Moist Specimen, (g)	1915.0	2013.2	2046.2	1959.5
Volume of Mold, (ft^3)	0.0333	0.0333	0.0333	0.0333
Wet Density, (pcf)	126.7	133.1	135.3	129.6
Weight of Wet (Moisture) Sample, (g)	100.0	100.0	100.0	100.0
Weight of Dry (Moisture) Sample, (g)	94.9	92.4	89.6	87.6
Moisture Content, (%)	5.4%	8.2%	11.6%	14.2%
Dry Density, (pcf)	120.2	123.0	121.3	113.5



SALEM engineering group, inc.

APPENDIX

C

APPENDIX C
GENERAL EARTHWORK AND PAVEMENT SPECIFICATIONS

When the text of the report conflicts with the general specifications in this appendix, the recommendations in the report have precedence.

1.0 SCOPE OF WORK: These specifications and applicable plans pertain to and include all earthwork associated with the site rough grading, including, but not limited to, the furnishing of all labor, tools and equipment necessary for site clearing and grubbing, stripping, preparation of foundation materials for receiving fill, excavation, processing, placement and compaction of fill and backfill materials to the lines and grades shown on the project grading plans and disposal of excess materials.

2.0 PERFORMANCE: The Contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications. This work shall be inspected and tested by a representative of SALEM Engineering Group, Incorporated, hereinafter referred to as the Soils Engineer and/or Testing Agency. Attainment of design grades, when achieved, shall be certified by the project Civil Engineer. Both the Soils Engineer and the Civil Engineer are the Owner's representatives. If the Contractor should fail to meet the technical or design requirements embodied in this document and on the applicable plans, he shall make the necessary adjustments until all work is deemed satisfactory as determined by both the Soils Engineer and the Civil Engineer. No deviation from these specifications shall be made except upon written approval of the Soils Engineer, Civil Engineer, or project Architect.

No earthwork shall be performed without the physical presence or approval of the Soils Engineer. The Contractor shall notify the Soils Engineer at least 2 working days prior to the commencement of any aspect of the site earthwork.

The Contractor shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that the Contractor shall defend, indemnify and hold the Owner and the Engineers harmless from any and all liability, real or alleged, in connection with the performance of work on this project, except for liability arising from the sole negligence of the Owner or the Engineers.

3.0 TECHNICAL REQUIREMENTS: All compacted materials shall be densified to no less that 95 percent of relative compaction (90 percent for fine grained cohesive soils) based on ASTM D1557 Test Method (latest edition), UBC or CAL-216, or as specified in the technical portion of the Soil Engineer's report. The location and frequency of field density tests shall be determined by the Soils Engineer. The results of these tests and compliance with these specifications shall be the basis upon which satisfactory completion of work will be judged by the Soils Engineer.

4.0 SOILS AND FOUNDATION CONDITIONS: The Contractor is presumed to have visited the site and to have familiarized himself with existing site conditions and the contents of the data presented in the Geotechnical Engineering Report. The Contractor shall make his own interpretation of the data contained in the Geotechnical Engineering Report and the Contractor shall not be relieved of liability for any loss sustained as a result of any variance between conditions indicated by or deduced from said report and the actual conditions encountered during the progress of the work.

5.0 DUST CONTROL: The work includes dust control as required for the alleviation or prevention of any dust nuisance on or about the site or the borrow area, or off-site if caused by the Contractor's operation either during the performance of the earthwork or resulting from the conditions in which the Contractor leaves the site. The Contractor shall assume all liability, including court costs of codefendants, for all claims related to dust or wind-blown materials attributable to his work. Site preparation shall consist of site clearing and grubbing and preparation of foundation materials for receiving fill.

6.0 CLEARING AND GRUBBING: The Contractor shall accept the site in this present condition and shall demolish and/or remove from the area of designated project earthwork all structures, both surface and subsurface, trees, brush, roots, debris, organic matter and all other matter determined by the Soils Engineer to be deleterious. Such materials shall become the property of the Contractor and shall be removed from the site.

Tree root systems in proposed improvement areas should be removed to a minimum depth of 3 feet and to such an extent which would permit removal of all roots greater than 1 inch in diameter. Tree roots removed in parking areas may be limited to the upper 1½ feet of the ground surface. Backfill of tree root excavations is not permitted until all exposed surfaces have been inspected and the Soils Engineer is present for the proper control of backfill placement and compaction. Burning in areas which are to receive fill materials shall not be permitted.

7.0 SUBGRADE PREPARATION: Surfaces to receive Engineered Fill and/or building or slab loads shall be prepared as outlined above, scarified to a minimum of 12 inches, moisture-conditioned as necessary, and recompacted to 95 percent relative compaction (90 percent for fine grained cohesive soils).

Loose soil areas and/or areas of disturbed soil shall be moisture-conditioned as necessary and recompacted to 95 percent relative compaction (90 percent for fine grained cohesive soils). All ruts, hummocks, or other uneven surface features shall be removed by surface grading prior to placement of any fill materials. All areas which are to receive fill materials shall be approved by the Soils Engineer prior to the placement of any fill material.

8.0 EXCAVATION: All excavation shall be accomplished to the tolerance normally defined by the Civil Engineer as shown on the project grading plans. All over-excavation below the grades specified shall be backfilled at the Contractor's expense and shall be compacted in accordance with the applicable technical requirements.

9.0 FILL AND BACKFILL MATERIAL: No material shall be moved or compacted without the presence or approval of the Soils Engineer. Material from the required site excavation may be utilized for construction site fills, provided prior approval is given by the Soils Engineer. All materials utilized for constructing site fills shall be free from vegetation or other deleterious matter as determined by the Soils Engineer.

10.0 PLACEMENT, SPREADING AND COMPACTION: The placement and spreading of approved fill materials and the processing and compaction of approved fill and native materials shall be the responsibility of the Contractor. Compaction of fill materials by flooding, ponding, or jetting shall not be permitted unless specifically approved by local code, as well as the Soils Engineer. Both cut and fill shall be surface-compacted to the satisfaction of the Soils Engineer prior to final acceptance.

11.0 SEASONAL LIMITS: No fill material shall be placed, spread, or rolled while it is frozen or thawing, or during unfavorable wet weather conditions. When the work is interrupted by heavy rains, fill operations shall not be resumed until the Soils Engineer indicates that the moisture content and density of previously placed fill is as specified.

12.0 DEFINITIONS - The term "pavement" shall include asphaltic concrete surfacing, untreated aggregate base, and aggregate subbase. The term "subgrade" is that portion of the area on which surfacing, base, or subbase is to be placed. The term “Standard Specifications”: hereinafter referred to, is the most recent edition of the Standard Specifications of the State of California, Department of Transportation. The term "relative compaction" refers to the field density expressed as a percentage of the maximum laboratory density as determined by ASTM D1557 Test Method (latest edition) or California Test Method 216 (CAL-216), as applicable.

13.0 PREPARATION OF THE SUBGRADE - The Contractor shall prepare the surface of the various subgrades receiving subsequent pavement courses to the lines, grades, and dimensions given on the plans. The upper 12 inches of the soil subgrade beneath the pavement section shall be compacted to a minimum relative compaction of 95% (90% for fine grained cohesive soil) based upon ASTM D1557. The finished subgrades shall be tested and approved by the Soils Engineer prior to the placement of additional pavement courses.

14.0 AGGREGATE BASE - The aggregate base material shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate base material shall conform to the requirements of Section 26 of the Standard Specifications for Class II material, ¾-inch or 1½-inches maximum size. The aggregate base material shall be compacted to a minimum relative compaction of 95 percent based upon CAL-216. The aggregate base material shall be spread in layers not exceeding 6 inches and each layer of aggregate material course shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

15.0 AGGREGATE SUBBASE - The aggregate subbase shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate subbase material shall conform to the requirements of Section 25 of the Standard Specifications for Class II Subbase material. The aggregate subbase material shall be compacted to a minimum relative compaction of 95 percent based upon CAL-216, and it shall be spread and compacted in accordance with the Standard Specifications. Each layer of aggregate subbase shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

16.0 ASPHALTIC CONCRETE SURFACING - Asphaltic concrete surfacing shall consist of a mixture of mineral aggregate and paving grade asphalt, mixed at a central mixing plant and spread and compacted on a prepared base in conformity with the lines, grades, and dimensions shown on the plans. The viscosity grade of the asphalt shall be PG 64-10, unless otherwise stipulated or local conditions warrant more stringent grade. The mineral aggregate shall be Type A or B, ½ inch maximum size, medium grading, and shall conform to the requirements set forth in Section 39 of the Standard Specifications. The drying, proportioning, and mixing of the materials shall conform to Section 39. The prime coat, spreading and compacting equipment, and spreading and compacting the mixture shall conform to the applicable chapters of Section 39, with the exception that no surface course shall be placed when the atmospheric temperature is below 50 degrees F. The surfacing shall be rolled with a combination steel-wheel and pneumatic rollers, as described in the Standard Specifications. The surface course shall be placed with an approved self-propelled mechanical spreading and finishing machine.

Appendix

Appendix D Noise and Vibration Analysis

Appendix

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OPL-01.0

Traffic Noise Calculations

	PM Peak hour volumes				dBA Increae	
Roadway Segment	Existing No Project	Existing Plus Project	Future No Project	Future Plus Project	Project Noise Increase	Cumulative Increase
Paramount Boulevard north of Washington Boulevard	1,975	1,988	2,085	2,098	0.0	0.3
Paramount Boulevard south of Washington Boulevard	2,233	2,246	2,330	2,343	0.0	0.2
Washington Boulevard east of Paramount Boulevard	3,022	3,081	3,138	3,197	0.1	0.2
Washington Boulevard west of Paramount Boulevard	3,414	3,447	3,545	3,578	0.0	0.2
Crossway Drive north of Washington Boulevard	294	294	301	301	0.0	0.1
Crossway Drive south of Washington Boulevard	550	550	566	566	0.0	0.1
Washington Boulevard east of Crossway Drive	2,818	2,877	2,927	2,986	0.1	0.3
Washington Boulevard west of Crossway Drive	2,730	2,789	2,836	2,895	0.1	0.3
Rosemeand Boulevard north of Coffman and Pico Road	2,464	2,484	2,576	2,596	0.0	0.2
Rosemeand Boulevard south of Coffman and Pico Road	2,418	2,438	2,528	2,548	0.0	0.2
Coffman and Pico Road east of Rosemeand Boulevard	49	49	50	50	0.0	0.1
Coffman and Pico Road west of Rosemeand Boulevard	125	125	130	130	0.0	0.2
Rosemead Boulevard north of Washington Boulevard	2,226	2,251	2,330	2,355	0.0	0.2
Rosemead Boulevard south of Washington Boulevard	2,192	2,212	2,299	2,319	0.0	0.2
Washington Boulevard east of Rosemeand Boulevard	2,526	2,559	2,622	2,655	0.1	0.2
Washington Boulevard west of Rosemeand Boulevard	2,556	2,592	2,657	2,693	0.1	0.2
					0.1	0.3

Appendix

Appendix E Service Provider Letters and Responses

Appendix

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COUNTY OF LOS ANGELES
FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294
(323) 881-2401
www.fire.lacounty.gov

"Proud Protectors of Life, Property, and the Environment"

DARYL L. OSBY
FIRE CHIEF
FORESTER & FIRE WARDEN

August 31, 2021

Mariana Zimmerman, Planner
Placeworks
Planning Department
3 MacArthur Place, Suite 1100
Santa Ana, CA 92707

Dear Ms. Zimmerman:

REQUEST FOR SERVICE PROVIDER INFORMATION FOR THE MITIGATED NEGATIVE DECLARATION, "WASHINGTON AND ROSEMEAD MIXED-USE PROJECT," INCLUDES A SIX-STORY MIXED-USE BUILDING WITH SUBTERRANEAN PARKING, GROUND-FLOOR RETAIL AND RESIDENTIAL USES, AND RESIDENTIAL USES IN FLOORS 2 THROUGH 6, THE BUILDING IS A WRAP-STYLE WITH PARKING LEVELS EXTENDING ALL FLOORS INTERIOR TO THE BUILDING, LOCATED AT 8825 WASHINGTON BOULEVARD, PICO RIVERA, FFER 2021008339

The Request for Service Provider Information has been reviewed by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department.

The following are their comments:

PLANNING DIVISION:

1. Please confirm that the nearest fire station closest to and that serve the Project Site is Los Angeles County Fire Department Station #103. What other stations will serve the Project Site in case of fire?

   Yes, Fire Station 103 located at 7300 S. Paramount Blvd. in the City of Pico Rivera is the jurisdictional fire station for the Project Site.

Fire Station 25 location at 9209 E. Slauson Ave. in the City of Pico Rivera is the 2nd-due station for the Project Site.

Are there any service agreements with other local or regional fire agencies (other than LACFD) for addition support?

No, the LACFD does not have any services agreement with any other fire agencies in the project area.

Please fill in the information requested below regarding equipment (e.g., engines, fire trucks, EMT vehicles) and daily staffing for each of the stations noted, as well as any other station(s) not noted but pertinent.

Fire Station 103 is staff with a 3-person assessment engine company, which is an engine company with some limited paramedic capabilities and a 4-Person USAR Squad, combined together they form a USAR Task Force with a daily staffing of 7 uniform personnel.

Fire Station 25 is staffed with a 4-person engine company with a daily staffing of 4 uniform personnel.

2. What is LACFD's response time goal/policy standard (in minutes) for responding to emergency and non-emergency in the service area? What is the current average response time?

The LACOFD uses the national guideline of a 5-minute response time for the 1st arriving unit and an 8 minute response time for advanced life support (paramedic) response in urban areas.

During 2020 Fire Station 103 had an emergency response time of 5:21 minutes.

3. Are there any existing deficiencies (personnel, equipment) in the fire protection service currently provided to the Project Site?

Fire protection serving the area appears to be adequate for the existing development/land uses; however, each additional development creates greater demands on existing resources.

4. Any existing plans for service facilities or expanded capacity (personnel, equipment, station) that would serve the Project Site.

LACoFD currently has no plans to construct new or expand existing fire stations in the project area.

5. What impact (if any) will the proposed Project have on LACFD's ability to provide fire protection and emergency service to the planning area?

   As stated above, fire protection serving the area appears to be adequate for the existing development/land use; however, each additional development creates greater demands on existing resources. However, the potential impact of this project by itself will not have a significant impact on services.

6. What are the primary sources of funding for LACFD operations and improvements? Do you collect development impact fees?

   The Fire Department is primarily funded by a share of property tax and a Special Tax approved by the voters in June 1997.

   The LACFD does not collect a developer impact fee in the project area.

7. What major difference in service demands is anticipated by changing the land use from commercial (currently vacant) to mixed-use with residential and commercial?

   The LACFD anticipates that no major difference in service demands would occur due to the change in land use and the development of Project (see response to Question #5.

8. Please provide any additional comments you wish to make regarding the Proposed Project.

   We have no additional comments.

For any questions regarding this response, please contact Loretta Bagwell, Planning Analyst, at (323) 881-2404 or Loretta.Bagwell@fire.lacounty.gov.

LAND DEVELOPMENT UNIT:

The proposed development shall comply with all applicable code and ordinance requirements for construction, access, water main, fire flows, and fire hydrants.

Every building constructed shall be accessible to Fire Department apparatus by way of access roadways with an all-weather surface of not less than the prescribed width. The roadway shall be extended to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building.

503.1.1 Buildings and facilities. Approved Fire Apparatus Access Roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The Fire Apparatus Access Road shall comply with the requirements of this section and shall extend to within 150 feet of all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility.

503.2.1.2 Commercial, industrial, and multifamily-residential developments. Fire Apparatus Access Roads for commercial, industrial, and multifamily-residential developments shall be installed and arranged in accordance with Sections 503.2.1.2.1 through 503.2.1.2.2. For purposes of this section, the highest roof surface shall be determined by measurement of the vertical distance between the access roadway and the eave of a pitched roof, the intersection of the roof to the exterior wall, or the top of parapet walls, whichever is greater.

503.2.1.2.2 Where the highest roof surface exceeds 30 feet. For buildings where the vertical distance between the access roadway and the highest roof surface exceeds 30 feet, an approved Fire Apparatus Access Roadway with a minimum width of 28 feet, exclusive of shoulders, shall be provided in the immediate vicinity of the building or portion thereof. This roadway shall have an unobstructed clearance of clear to the sky.

503.2.1.2.2.1 Proximity to Building. At least one required access route meeting this condition shall be located such that the edge of the Fire Apparatus Access Roadway, not including shoulder, that is closest to the building being served, is between 10 feet and 30 feet, from the building, as determined by the fire code official, and shall be positioned parallel to one entire side of the building. The side of the building on which the Fire Apparatus Access Road is positioned shall be approved by the fire code official.

503.2.1.2.2.2 Obstructions. Overhead utility and power lines shall not be located over the fire apparatus access road or between the fire apparatus road and the building. Other obstructions shall be permitted to be placed with the approval of the fire code official.

503.2.2.1 Dimensions maintained. The dimensions of approved fire apparatus roads shall be maintained as originally approved by the fire code official.

503.2.3 Surface. Facilities, buildings, or portions of buildings hereafter constructed shall be accessible to fire department apparatus by way of an approved fire apparatus access road that is designed and maintained with an asphalt, concrete, or other approved driving surface capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds.

503.2.4 Turning radius. The minimum turning radius shall be not less than 32 feet, measured at the centerline of the required access roadway.

503.2.5 Dead Ends. Dead end Fire Apparatus Access Roads in excess of 150 feet shall be provided with an approved turnaround. See Figure 503.2.5(1) and 503.2.5 (2). The turnaround shall be oriented on the access roadway in the proper direction of travel.

503.4 Obstruction of fire apparatus access roads. Fire Apparatus Access Roads shall not be obstructed in any manner, including by the parking of vehicles or the use of traffic calming devices, including but not limited to, speed bumps or speed humps. The minimum widths and clearances established in Sections 503.2.1 and 503.2.2 shall be maintained at all times.

504.1 Required access. Exterior doors and openings required by this code or the California Building Code shall be maintained readily accessible for emergency access by the fire department. An approval access walkway leading from Fire Apparatus Access Roads to exterior openings shall be provided for where required by the fire code official.

504.5 Rooftop barriers and parapets. No person shall install any security barrier, visual barrier screen, or other obstruction on; the roof of any building in such a manner as to obstruct firefighter ingress or egress in the event of fire or other emergency, Parapet shall not exceed 36 inches on at least two sides of the building. These sides should face an access roadway or yard sufficient to accommodate ladder operations.

Fire flow requirements shall be determined upon submittal for review and approval of the proposed development to the County of Los Angeles Fire Department. The County of Los Angeles Fire Code Appendix B shall be utilized to determine the appropriate Fire Flow requirements for the proposed development.

Note: additional requirements may be applicable and will be determined upon formal submittal to the County of Los Angeles Fire Department Fire Prevention, Land Development Unit and or the County of Los Angeles Fire Department Fire Prevention, Engineering Section Building Plan Check Unit.

Should any questions arise regarding subdivision, water systems, or access, please contact the County of Los Angeles Fire Department Land Development Unit's, Inspector Nancy Rodeheffer at (323) 890-4243.

FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS:

The statutory responsibilities of the County of Los Angeles Fire Department's Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones, archeological and cultural resources, and the County Oak Tree Ordinance. Potential impacts in these areas should be addressed.

Under the Los Angeles County Oak tree Ordinance, a permit is required to cut, destroy, remove, relocate, inflict damage or encroach into the protected zone of any tree of the Oak genus which is 25 inches or more in circumference (eight inches in diameter), as measured 4 1/2 feet above mean natural grade.

If Oak trees are known to exist in the proposed project area further field studies should be conducted to determine the presence of this species on the project site.

The County of Los Angeles Fire Department's Forestry Division has no further comments regarding this project.

For any questions regarding this response, please contact Forestry Assistant, Nicholas Alegria at (818) 890-5719.

HEALTH HAZARDOUS MATERIALS DIVISION:

The Health Hazardous Materials Division (HHMD) of the Los Angeles County Fire Department recommends that a Phase I Environmental Site Assessment and, possibly, an associated Vapor Encroachment Screening be conducted at the project site to evaluate whether known environmental Volatile Organic Contaminants (VOCs) impacting soil and groundwater at the adjacent southern property (former Northrop Corporation) pose potential health risks and/or hazards to future project site occupants. HHMD has no additional comments at this time.

Please contact HHMD senior typist-clerk, Perla Garcia at (323) 890-4035 or Perla.garcia@fire.lacounty.gov if you have any questions.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,

RONALD M. DURBIN, CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

RMD:ac

City of Pico Rivera
COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT
6615 Passons Boulevard · Pico Rivera, California 90660
(562) 801-4332
Web: www.pico-rivera.org
e-mail: communitydevelopment@pico-rivera.org

Michael L. Garcia
Director

July 21, 2021

Captain Phillip R. Marquez
c/o Lieutenant Jodi Hutak
Los Angeles County Sheriff's Department
Pico Rivera Station
6631 Passons Boulevard
Pico Rivera, 90660

Subject: Request for Service Provider Information for the Mitigated Negative Declaration for the Washington and Rosemead Mixed-Use Project (OPL-01.0)

To Captain Marquez:

PlaceWorks is preparing an Initial Study/Mitigated Negative Declaration (IS/MND) for the Washington and Rosemead Mixed-Use project (proposed project). This letter is to request your assistance in updating information regarding existing fire-related services in Pico Rivera and assessing potential impacts of the proposed project. Please respond to the enclosed questionnaire, using additional sheets if necessary. Note that your responses will become a part of the administrative record for this project and will be included as an appendix to the MND.

Project Location

The project site is 2.85 acres parcel at 8825 Washington Boulevard (Assessor's Parcel Number [APN] 6370-027-018) in the City of Pico Rivera, Los Angeles County (see Figure 1, *Local Vicinity Map* and Figure 2, *Aerial Photograph*). The project site is primarily surrounded by commercial and residential uses. The Pico Rivera Marketplace borders the site to the north and east, a single-family residential neighborhood borders to the northwest, and commercial uses border to the west and south across Washington Boulevard.

Existing Conditions

The project site is 2.85 acres and is currently vacant and contains paved surfaces and landscaped areas. The project site is fenced off and there is no public access. It was previously developed with a commercial building that operated as a nightclub until March 2015 and was subsequently demolished in 2020.

Project Description

The proposed project includes a six-story mixed-use building with subterranean parking, ground-floor retail and residential uses, and residential uses in floors 2 through 6 (see Figure 3, *Proposed Site Plan*). The building is a wrap-style with parking levels extending all floors interior to the building. The proposed project would develop 255 dwelling units consisting of a mix of studios, one-bedrooms, two-bedrooms, and three-bedrooms; up to 5,500 square feet of retail; up to 1,500 square feet of ground-floor lobby/leasing space; up to 13,500 square feet of recreational uses; and up to 190,000 square feet of parking. The first floor of

the proposed building is a mix of retail, residential, public seating areas and a main lobby/leasing office. Floors 2 through 6 include residential units, parking, and related residential amenities such as a small flex office space for residents. Parking would be located in one and a half subterranean levels. The roof deck of the parking structure would include a pool and recreation facilities such as a gym and clubhouse for use by residences only.

Discretionary Actions

The proposed project would include the following discretionary actions: (1) Specific Plan approval seeks adoption by ordinance to facilitate the implementation of the proposed uses and provide regulatory standards, zoning and guidelines for the development; (2) Zone reclassification seeks to change the current zoning designation of General Commercial (GC) to Specific Plan (SP); (3) Zone code amendment seeks to add SP for this area to the Zoning Map (the city may have other adds to the code text or tables as a result of the zone change); (4) General plan amendment seeks to change the current General Plan land use designations of Housing Element Site and Opportunity Area 8 to Specific (SP); and (5) Conditional use permit to allow for the proposed project.

Please respond to PlaceWorks no later than **Wednesday, August 11, 2021.** If you need additional time to respond, please contact Mariana Zimmermann at mzimmermann@placeworks.com or 714.966.9220. If you prefer, mail the completed questionnaire to Mariana Zimmermann at 3 MacArthur Place, Suite 1100, Santa Ana, California, 92707. Thank you for your prompt attention to this request.

Sincerely,

Julia Gonzalez
Deputy Director

Enclosures:
Questionnaires
Figure 1Local Vicinity Map
Figure 2Aerial Photograph
Figure 3Proposed Site Plan

Washington and Rosemead Mixed-Use MND
Police Services Questionnaire – Los Angeles County Sheriff's Department (LASD)

1. Please provide the information requested below regarding staffing for the police services for the Project Site, as well as any other station(s) not noted but pertinent.

Station	Location	Daily Staffing	Total Staffing	Equipment
Pico Rivera Sheriff's Station	6631 Passons Blvd, Pico Rivera, CA 90660	Varies by shift 4-7 units		# patrol cars #motorcycles Varies per shift 4-7 cars. 1-3 motorcycles
Other stations or smaller office facilities? (if relevant)				

2. What is LASD response time goal/policy standard (in minutes) for responding to emergency and non-emergency calls in the service area?

   Routine calls: 60 minutes
   Priority calls: 20 minutes
   Emergent calls: 10 minutes

3. What is LASD's current average response time (in minutes) for emergency and non-emergency calls?

   Routine calls: 34.5 minutes
   Priority calls: 9.3 minutes
   Emergent calls: 3.6 minutes

4. Are there any existing deficiencies (personnel, equipment, facilities) in the police protection service currently provided to the City?

   Not at this time

5. Any plans for new Sheriff's stations near the project site?

   No

6. Given the existing level of resources (stations, equipment, personnel), does LASD anticipate that it will have adequate resources to meet the additional demands that would be generated by the Proposed Project?

   None projected at this time.

   If not, please summarize any additional resources that would be needed.

7. What impact (if any) other than increased service calls will the Proposed Project have on LASD's ability to provide police protection service to the Project Area?

   Additional traffic potentially yielding an increase in the need for traffic enforcement.

8. What are the primary sources of funding for LASD operations and improvements?

   Contracted through the city of Pico Rivera

   Will the proposed project be responsible for any police impact fees? If yes, who collects the fees? (e.g., City of Pico Rivera as part of other development fees or LASD?)

   Any fees would be coordinated with the management of the city of Pico Rivera

9. Does the LASD have any design guidelines or programs pertaining to reducing and/or preventing crimes through environmental design? If yes, please provide the guidelines and/or program procedure.

   Security measures such as security gates, cameras, alarms and the like are suggested as deterrents to criminal activity.

10. Please provide any additional comments you wish to make regarding the Proposed Project.

Response Prepared By:

Jodi Hutak	Acting Captain
Name	**Title**
Los Angeles County Sheriff's Department – Pico Rivera Station	August 26, 2021
Agency	**Date**

1. Please identify the nearest existing parks and recreation facilities in the project vicinity. Any planned expansion of existing parks or development of new parks?

Park	Location	Facilities/Resources
Amigo Park - County Park	5700 Juarez Ave, Whittier, CA 90606	Equipped with softball fields, children play area, multipurpose field, picnic area, and walking and biking trails
Sorensen Park – County Park	11419 Rose Hedge Dr, Whittier, CA 90606	Baseball and softball fields, play structures, basketball courts, and green space
McNees Park – County Park	11590 Hadley Blvd. Whittier, CA 90606	Green space
Smith Park	6016 Rosemead Boulevard Pico Rivera, CA 90660	A community park of 16 acres with multipurpose auditorium, baseball/softball fields, football/soccer stadium, basketball courts, picnic facilities, drinking fountains, Olympic size swimming pool, parking lot, and concession stand.
Rio Vista Park	8751 Coffman and Pico Rd, Pico Rivera, CA 90660	Sports focused public recreation area with playground equipment, concession stand, and picnic facilities.
Rivera Park	9530 Shade Ln, Pico Rivera, CA 90660	Baseball and softball fields, handball courts, picnic facilities and play equipment.
Rio Hondo Park	P, 8421 San Luis Potosi, Pico Rivera, CA 90660	13 acres of multipurpose auditorium, play structures, fields, and basketball and handball courts.
Veterans and Ladies Auxiliary Park	4904 Durfee Ave, Pico Rivera, CA 90660	Play structure and picnic area.
Other parks? (if relevant):		

2. What is the City's standard for parks/recreation spaces for Pico Rivera residents? Is the City currently meeting the demand?

The City's Parks and Recreation Mission is to "Enhance the quality of life of Pico Rivera present and future generations by providing safe and welcoming parks and facilities, and creative programming, while promoting opportunities for healthy lifestyles."

The Los Angeles County Regional Parks and Open Space District have identified 3.3 acres per 1,000 people as typical in the local and regional area (RPOSD Park Needs Assessment, 2016). The City of Pico Rivera currently has only 1.3 acres of park or open space per 1,000 residents, and is already considered park poor. However, upon completing a California State Parks *Community Fact Finder Report* for the ½ mile radius surrounding the project site (Enclosure 1), it shows that there is only 0.21 acres of park space per 1,000 residents.

The Department of Parks and Recreation has had to scale back normal operations due to the Covid-19 pandemic and having to comply with several Federal, State, County, and local orders. This includes restricting access to certain recreation facilities and/or requiring patron compliance for disease transmission prevention. In addition, the City will lose approximately 67% of its outdoor recreation space in October 2022 due to the Whittier Narrows Dam Safety Modification project being completed by the United States Army Corps of Engineers. Due to these factors, and in consideration of the City's park poor status, it is believed that the City will not be able to meet recreation demand.

3. Please indicate other applicable regulations, plans, and policies related to park services.

- LA County Code Sections (21.24.310, 21.24.350, etc.) [not sure if this applies]
- LA County Parks Measure A (Effective December 3, 2019: $0.16 per square foot of development)
- Pico Rivera General Plan
- Pico Rivera Municipal Code (Sections 2.53 Park and Recreation Commission, 8.44 Parks, etc.)

It is believed that there are no Federal or State parks and recreation regulations applicable to this project.

4. Please add any other comments you may wish to make regarding this Project.

Including up to 13,500 square feet of recreational use space and a rooftop pool for residents will greatly help to reduce the impact of increased residency to our already park poor neighborhood for the project area.

Response Prepared By:

Kaili Torres	Senior Manager
Name	**Title**
City of Pico Rivera	**August 2, 2021**
Agency	**Date**

California State Parks

Community FactFinder Report

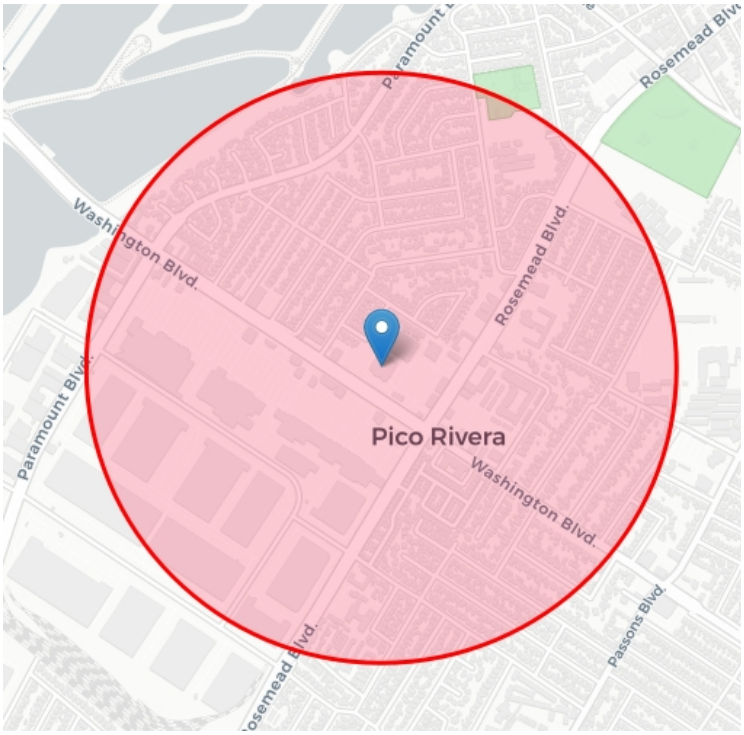
Project ID: 104143
Coordinates: 33.9847, -118.0984
Date: 8/2/2021

This is your project report for the site you have defined. Please refer to your **Project ID** above in any future communications about the project.

PROJECT AREA STATISTICS

County	Los Angeles
City	Pico Rivera
Total Population	5,914
Youth Population	1,407
Senior Population	828
Households Without Access to a Car	106
Number of People in Poverty	535
Median Household Income	$68,664
Per Capita Income	$25,424
Park Acres	1.22
Park Acres per 1,000 Residents	0.21

PROJECT AREA MAP



REPORT BACKGROUND

The project statistics have been calculated based on half mile radius around the point location selected. Only park acres within the project area's half mile radius are reported.

Population and people in poverty are calculated by determining the percent of any census block-groups that intersect with the project area. The project area is then assigned the sum of all the census block-group portions. An equal distribution in census block-groups is assumed. Rural areas are calculated at a census block level to improve results.

Median household and per capita income are calculated as a weighted average of the census block- group values that fall within the project area.

More information on the calculations is available on the methods page.

Demographics—American Community Survey (ACS) 5-year estimates 2014-2018; Decennial 2010 Census; the margin of error (MOE) was not analyzed.

Parks—California Protected Areas Database 2020a CFF adjusted (6/2020) - more information at http://www.CALands.org. Parks and park acres area based on best available source information but may not always contain exact boundaries or all parks in specific locations. Parks are defined further in the 2015 SCORP (pg. 4).

Users can send updated information on parks to SCORP@parks.ca.gov

Pico Water District
P.O. BOX 758 4843 CHURCH ST.
PICO RIVERA, CALIFORNIA 90660
TEL: (562) 692-3756 FAX: (562) 695-5627
www.picowaterdistrict.net

August 23, 2021

Ms. Julia Gonzalez, Deputy Director
Community & Economic Development Department
City of Pico Rivera
6615 Passons Boulevard
Pico Rivera, CA 90660

Subject: Water Service Issues - Washington & Rosemead Mixed-Use Project

Dear Ms. Gonzalez:

Pico Water District (District) has been asked to respond to various questions related to the planned 225 dwelling units to be constructed at the intersection of Washington Blvd. and Rosemead Blvd. The District's responses to the City's questionnaire are enclosed.

As stated in the District's response to Item 3 of the questionnaire, the District needs additional information from the developer regarding the projected water use at the planned development before the District can provide more detailed figures regarding the project water demand. That information includes the following:

Engineer's calculations regarding immediate water demand for the project;
Engineer's long-term calculations of water demand for the project;
Plans and calculations for any landscape needs;
Plans and calculations for any/all fire flow needs; and
Hydraulic Impact Assessment may be required for this project depending on the extent of the projected water use, as determined by the above calculations;

Please let us know if you have any questions.

Sincerely,

Mark J. Grajeda
General Manager

{152101/000/00451417}

1. Please **confirm or update** the following information from Pico Water District 2015 Urban Water Management Plan

   a. The District relies entirely on groundwater as its sole source of potable water supply.
   Response: Pico Water District (District) currently relies solely on groundwater.

   b. The District does not currently and has no plans to receive imported water from CBMWD.
   Response: The District does not have a connection with the Metropolitan Water District (MWD) to access imported water and does not purchase water from CBMWD. At this time there are no plans to have a connection made with MWD for the purchase of imported water through CBMWD.

   c. Sources of water supply:

      i. **Groundwater** from the Central Basin (Basin)

         1. The District has an allowed pumping allocation of 3,624 AFY.
         Yes this is correct.

         2. The District's average groundwater production from the Basin is approximately 3,127 AFY between 2010 to 2015. Does the District have more average?
         The District's average groundwater production from 2016 thru 2020 was 2,780 AFY.

         3. The District operates 4 wells with a combined pumping capacity of 5,400 AFY or approximately 8,700 AFY if operated continuously.
         The District operates five wells with a combined pumping capacity of 7500 gallons per minute.

         4. The District's distribution system includes one booster pump station and one reservoir with 1.25 million gallons of storage.
         Yes this is correct.

      ii. **Recycled Water** from CBMWD

         1. The District obtains recycled water from Los Angeles County Sanitation District's San Jose Creek Water Reclamation Plant, which currently has a treatment capacity of 100 million gallons per day and serves approximately 1 million people.
         Any questions related to the supply of recycled water must be directed to the Central Basin Municipal Water District (CBMWD). The District purchases its supply of recycled water from the CBMWD. CBMWD

has a contract with the Los Angeles County Sanitation District for the supply of recycled water, which is furnished to District customers through CBMWD.

iii. District water supplies by source over the 2015-2040 period (actuals for 2015 and forecast for 2020-2040) in normal-year conditions are as shown in the following table.

1. Supplies over the 2020-2040 period are forecast at about:

Pico Water District Water Supplies Existing and Future, acre-feet per year

Year	2015	2020	2025	2030	2035	2040
Normal Year	2,794	3,697	3,774	3,853	3,933	4,015
Single Dry Year	--	2,703	2,760	2,817	2,876	2,936
Multiple Dry Years						
Year 2	--	2,796	2,854	2,914	2,974	3,036
Year 3	--	2,698	2,754	2,812	2,870	2,930

Source: Pico Water District Urban Management Plan 2015

iv. The District forecasts that it will have sufficient water supplies to meet demands over the 2020-2040 period in normal, single-dry-year, and multiple-dry-year conditions.
This forecast is based on moderate growth, and water availability outside of the District's allocated water rights.

v. Wastewater generated within the District is treated by LACSD at two water treatment plants including: Los Coyotes Water Reclamation Plant and Joint Water Pollution Control Plant.
Any questions related to wastewater need to be directed to the Los Angeles County Sanitation District.

vi. LACSD estimates a wastewater generation of approximately 80 gallons per person per day.
Any questions related to wastewater need to be directed to the Los Angeles County Sanitation District

2. What water demand factors does the District use for each of the following land uses:

a. Multifamily Residential – Uniform Plumbing Code, local landscape ordinances, latest drought tolerant landscapes practices

b. Retail - Uniform Plumbing Code, local landscape ordinances, latest drought tolerant landscapes practices

c. Office - Uniform Plumbing Code, local landscape ordinances, latest drought tolerant landscapes practices

d. Restaurant - Uniform Plumbing Code, local landscape ordinances, latest drought tolerant landscapes practices

3. Would existing and forecast water supplies be sufficient to serve estimated project water demand, or would new or expanded water supplies be required?
   Response – additional information on the project's proposed uses, including the project's plans and drawings is necessary to respond to this question. See the accompanying letter.

4. Do you have any other comments about this project?

Yes see attached letter.

Response Prepared By:

Mark J. Grajeda	General Manager
Name	**Title**
Pico Water District	8-16-21
Agency	**Date**

SKYE PATRICK
Library Director

LA COUNTY LIBRARY

September 15, 2021

Mariana Zimmermann
PlaceWorks
3 MacArthur Place, Suite 1100
Santa Ana, CA 92707

REQUEST FOR SERVICE PROVIDER INFORMATION FOR THE MITIGATED NEGATIVE DECLARATION FOR THE WASHINGTON AND ROSEMEAD MIXED-USE PROJECT (OPL-01.0)

Dear Ms. Zimmermann:

This is in response to your request for information regarding the Washington and Rosemead Mixed-Use Project which proposes the development of 255 residential units and an additional 5,500 square feet of retail. Attached is a report of LA County Library's analysis of the development and the projected impact to services.

If you have any questions or need additional information, please contact Elsa Muñoz at (562) 940-8450 or EMunoz@library.lacounty.gov.

Very best,

Skye Patrick
Library Director

SP:YDR:GR:EM

Attachments

c: Grace Reyes, Administrative Deputy, LA County Library
Jesse Walker-Lanz, Assistant Director, Public Services, LA County Library
Ting Fanti, Departmental Finance Manager, Budget and Fiscal Services, LA County Library

https://lacounty.sharepoint.com/sites/publiclibrary/docs/staffservices/Documents/EIR/Washington and Rosemead Mixed-Use Project/Washington and Rosemead Mixed-Use Project response.docx

LA COUNTY LIBRARY
WASHINGTON AND ROSEMEAD MIXED-USE PROJECT

1. **Please summarize existing library facilities and resources (library building square footages, collection volume, capacity, computer labs, audio books, e-books, etc.) that will serve the project site in the following table.**

   This project is within the service area of the Pico Rivera Library, located at 9001 Mines Ave., Pico Rivera, CA 90660, a facility with 16,000 sq. ft. of space, a collection of 54,502 books, magazines, and media, and 32 computers (as of June 30, 2020).

2. **Are there any existing plans to expand library facilities and/or resources for the City? If so, please describe these planned expansions.**

   Currently, LA County Library does not have plans for expanding the Pico Rivera Library.

3. **What generation factors or standards are used by the LA County Library to estimate library facility and resource requirement (e.g., square feet of library facility floor areas per capita and book volumes per capita)?**

   LA County Library service level guidelines entail a minimum of 0.50 gross square foot of library facility space per capita, 3.0 items (books and other library materials) per capita for regional libraries and 2.75 items per capita for community libraries, and 1.0 public access computer per 1,000 people served.

4. **What impact (if any) will the proposed project have on the LA County Library's ability to provide library service to the City?**

   Pico Rivera Library is a community library and based on the service guidelines does not currently meet the minimum requirements for the population of this service area. The current deficiency is 55,974 collection items, 8 public access computers, and 4,087 square feet of facility space.

   The proposed project involves the construction of 255 residential units with a population increase of approximately 803 which creates a need for an additional 2,208 collection items, 1 public access computer, and 402 square feet of facility space.

   The table below illustrates the impact of the proposed population growth from the Washington and Rosemead Mixed-Use Project to the LA County Library service level guidelines. To fully mitigate this growth LA County Library estimates the total cost to be $512,198.

Trails at Lyons Canyon Project Environmental Impact Report	Impact Per Capita (population of 1,629)	Estimated Costs	Total Costs
a. Building	402	$1,000 sq. ft.	$402,000
b. Land (4:1 land to building ratio)	1,606	$29 (Library Planning Area 5)	$46,574
c. Collections	2,208	$28	$61,824
d. Public Access Computers	1	$1,800	$1,800
Total			$512,198

To meet the service demands of the current population and the proposed Washington and Rosemead Mixed-Use Project the library will require a total of 112,684 collection items, 41 public access computers, and 20,488 sq. ft of facility space.

Given the LA County Library's e-books, audiobooks, and internet resources, do you anticipate physical expansion of the library facilities due to the proposed development of 255 units?

The Library does not anticipate physical expansion of library facilities due to the proposed development.

5. **How are the library's operation and improvements funded? Any library impact fees imposed to new development?**

Funding sources for the LA County Library consist of, in descending proportions property taxes, County General Fund allocation, Library's Special Tax, Library Facilities Mitigation Fee (Developer Fee) and other miscellaneous sources.

In efforts to minimize the impact of residential projects on library services LA County Library collects a one-time Developer Fee at the time building permits are requested for all new residential dwellings located within the unincorporated areas of the County served by the LA County Library.

The current Developer Fees are as follows, by Library Planning Area, these fees are subject to a CPI increase effective July 1:

FY 2021-22 Library Facilities Mitigation Fee Schedule

Planning Area	Fee per Dwelling Unit
Area 1 - Santa Clarita Valley	$1,010
Area 2 - Antelope Valley	$978
Area 3 - West San Gabriel Valley	$1,021
Area 4 - East San Gabriel Valley	$1,008
Area 5 - Southeast	$1,011
Area 6 - Southwest	$1,018
Area 7 - Santa Monica Mountains	$1,013

The Washington and Rosemead Mixed-Use Project is within the Library's Planning Area 5 – Southeast, current Developer Fee is $1,011 per dwelling unit for a total of $257,805 ($1,011 x 255 dwelling units). However, since the development is located within the City of Pico Rivera, it is not subject to a Library Facilities Mitigation Fee.

LA County Library also collects an annual special tax which is levied on parcels within 10 cities (Cudahy, Culver City, Duarte, El Monte, La Cañada Flintridge, Lakewood, Lomita, Lynwood, Maywood, and West Hollywood) and unincorporated areas serviced by LA County Library. The Special Tax Rate for FY 2021-22 is $32.55 per parcel. Nevertheless, the project is not subject to Special Tax.

6. **Please provide any additional comments you wish to make regarding the proposed project.**

The proposed commercial component will also impact the library if the people who work, but do not live, in the area use local library services throughout their day, therefore adding to the number of resources that will be needed.

There are no mitigation factors for the impact that this project will have on library services since it is not subject to a Library Facilities Mitigation Fee or Special Tax. The library proposes discussions with City representatives and developers regarding mitigation efforts and support for the continued enhancement and delivery of library services to the residents of the City of Pico Rivera.

Appendix

Appendix F Transportation Impact Analysis Report

Appendix

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LINSCOTT LAW & GREENSPAN engineers

TRANSPORTATION IMPACT ANALYSIS REPORT

THE MERCURY PROJECT

City of Pico Rivera, California
July 5, 2022

Prepared for:

Optimus Properties, LLC
1801 Century Park East, Suite 2100
Los Angeles, California 90067

LLG Ref. 1-21-4418-1

Prepared by:

Francesca S. Bravo
Senior Transportation Engineer

Under the Supervision of:

David Roseman, P.E.
Principal

Under the Supervision of:

Clare Look-Jaeger, P.E.
Principal

Linscott, Law & Greenspan, Engineers

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TRANSPORTATION IMPACT ANALYSIS REPORT

THE MERCURY PROJECT

City of Pico Rivera, California
July 5, 2022

1.0 INTRODUCTION

1.1 Transportation Impact Analysis Overview

This transportation impact analysis report has been prepared to identify and evaluate the potential transportation impacts of the proposed Washington and Rosemead Mixed-Use project ("proposed project"). The proposed project site is located at 8825 Washington Boulevard in the City of Pico Rivera, California. The project site is generally bounded by adjacent commercial and residential uses to the north and west, commercial uses to the east, and Washington Boulevard to the south. The proposed project site and general vicinity are shown in ***Figure 1-1***.

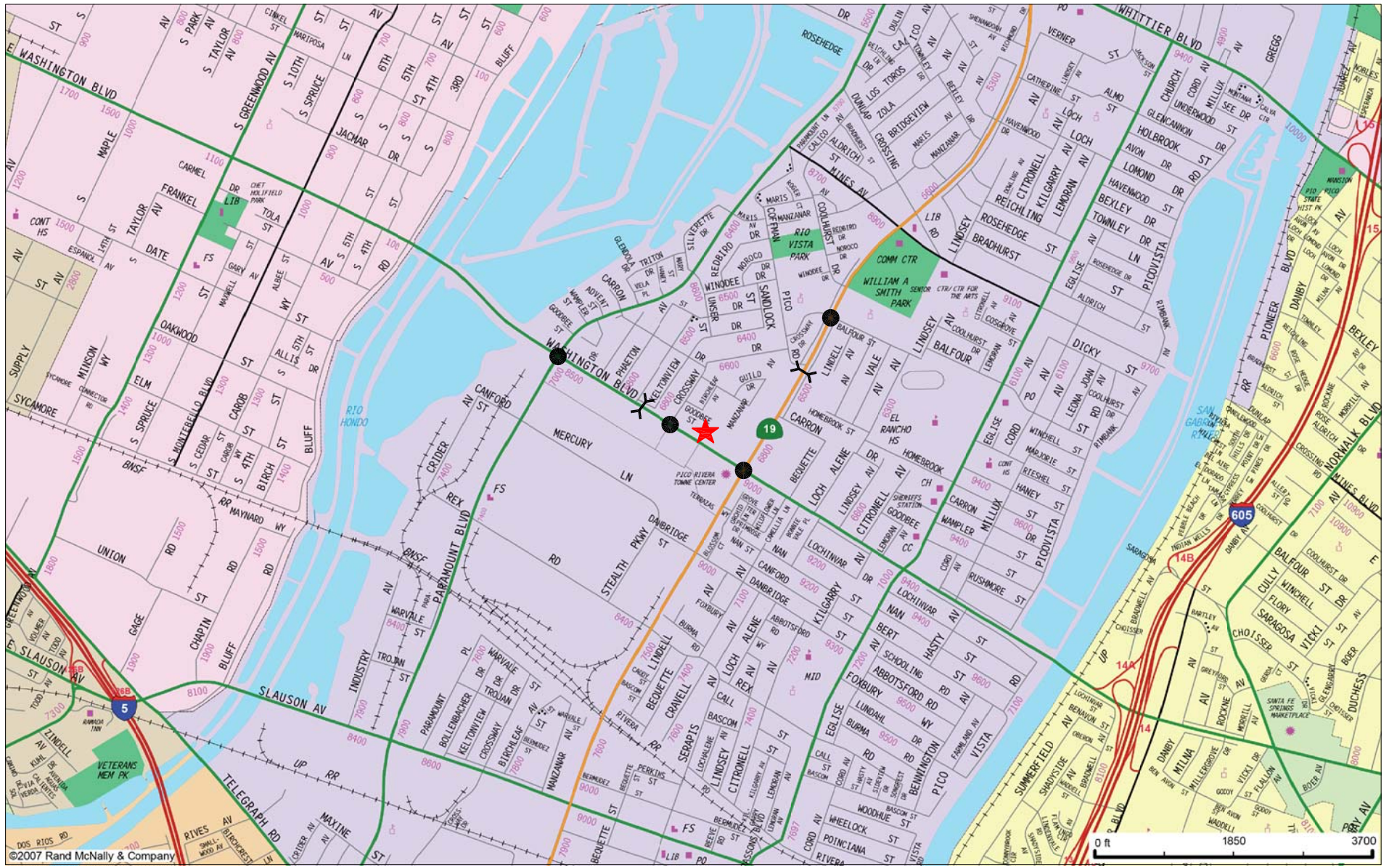
The transportation impact analysis follows the City of Pico Rivera's *Traffic Impact Analysis Guidelines*[1] ("Guidelines"). In general, the City uses the Los Angeles County Public Works *Transportation Impact Guidelines*[2] as a benchmark for the Traffic Impact Analysis (TIA) requirements, with variations. The City Guidelines are focused on transportation metrics that promote: the reduction of greenhouse gas emissions, the development of multimodal networks and access to diverse land uses, as well as safety, sustainability and smart growth. In compliance with the California Environmental Quality Act (CEQA), the City Guidelines identify vehicle miles traveled (VMT) as the primary metric for evaluating a project's transportation impacts. In addition, the City Guidelines require non-CEQA intersection Level of Service (LOS) analysis evaluating potential project-related effects at key intersections in the vicinity of the project site.

This assessment report (i) presents the proposed project's existing transportation network context, (ii) forecasts project-generated traffic, (iii) presents a CEQA assessment of project-related VMT, (iv) provides a non-CEQA evaluation of project access and circulation, (v) provides a non-CEQA review of project construction activities, and (vi) recommends VMT-reducing measures or other transportation network improvement measures, where necessary.

1.2 Study Methodology

The CEQA and non-CEQA analysis criteria for this transportation impact analysis were identified in consultation with the City of Pico Rivera Public Works Department staff. The analysis criteria were determined based on the City's Guidelines, the proposed project description and location, and the characteristics of the surrounding transportation system. As defined by the City as Lead Agency

[1] City of Pico Rivera Public Works Department *Traffic Impact Analysis Guidelines"*, prepared by Elie Farah, Inc., July 2020.
[2] Los Angeles County Public Works "Transportation Impact Analysis Guidelines", prepared by Public Works, July 23, 2020.



MAP SOURCE: RAND MCNALLY & COMPANY

LINSCOTT LAW & GREENSPAN engineers

- Project Site
- Study Intersection
- Street Segment Location

Figure 1-1
Vicinity Map

The Mercury Project

under CEQA, City staff confirmed the appropriateness of the analysis methodology and criteria when it approved the transportation impact analysis Scoping Document. The approved Scoping Document is provided in ***Appendix A***.

1.3 Los Angeles County Congestion Management Program Status

The Los Angeles County Congestion Management Program (CMP) was previously a state-mandated program that was enacted by the California State Legislature with the passage of Proposition 111 in 1990 that primarily utilized a level of service (LOS) performance metric. Pursuant to California Government Code §65088.3, local jurisdictions may opt out of the CMP requirement without penalty if a majority of the local jurisdictions representing a majority of the County's population formally adopt resolutions requesting to opt out of the program. As stated in a letter from the Los Angeles County Metropolitan Transportation Authority (Metro)[3], by August 28, 2019 fifty-seven local jurisdictions, which in total represent 8.5 million in population, had adopted resolutions electing to be exempt from the CMP. With the Los Angeles County region having reached the statutorily required threshold, the provisions of the CMP are no longer applicable to any of the 89 local jurisdictions within Los Angeles County, regardless of whether or not a jurisdiction adopted an opt-out resolution. Therefore, CMP Traffic Impact Analysis is no longer required.

[3] Kalieh Honish, Los Angeles County Metropolitan Transportation Authority, to Seleta Reynolds, City of Los Angeles Department of Transportation, "Re: Dissolution of the Congestion Management Program in Los Angeles County", August 28, 2019.

2.0 PROJECT DESCRIPTION

2.1 Existing Project Site

The project site is located at 8825 Washington Boulevard (APN: 6370-027-018) situated along the north side of Washington Boulevard, west of Rosemead Boulevard in the City of Pico Rivera. The existing 2.85-acre project site is currently vacant, formerly occupied by a commercial building that operated as a nightclub until March 2015 and was subsequently demolished in 2020. The project site is adjacent to and would become part of the Pico Rivera Marketplace, a larger commercial site with a broad range of retail services including a fitness center, restaurants, and bank. Vehicular access to the existing project site is currently primarily provided via two driveways on Washington Boulevard. An aerial photograph of the existing project site is presented in ***Figure 2-1***.

2.2 Proposed Project Description

The project applicant, Mercury Bowl, LLC: Green Rivera, LLC, is seeking approval from the City of Pico Rivera for implementation of the Washington and Rosemead Mixed-Use Specific Plan ("Specific Plan") that reflects the proposed development of a mixed-use building with subterranean parking, ground-floor retail, and residential uses. The proposed Specific Plan, if approved by the City, would allow for the future development of 255 residential dwelling units including 13 affordable units, 5,730 square feet of commercial/retail space; 1,750 square feet of ground-floor lobby/leasing space; and 13,500 square feet of recreational amenities for future residential tenants. The proposed residential unit mix consists of 35 studio units, 159 one-bedroom units, 57 two-bedroom units, and 4 three-bedroom units. Residential amenities for the proposed mixed-use development include a swimming pool, jacuzzi, poolside cabanas, clubhouse, gym, barbecue area, and garden/green areas. Construction would begin in 2022 and occupancy of the proposed project is expected to occur by year 2024. The site plan for the proposed project is illustrated in ***Figure 2-2***.

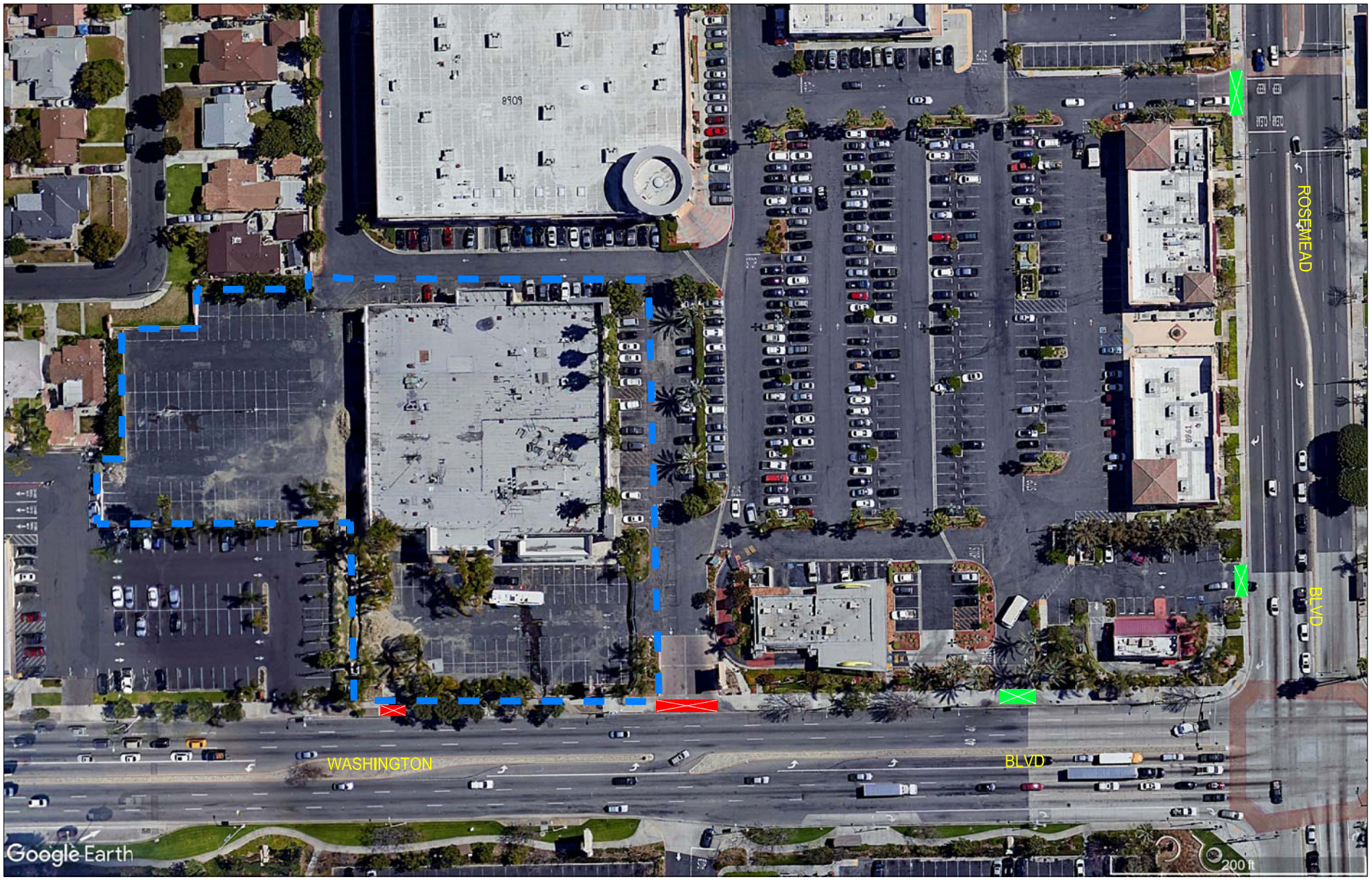
2.3 Project Site Access

2.3.1 *Vehicular Site Access*

Vehicular access to the project site will be accommodated by a total of two driveways: one existing driveway on Washington Boulevard and one existing driveway on Rosemead Boulevard. The other existing access points along Washington Boulevard and Rosemead Boulevard for the Pico Rivera Marketplace will remain. In addition, while another existing driveway curb cut will remain along the Washington Boulevard project frontage, it is not planned for vehicular access as further described below. Descriptions of the planned project site access driveways are provided in the following paragraphs.

- Existing Washington Boulevard Main Project Driveway:

  This existing driveway is located on the north side of Washington Boulevard along the easterly property boundary directly west of the existing McDonalds restaurant. This driveway currently serves the existing McDonald's restaurant adjacent to the project site. The site driveway will provide access to the main internal roadway surrounding the proposed



MAP SOURCE: GOOGLE EARTH

Project Site

Existing Driveway

Shared Driveway

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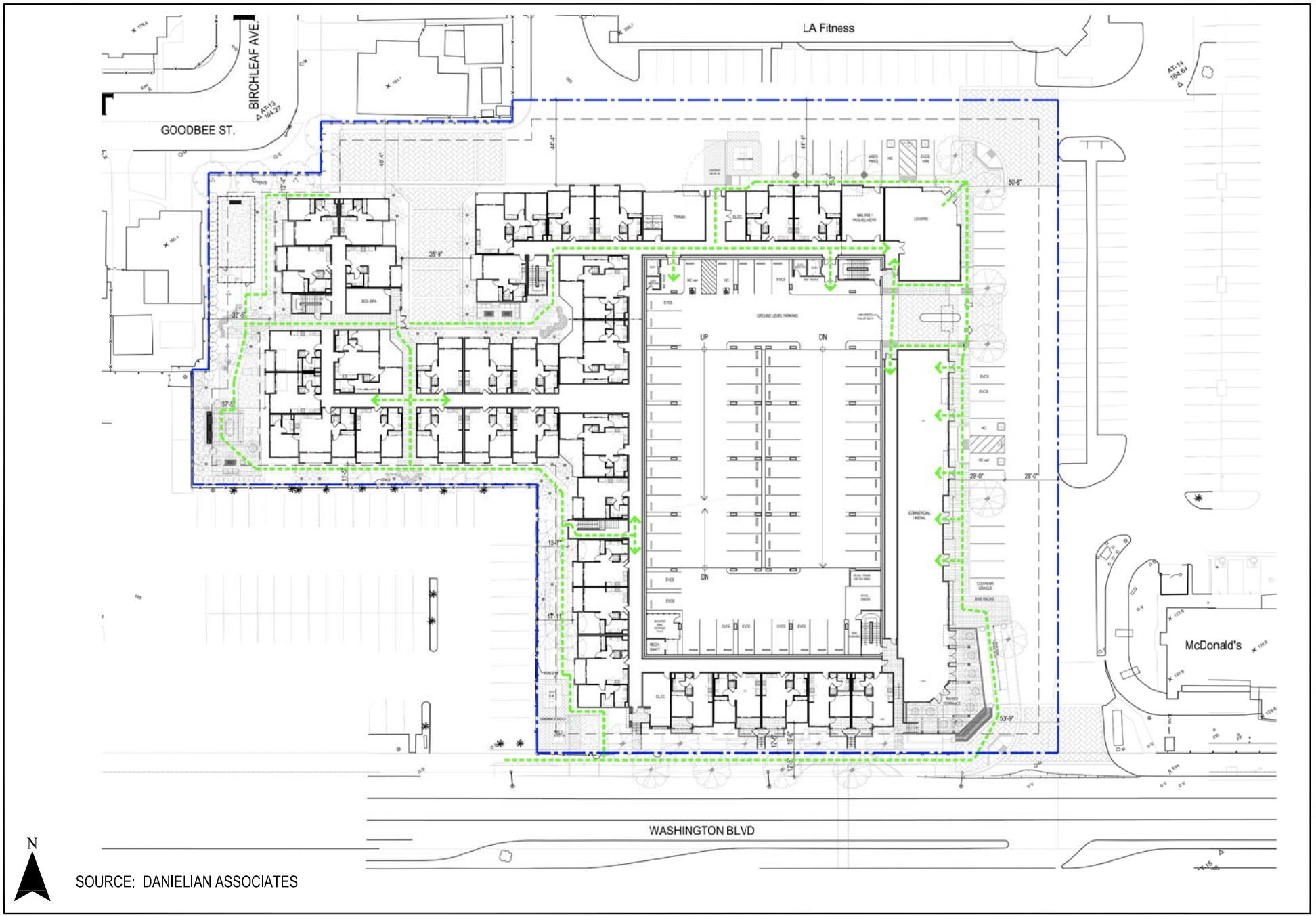
Figure 2-1
Aerial Photograph of Existing Site

The Mercury Project



SOURCE: DANIELIAN ASSOCIATES

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Figure 2-2
Site Plan

building and to the subterranean parking entrance for the project. The driveway will continue to accommodate left-turn ingress and right-turn ingress and egress traffic movements (i.e., no left-turns out). No physical modifications are proposed at this driveway.

- Existing Rosemead Boulevard Driveway:

  This existing driveway is located on the west side of Rosemead Boulevard north of Washington Boulevard. This signalized driveway currently serves the existing Pico Rivera Marketplace and would also serve the proposed project. The driveway will continue to accommodate full access (i.e., left-turn and right-turn ingress and egress traffic movements).

The curb cut for the existing westerly site driveway on Washington Boulevard will remain; however, no vehicle access would be provided from this point. The curb cut will be used solely for emergency/fire access (e.g., for fire personnel to extend hoses via this existing curb cut).

Within the project site, vehicular circulation will be accommodated by a drive aisle which is adjacent to the north and east sides of the proposed building. The drive aisle will be no less than 28 feet wide in order to accommodate Fire Department access to the project site.

While the parking structure entrance design shown in the site plan is conceptual, the project's final design would provide a gate and storage for a minimum of two vehicles at the access control point of the parking structure.

2.3.2 *Non-Vehicular Site Access*

Pedestrian access to the project site will be accommodated via the existing public sidewalks and pedestrian facilities provided along Washington Boulevard and Rosemead Boulevard. A handicap accessible ramp is planned to be installed at the west corner of the site driveway at Washington Boulevard. Pedestrian access within the project site will be accommodated by an Americans with Disabilities Act (ADA) compliant walkway that will connect the building entrance and retail frontages to the public right-of-way. This walkway will provide exclusive pedestrian and bicycle access from the public sidewalks to the proposed project, thus minimizing the extent of pedestrian and bicycle interaction with vehicles at the site and providing a comfortable, convenient, and safe environment for pedestrians and bicyclists to access the proposed project from the public right-of-way. Pedestrian pathways will also be constructed surrounding the proposed building and will connect to the existing shopping center pedestrian facilities. Pedestrian access to and from the project site is illustrated in ***Figure 2-3***. *Figure 2*-3 also shows the proximity of the nearby existing transit stops located both east and west of the project site. Pedestrian access within the project is shown in ***Figure 2-4.***

MAP SOURCE: DANIELIAN ASSOCIATES

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Figure 2-3
Pedestrian Access to Site

The Mercury Project

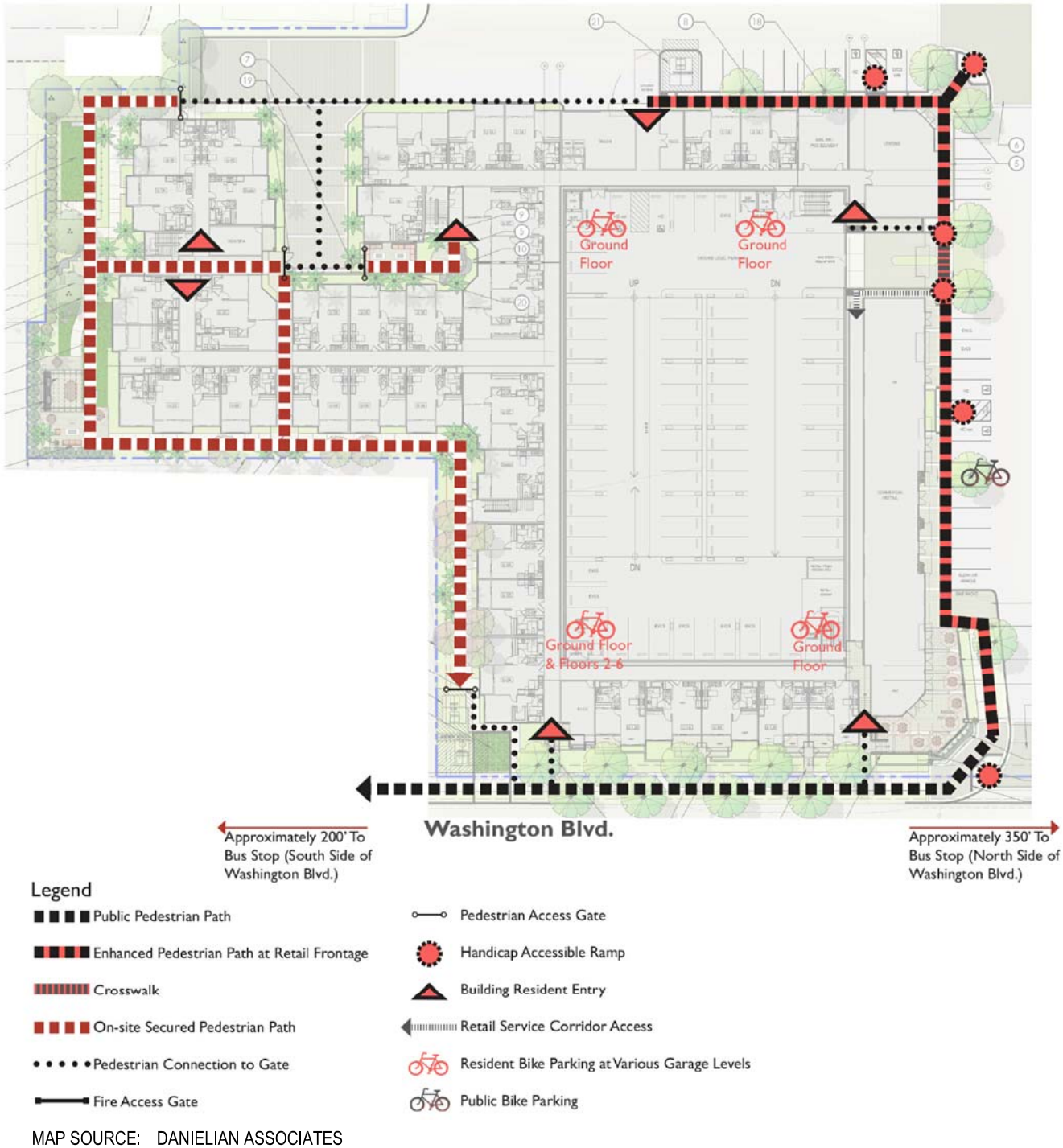

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Figure 2-4
Pedestrian Access Within the Site

2.4 Project Parking

2.4.1 *City of Pico Rivera Parking Requirements*

The City of Pico Rivera off-street parking requirements are set forth in Section 18.44 (Off-Street Parking and Loading) of the Municipal Code[4]. In accordance with the Municipal Code parking regulations, the following parking requirements are applicable to the project:

- Residential - Multi-Family Dwelling Units:
  - Resident Parking: 2.0 parking spaces per dwelling unit (DU) (within a parking garage or carport)
  - Guest Parking: 1.0 space for each 8 DUs
- Commercial Use: 1.0 parking space per 250 square feet (SF)

Based on strict application of the City Code parking requirements, a total of 572 spaces would be required for the project as summarized below:

- Resident Parking: 255 units x 2.0 spaces/DU = 510 spaces
- Residential Guest Parking: 255 units x 1.0 space/8 DUs = 32 spaces
- Commercial (Leasing Space and Retail): 7,480 SF x 1.0 space/250 SF = 30 spaces

  Total City Code Required Project Parking = 572 spaces

As noted above, the residential parking requirements for the project is 542 spaces (i.e., 510 resident + 32 guest = 542 spaces). The overall Code residential parking ratio equates to 2.13 spaces per DU (i.e., 542 residential parking spaces/255 DU = 2.13 spaces/DU). Based on reviews of other parking standards outlined in nationally recognized publications and parking demand characteristics at other multi-family residential complexes similar to the proposed project, it can be expected that residential parking demand would be much lower for the project than what is currently required by strict application of the City Code.

2.4.2 *Specific Plan Parking Requirements*

As outlined in the Chapter 4 of the proposed Specific Plan, the development parking standards for the project are outlined below:

- Residential - Multi-Family Dwelling Units:
  - Studio Unit: 1.0 parking space per DU
  - One-Bedroom unit: 1.4 parking spaces per DU
  - Two-Bedroom unit: 1.6 parking spaces per DU
  - Three-Bedroom unit: 2.0 parking spaces per DU

[4] Source: City of Pico Rivera Municipal Code (Section 18.44).

- Guest Parking: 1.0 space for each 8 DUs

- Commercial Use: 1.0 parking space per 250 square feet (SF)

Based on application of the Specific Plan parking requirements, a total of 420 spaces would be required for the project as summarized below:

• Studio Resident Parking:	35 units x 1.0 space/DU = 35 spaces
• One-Bedroom Resident Parking:	159 units x 1.4 spaces/DU = 223 spaces
• Two-Bedroom Resident Parking:	57 units x 1.6 spaces/DU = 92 spaces
• Three-Bedroom Resident Parking:	4 units x 2.0 spaces/DU = 8 spaces
• Residential Guest Parking:	255 units x 1.0 space/8 DU = 32 spaces
• Commercial (Leasing Space and Retail):	7,480 SF x 1.0 space/250 SF = 30 spaces
Total Required Project Parking =	420 spaces

2.4.3 *Proposed Parking Supply*

The proposed project is planned to provide a total of 464 vehicular parking spaces on-site, including 437 spaces within the new parking garage and 27 on-site surface parking spaces. The new parking structure is planned to provide 390 residential spaces (i.e., 358 resident parking spaces and 32 spaces for residential guest parking) and 47 secured parking spaces. The proposed project also includes 27 on-site surface spaces located outside the structure, which would be designated and signed for the commercial uses (i.e., 26 spaces for retail/leasing use and one (1) dedicated US Postal Service parking space). Based on the residential parking supply of 390 spaces, the overall project residential parking ratio is 1.53 spaces per DU (i.e., 390 residential parking spaces/255 DU = 1.53 spaces/DU).

As part of the parking supply, a total of 19 handicap accessible spaces will be provided on-site, of which 16 spaces are allocated for residential use and three (3) spaces are allocated for the commercial use. In addition, 47 electric vehicle charging station (EVCS) installed spaces will be provided on-site (i.e., 44 residential spaces and 3 commercial spaces). Bicycle parking and storage would also be provided for the project, with a minimum of 12 long-term bicycle spaces and a minimum of four (4) short-term bicycle spaces. Short-term bicycle parking typically consists of bicycle racks. Long-term bicycle parking are fully enclosed spaces and typically consist of bicycle lockers, bicycle rooms, or bicycle cages.

Residents will be required to provide the make, model, and year of their vehicle/s during lease execution and subsequently will be issued an access card or key for entry into the parking garage. All resident and employee parking policies will be outlined in the lease/rental agreement. "No Overnight Parking" signs will be posted within the existing shopping center to prohibit tenants from parking in the center overnight and will be enforced by security staff monitoring the center on a 24-hour basis. The signage will also include verbiage that notes that any violations of the parking restriction are subject to towing.

The project applicant (or successor owner/s) will identify a Community Liaison/Parking Ombudsman in order to keep nearby residential communities informed on various matters and provide an open line of communication. The Community Liaison/Parking Ombudsman will efficiently manage parking and enforce changes that the project management will make to prevent local neighborhood parking intrusion. The parking ombudsman will be responsible for enforcing resident and employee parking rules and will address any complaints from the public regarding neighborhood parking intrusion. The telephone number of the parking ombudsman will be disseminated to the surrounding communities. For example, should a community member notice a resident or employee parking in their neighborhood, they will be able to notify the ombudsman of the intrusion, as well as request enforcement if it was determined that the motorist parking was attributable to the proposed project. All verifiable violations will be documented for monitoring and reporting purposes and warnings and fines/penalties will be issued. A resident or employee that has been determined by the parking ombudsman to have violated the lease agreement policy (i.e., no on-street parking within the neighborhood) will receive a verbal warning upon their first violation. An employee with a second violation will receive a formal written warning that includes a restatement of the policy along with a notification that the employee's supervisor/manager has been informed of the multiple violations. A resident with a second violation will receive a formal written warning that includes a restatement of the policy to be included in the resident's file. Should a subsequent employee violation occur, it will result in the preparation of a formal letter to the Human Resources department to be included in the employee's file and the employee's supervisor/manager will again be notified in order to determine the appropriate penalty. Should a subsequent resident violation occur, it will result in the issuance of a lease termination/non-renewal letter for violation of the terms outlined in the lease/rental agreement.

2.4.4 *Comparison to ITE Parking Standards*

Research was conducted of applicable parking ratios for multi-family residential uses outlined in industry standard publications. The parking demand for multi-family residential uses can be estimated using ratios published in the Institute of Transportation Engineers' (ITE) *Parking Generation*[5] publication. When utilizing the ITE publication, the parking demand for the proposed project can be calculated based upon ratios per DU. More specifically, the ITE Land Use Code 221 (Multifamily Housing [Mid-Rise]) parking demand ratios were reviewed and the average weekday peak period parking demand ratio could be used to forecast the parking demand expected for the proposed project. The ITE parking demand ratios for multi-family residential are summarized below:

- Weekday peak period parking demand ratio – Average Rate (General Urban/Suburban, no nearby rail transit): 1.31 spaces per dwelling unit (73 study sites, inclusive of resident and guest parking demand)
- Weekday peak period parking demand ratio – 85th Percentile Rate (General Urban/Suburban, no nearby rail transit): 1.47 spaces per dwelling unit (73 study sites, inclusive of resident and guest parking demand)

[5] Institute of Transportation Engineers *Parking Generation Manua*l, 5th Edition, Washington D.C., 2019.

Application of the higher ITE published parking demand ratio to the proposed project would yield a peak residential parking demand of 375 spaces as summarized below:

- Peak Parking Demand: 1.47 spaces/DU x 255 DU = 375 parking spaces

In comparison, the residential parking demand of 375 spaces forecast for the project per ITE is significantly lower than the City's Code residential parking requirement of 542 spaces. In addition, the overall project residential parking ratio of 1.53 spaces per DU is higher (i.e., more conservative) than the ITE peak parking demand ratio of 1.47 spaces per DU.

2.4.5 *Empirical Parking Demand Ratios at Other Multifamily Residential Sites*

A review was also conducted of site-specific multifamily residential parking surveys that have been previously conducted by LLG. Parking demand data for other existing multi-family residential sites are based on the empirical parking demand studies conducted at the following three (3) multi-family residential sites:

- Paragon at Old Town located at 700 S. Myrtle Avenue, Monrovia (163 units)
- Trio Apartments located at 44 N. Madison Avenue, Pasadena (304 units)
- Main Street Village located at 2555 Main Street, Irvine (481 units)

The peak parking demand ratios for these facilities ranged between 1.22 spaces per unit (i.e., Trio Apartments) to 1.48 spaces per unit (i.e., Paragon at Old Town). The average of the peak parking ratio results for the three (3) surveyed sites was 1.36 spaces per unit. The summary of the existing parking supply ratios, as well as the observed and forecast (i.e., at full occupancy) parking demand ratios based on the number of units at the comparable sites is provided in ***Appendix B***.

Application of the highest residential peak parking demand ratio to the proposed project would yield a forecast peak parking demand of 377 parking spaces (i.e., 1.48 spaces/DU x 255 DUs = 377 spaces), which is significantly lower than the City's Code residential parking requirement of 542 spaces. The overall project residential parking ratio of 1.53 spaces per DU is higher (i.e., more conservative) than the empirical (observed) parking demand ratio of 1.48 spaces per DU. Therefore, the parking requirements proposed in the Specific Plan are consistent with the empirical parking demand ratios and the ITE published residential parking demand ratio.

2.5 Project Trip Generation and Distribution

2.5.1 *Project Trip Generation Forecast*

Traffic trip generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Traffic volumes to be generated by the proposed project were forecast for the weekday AM and PM peak hours, and over a 24-hour period. Trip

generation rates provided in the ITE's *Trip Generation Manual*[6] were utilized to forecast project traffic generation for the proposed project, with the exception of the 13 affordable housing dwelling units. Traffic volumes expected to be generated by the residential component of the proposed project were based upon rates per number of dwelling units. Traffic volumes expected to be generated by the commercial component of the proposed project were based upon rates per 1,000 square feet. For purposes of trip generation, the proposed commercial/retail space was assumed to consist of 2,865 square feet of retail space and 2,865 square feet of restaurant space. Trip generation average rates for the following uses were used to forecast the traffic volumes expected to be generated by the proposed project:

- ITE Land Use Code 221: Multi-Family Housing (Mid-Rise)
- ITE Land Use Code 820: Shopping Center
- ITE Land Use Code 932: High-Turnover (Sit-Down) Restaurant

As the ITE publication does not provide trip rates for a land use such as the project's affordable housing residential land use component, it was deemed appropriate to forecast the trips expected to be generated by the affordable housing land use component using trip rates published by the City of Los Angeles Department of Transportation (LADOT) in the City's *Transportation Assessment Guidelines*[7] (TAG) which are directly applicable to the proposed project. The LADOT trip generation rates for affordable housing projects were developed based on vehicle trip count data collected at affordable housing sites in the City of Los Angeles during year 2016. A copy of the Affordable Housing Trip Generation Study contained in LADOT's *TAG* is provided in ***Appendix C***. The LADOT affordable housing trip rates include three (3) different housing type categories: affordable family housing; affordable senior housing, and affordable special needs and supportive housing. In this instance, the affordable family housing category is directly applicable to the proposed project. LADOT's affordable family housing category trip rates are summarized below:

Affordable Family Housing

- Average AM Peak Hour Trip Rate: 0.52 trips per dwelling unit; 38% inbound and 62% outbound
- Average PM Peak Hour Trip Rate: 0.38 trips per dwelling unit; 55% inbound and 45% outbound

In addition to the above project trip generation forecasts, a forecast was made of likely internal capture/captive market trips projected at the site with respect to the proposed uses. Internal capture and captive markets trips are trips made from other components of the project and other uses in the immediate vicinity of the site. The internal capture/captive market reduction for the residential uses

[6] Institute of Transportation Engineers *Trip Generation Manual*, 10th Edition, Washington, D.C., 2017.
[7] *Transportation Assessment Guidelines*, City of Los Angeles Department of Transportation, July 2020.

has been estimated based on the ITE *Trip Generation Handbook*[8], the National Cooperative Highway Research Program (NCHRP) Report 684 – "Enhanced Internal Trip Capture Estimation for Mixed-Use Developments"[9] and in consultation with City Public Works staff. A conservative 15 percent (15.0%) internal capture/captive market reduction factor has been applied to the AM and PM peak hour traffic volume forecasts, as well as to the daily traffic volume forecast for the residential component of the proposed project to reflect the internal trip making between the project land uses and other site uses, as well as from other uses in the immediate vicinity.

The trip generation forecast for the proposed project is summarized in ***Table 2-1***. The trip generation forecasts for the proposed project were submitted to City staff for review and were subsequently approved for analysis purposes. As presented in *Table 2-1*, the proposed project is expected to generate 111 vehicle trips (40 inbound trips and 71 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 134 net new vehicle trips (80 inbound trips and 54 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 1,594 daily trip ends during a typical weekday (approximately 797 inbound trips and 797 outbound trips).

2.5.2 *Project Trip Distribution and Assignment*

Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to major traffic corridors (i.e., Washington Boulevard, Rosemead Boulevard, etc.);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Ingress/egress scheme planned for the proposed project;
- Nearby population and employment centers; and
- Input from City staff.

[8] Institute of Transportation Engineers *Trip Generation Handbook*, 3rd Edition, 2017.
[9] National Cooperative Highway Research Program (NCHRP) Report 684 – "Enhanced Internal Trip Capture Estimation for Mixed-Use Developments," 2011.

Table 2-1
PROJECT TRIP GENERATION [1]

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Apartment [3]	242 DU	1,316	23	64	87	65	41	106
- Less 15% Internal Capture/Captive Market [4]		(197)	(3)	(10)	(13)	(10)	(6)	(16)
Affordable Housing [5]	13 DU	54	3	4	7	3	2	5
- Less 15% Internal Capture/Captive Market [4]		(8)	0	(1)	(1)	0	0	0
Retail [6]	2,865 GLSF	108	2	1	3	5	6	11
Restaurant [7]	2,865 GSF	321	15	13	28	17	11	28
TOTAL		**1,594**	**40**	**71**	**111**	**80**	**54**	**134**

[1] Source: ITE "Trip Generation Manual", 10th Edition, 2017 and Transportation Assessment Guidelines (TAG), City of Los Angeles Department of Transportation (LADOT), July 2020.

[2] Trips are one-way traffic movements, entering or leaving.

[3] ITE Land Use Code 221 (Multi-Family [Mid-Rise]) trip generation average rates.
- Daily Trip Rate: 5.44 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.36 trips/dwelling units; 26% inbound/74% outbound
- PM Peak Hour Trip Rate: 0.44 trips/dwelling units; 61% inbound/39% outbound

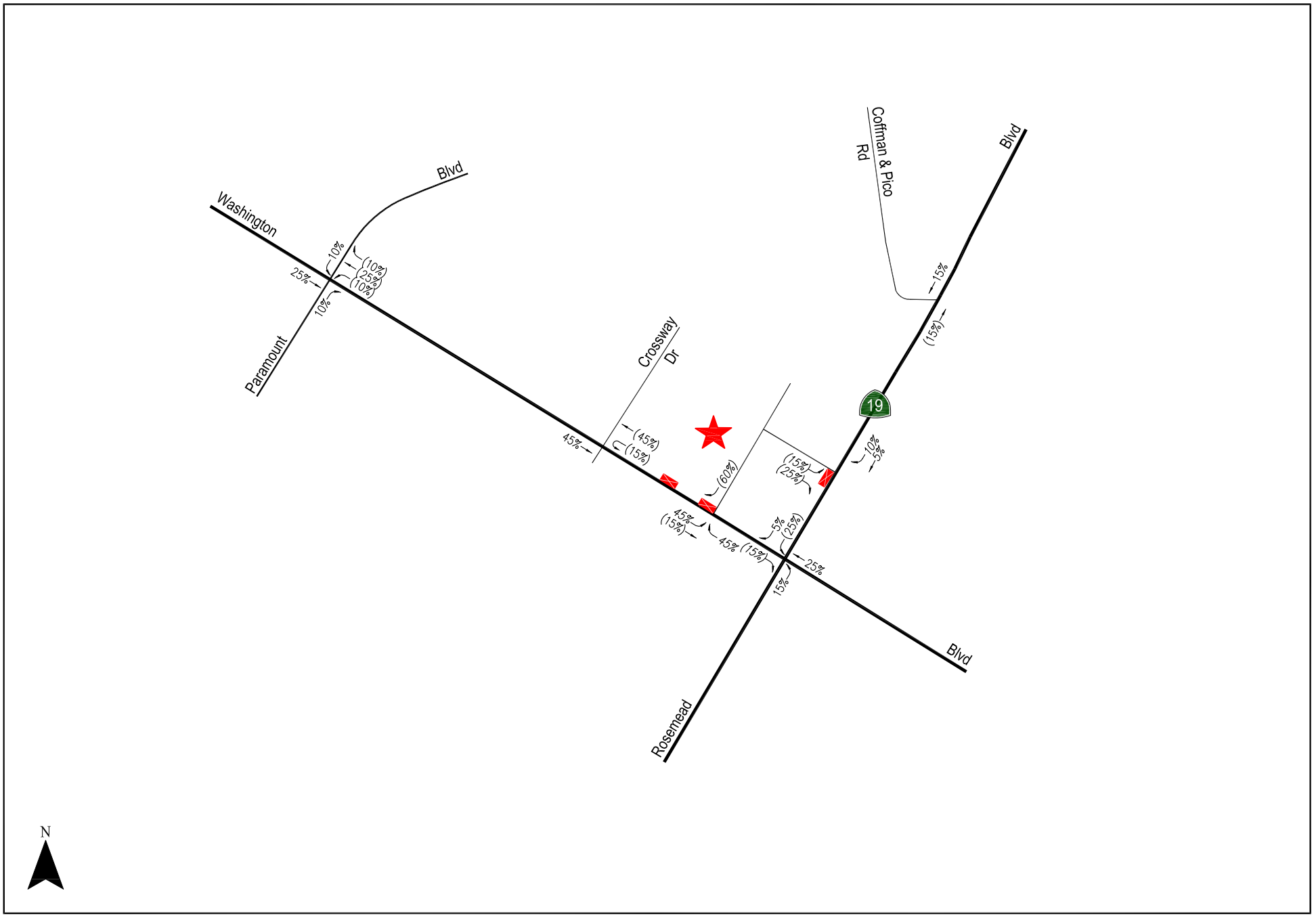
[4] Source: ITE "Trip Generation Handbook", 3rd Edition, 2017 and the National Cooperative Highway Research Program (NCHRP) Report 684 - "Enhanced Internal Trip Capture Estimation for Mixed-Use Developments", 2011. Internal capture and Captive markets trips are trips made to and from other components of the project and other uses in the immediate vicinity of the site. A 15% internal capture/captive market reduction factor has been applied to reflect the internal trip making between the project land uses and other uses in the area.

[5] LADOT trip generation average rates for Family Affordable Housing.
- Daily Trip Rate: 4.16 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.52 trips/dwelling unit; 38% inbound/62% outbound
- PM Peak Hour Trip Rate: 0.38 trips/dwelling unit; 55% inbound/45% outbound

[6] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
- Daily Trip Rate: 37.75 trips/1,000 SF; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.94 trips/1,000 SF; 62% inbound/38% outbound
- PM Peak Hour Trip Rate: 3.81 trips/1,000 SF; 48% inbound/52% outbound

[7] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.
- Daily Trip Rate: 112.18 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 9.94 trips/1,000 SF of floor area; 55% inbound/45% outbound
- PM Peak Hour Trip Rate: 9.77 trips/1,000 SF of floor area; 62% inbound/38% outbound

The general, directional traffic distribution pattern for the proposed project is presented in ***Figure 2-5***. The forecast weekday AM and PM peak hour project traffic volumes at the study intersections associated with the proposed project are presented in ***Figures 2-6*** and ***2-7***, respectively. The traffic volume assignments presented in *Figures 2-6* and *2-7* reflect the traffic distribution characteristics shown in *Figure 2-5* and the project trip generation forecasts presented in *Table 2-1*.



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★ Project Site

XX = Inbound Percentage

(XX) = Outbound Percentage

Figure 2-5

Project Trip Distribution

The Mercury Project

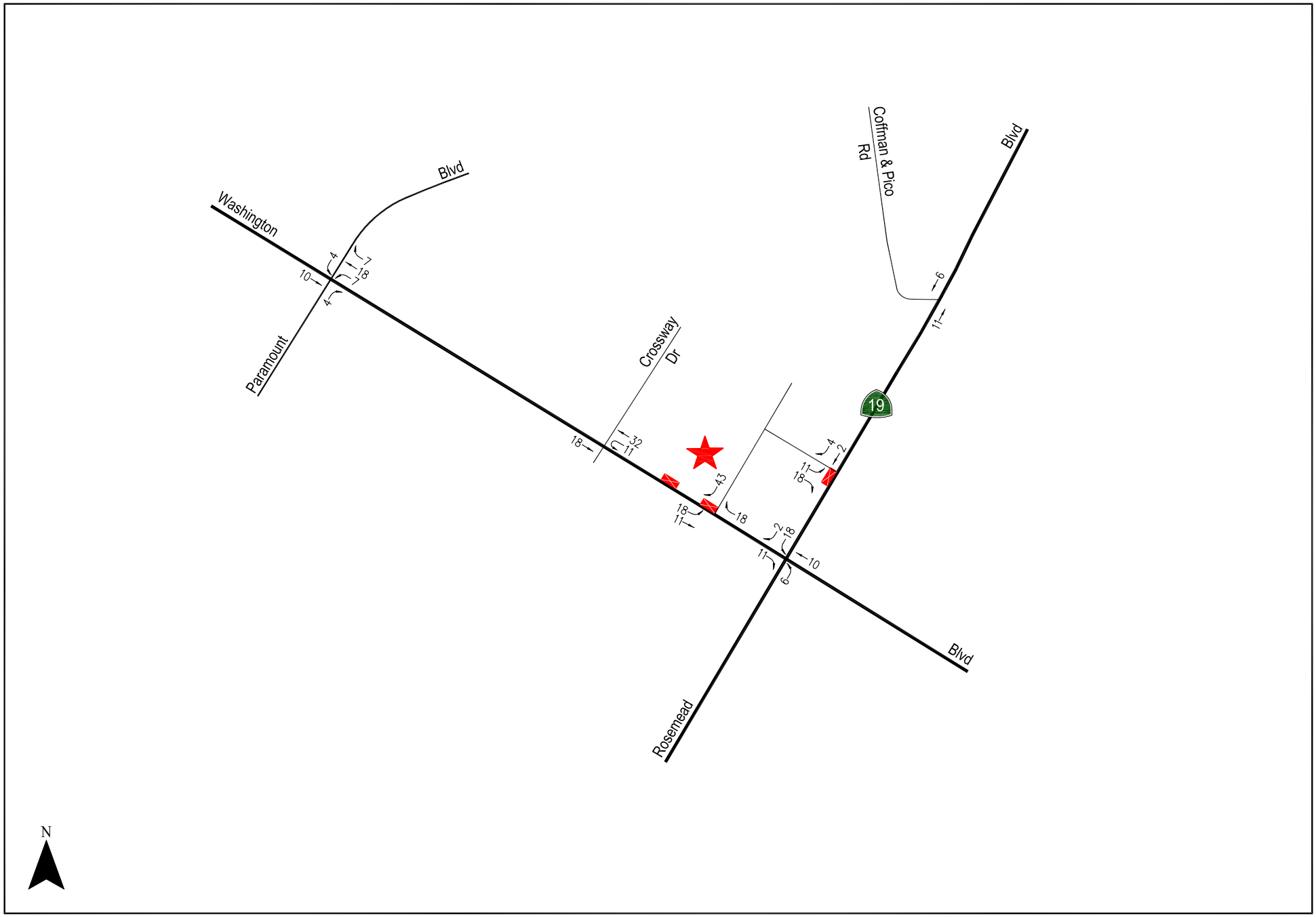

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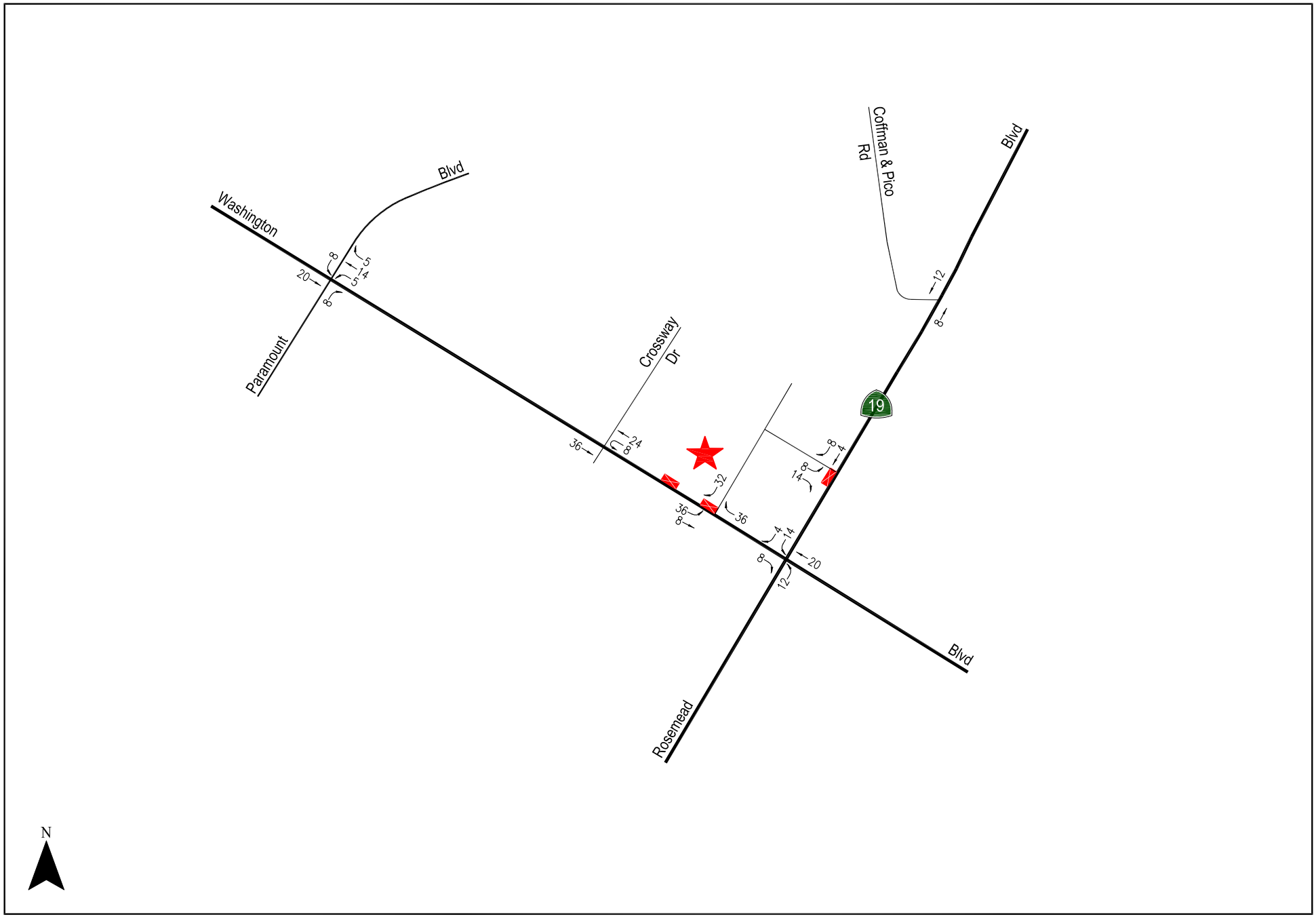
Figure 2-6
Project Traffic Volumes
Weekday AM Peak Hour
The Mercury Project



Project Site

Figure 2-7
Project Traffic Volumes
Weekday PM Peak Hour
The Mercury Project

3.0 PROJECT SITE CONTEXT

The following sections provide an overview of the transportation infrastructure in the vicinity of the proposed project, including infrastructure which supports both motorized and non-motorized transportation modes.

3.1 Non-Vehicle Network

Non-vehicular transportation generally encompasses walking, biking, and other active transportation modes. Distinct facilities are often provided for these non-vehicular modes. Most prominently, paved sidewalks are typically provided to facilitate pedestrian travel outside of the roadway. In some cases, bicycle facilities such as painted bike lanes or separated bike paths are provided within the roadway in order to separate bike traffic from vehicular traffic. Roadways which are designed to prioritize non-vehicular transportation modes utilize complimentary non-vehicular infrastructure in order to promote comfortable, safe travel for both pedestrians and bicyclists. A review of the pedestrian and bicycle infrastructure provided in the vicinity of the project site is provided below.

3.1.1 *Pedestrian System*

Public sidewalks and pedestrian facilities are provided on all streets within the project vicinity. ***Figure 3-1*** shows the existing pedestrian and transit facilities near the project site. The proposed project is designed to encourage pedestrian activity and walking as a transportation mode with a Walkability score for the project site of approximately 81 (Very Walkable) out of 100.[10] As indicated in *Figure 2–2*, walkways are planned within the proposed project which will connect to adjacent sidewalks in a manner that promotes walkability. Walkability is a term for the extent to which walking is readily available as a safe, connected, accessible and pleasant mode of transport. There are several criteria that are widely accepted as key aspects of the walkability of urban areas that should be satisfied. The underlying principle is that pedestrians should not be delayed, diverted, or placed in danger. The widely accepted characteristics of walkability are as follows:

- Connectivity: People can walk from one place to another without encountering major obstacles, obstructions, or loss of connectivity.
- Convivial: Pedestrian routes are friendly and attractive, and are perceived as such by pedestrians.
- Conspicuous: Suitable levels of lighting, visibility and surveillance over its entire length, with high quality delineation and signage.
- Comfortable: High quality and well-maintained footpaths of suitable widths, attractive landscaping and architecture, shelter and rest spaces, and a suitable allocation of roadspace to pedestrians.

[10] Refer to http://www.walkscore.com/, which generates the walkability score for the project site. Walk Score calculates the walkability of an address by locating nearby stores, restaurants, schools, parks, etc. Walk Score measures how easy it is to live a car-lite lifestyle.

N

Site
Signal
Stop Sign
ADA
ADA Yellow Truncated Dome
Trash
Crosswalk
Crosswalk Yellow
BR Bike Rack
Bike Lane/Route
BS Bus Stop
BB Bus Stop with Bus Bench
BBS Bus Stop with Bus Bench & Shelter

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Figure 3-1
Existing Nearby Pedestrian and Transit Facilities

The Mercury Project

- Convenient: Walking is a realistic travel choice, partly because of the impact of the other criteria set forth above, but also because walking routes are of a suitable length as a result of land use planning with minimal delays.

A review of the proposed project pedestrian walkways indicates that these primary characteristics are accommodated within the project. Proposed project features would include landscaped pedestrian walkways connecting facilities within the site, as well as connections with the adjacent public sidewalks on the Washington Boulevard project frontage for access to nearby pedestrian and transit facilities. As part of the Specific Plan, street trees and streetscape plantings will be provided along the public frontages in accordance with the City's standards. In addition, project signage will include wayfinding pedestrian signage around the perimeter of the project site, building identification signs, and other sign types. Wayfinding signs would be located at access points to the on-site amenities and facilities and parking areas.

3.1.2 *Bicycle System*

Bicycle infrastructure consists of both facilities within the roadway as well as public bicycle parking spaces. The Federal and State transportation systems recognize three primary bikeway facilities: Bicycle Paths (Class I), Bicycle Lanes (Class II), and Bicycle Routes (Class III). Bicycle Paths (Class I) are exclusive car-free facilities that are typically not located within a roadway area. Bicycle Lanes (Class II) are part of the street design that is dedicated only for bicycles and identified by a striped lane separating vehicle lanes from bicycle lanes. Bicycle Routes (Class III) are preferably located on collector and lower volume arterial streets.

Bicycle access to the project site will be facilitated by the County's bicycle roadway network. Walk Score calculates a bike score based on the topography, number and proximity of bike lanes, etc., and generates a bike score for the project site of approximately 58 (Bikeable) out of 100.[11] Proposed bicycle facilities (e.g., Class I Bicycle Path, Class II Bicycle Lanes, Class III Bicycle Routes, Proposed Bicycle Routes, Bicycle Boulevards, etc.) identified in the City's Circulation Element[12] will be located within an approximate one-mile radius from the project site. The location of the proposed bicycle lane network for the City in close proximity to the project site and in the surrounding area is illustrated in ***Figure 3-2***. As shown in *Figure 3-2*, a Class II Bicycle Lane is proposed for Rosemead Boulevard between Gallatin Road and I-5 Freeway. In addition, a Class III Bicycle Route is proposed for Washington Boulevard between Telegraph Road and the San Gabriel River.

3.2 Transit Network

Public transit service in the vicinity of the project is currently provided by the Los Angeles County Metropolitan Transportation Authority (Metro), Montebello Transit and Norwalk Transit. The existing public transit routes in the project site vicinity are illustrated in ***Figure 3–3***. A summary of

[11] Refer to http://www.walkscore.com/, which generates a bike score for the project site. Walk Score calculates the bike score of an address by locating nearby bicycling facilities as well as connections to bus/rail transit routes and stops. Walk Score measures how easy it is to live a car-lite lifestyle.
[12] City of Pico Rivera General Plan Circulation Element, October 2014.

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MAP SOURCE: CITY OF PICO RIVERA GENERAL PLAN UPDATE, OCTOBER 2014

★ Project Site

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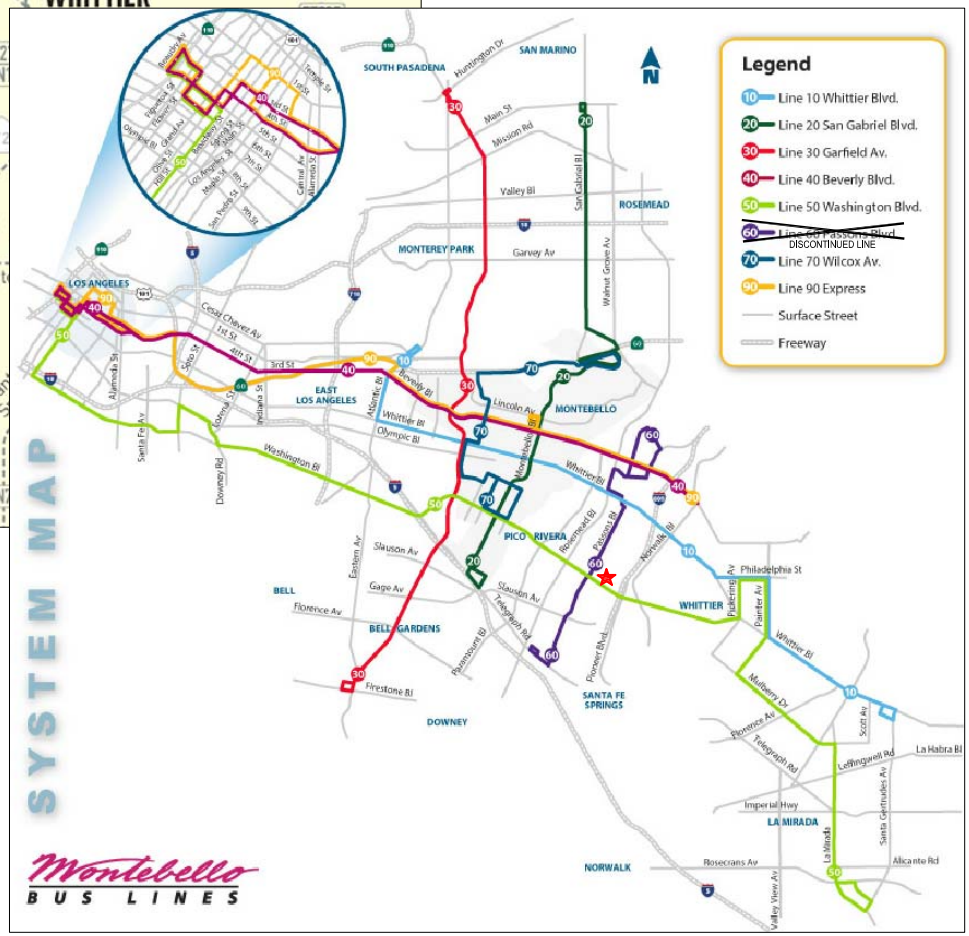
Figure 3-2
Proposed Bicycle Facilities

MAP SOURCE: METROPOLITAN TRANSPORTATION AUTHORITY WEBSITE



MAP SOURCE: CITY OF MONTEBELLO BUS LINE WEBSITE

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★ Project Site

Figure 3-3
Existing Transit Routes

The Mercury Project

the existing transit service, including the transit routes, destinations, and the peak hour headways is presented in ***Table 3–1***. As summarized in *Table 3-1*, a total of 9 public transit routes provide service near the project site.

Metro is evaluating an extension of the Metro L (Gold) Line further east from its current terminus in East Los Angeles potentially through the cities of Commerce, Montebello, Pico Rivera, Santa Fe Springs and Whittier. The proposed light rail line would travel south along Atlantic Boulevard underground from the current Metro L (Gold) Line terminus at Pomona Boulevard and Atlantic Boulevard to the Citadel Outlets in the City of Commerce. The route would then proceed east along Washington Boulevard via aerial and/or at-grade (street level) configurations with an above-grade station at Rosemead Boulevard and ending at Lambert Road in the City of Whittier.

3.3 Vehicle Network

3.3.1 *Roadway Classifications*

The City of Pico Rivera utilizes the roadway categories recognized by regional, state and federal transportation agencies. There are four (4) categories in the roadway hierarchy, ranging from freeways with the highest capacity to two-lane undivided roadways with the lowest capacity. The roadway categories are summarized as follows:

- *Freeways* are limited-access and high speed travel ways included in the state and federal highway systems. Their purpose is to carry regional through-traffic. Access is provided by interchanges with typical spacing of one mile or greater. No local access is provided to adjacent land uses.

- *Arterial* roadways are major streets that primarily serve through-traffic and provide access to abutting properties as a secondary function. Arterials are generally designed with two to six travel lanes and their major intersections are signalized. This roadway type is divided into two categories: principal and minor arterials. Principal arterials are typically four-or-more lane roadways and serve both local and regional through-traffic. Minor arterials are typically two-to-four lane streets that service local and commuter traffic.

- *Collector* roadways are streets that provide access and traffic circulation within residential and non-residential (e.g., commercial and industrial) areas. Collector roadways connect local streets to arterials and are typically designed with two through travel lanes (i.e., one through travel lane in each direction) that may accommodate on-street parking. They may also provide access to abutting properties.

- *Local* roadways distribute traffic within a neighborhood, or similar adjacent neighborhoods, and are not intended for use as a through-street or a link between higher capacity facilities such as collector or arterial roadways. Local streets are fronted by residential uses and do not typically serve commercial uses.

Table 3-1
EXISTING TRANSIT ROUTES [1]

ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	NO. OF BUSES/TRAINS DURING PEAK HOUR		
			DIR	AM	PM
Metro 62	Downtown Los Angeles to Hawaiian Gardens via Boyle Heights, Commerce, Pico Rivera, Norwalk and Cerritos	Telegraph Road, Slauson Avenue	NB-WB SB-EB	2 2	3 2
Metro 108	Marina Del Rey to Pico Rivera via Fox Hills, Hyde Park, Los Angeles, Huntington Park and City of Commerce	Paramount Boulevard, Slauson Avenue	EB WB	4 3	3 3
Metro 265	Pico Rivera to Lakewood via Downey, Paramount and Long Beach	Paramount Boulevard, Washington Boulevard	NB SB	1 1	1 1
Metro 266	Pasadena to Lakewood via Temple City, South El Monte, Pico Rivera, Downey and Bellflower	Rosemead Boulevard, Washington Boulevard	NB SB	2 2	2 2
Montebello Transit 10	Monterey Park to Whittier via Montebello and Pico Rivera	Rosemead Boulevard, Whittier Boulevard	EB WB	4 4	4 5
Montebello Transit 20	Montebello to Pico Rivera	Greenwood Avenue, Washington Boulevard	NB SB	2 2	2 2
Montebello Transit 50	La Mirada to Downtown Los Angeles via Whittier, Pico Rivera and East Los Angeles	Rosemead Boulevard, Washington Boulevard	EB WB	2 1	1 2
Montebello Transit 70	Montebello to Pico Rivera	Greenwood Avenue, Washington Boulevard	NB SB	2 2	2 2
Norwalk Transit 1	Bellflower to Pico Rivera via Norwalk and Santa Fe Springs	Norwalk Boulevard, Washington Boulevard	NB SB	2 2	2 2
TOTAL				**40**	**41**

[1] Sources: Los Angeles County Metropolitan Transportation Authority (Metro), City of Montebello Bus Lines and City of Norwalk Transit websites, 2021.

3.3.2 *Roadway Descriptions*

Immediate access to the project site is provided via Washington Boulevard and Rosemead Boulevard. The existing roadway configurations and intersection controls at the study intersections are displayed in ***Figure 3-4*** and descriptions of the existing roadways (e.g., roadway classifications, number of travel lanes, median type, speed limit, etc.) are provided in ***Table 3-2***.

3.4 Traffic Count Data

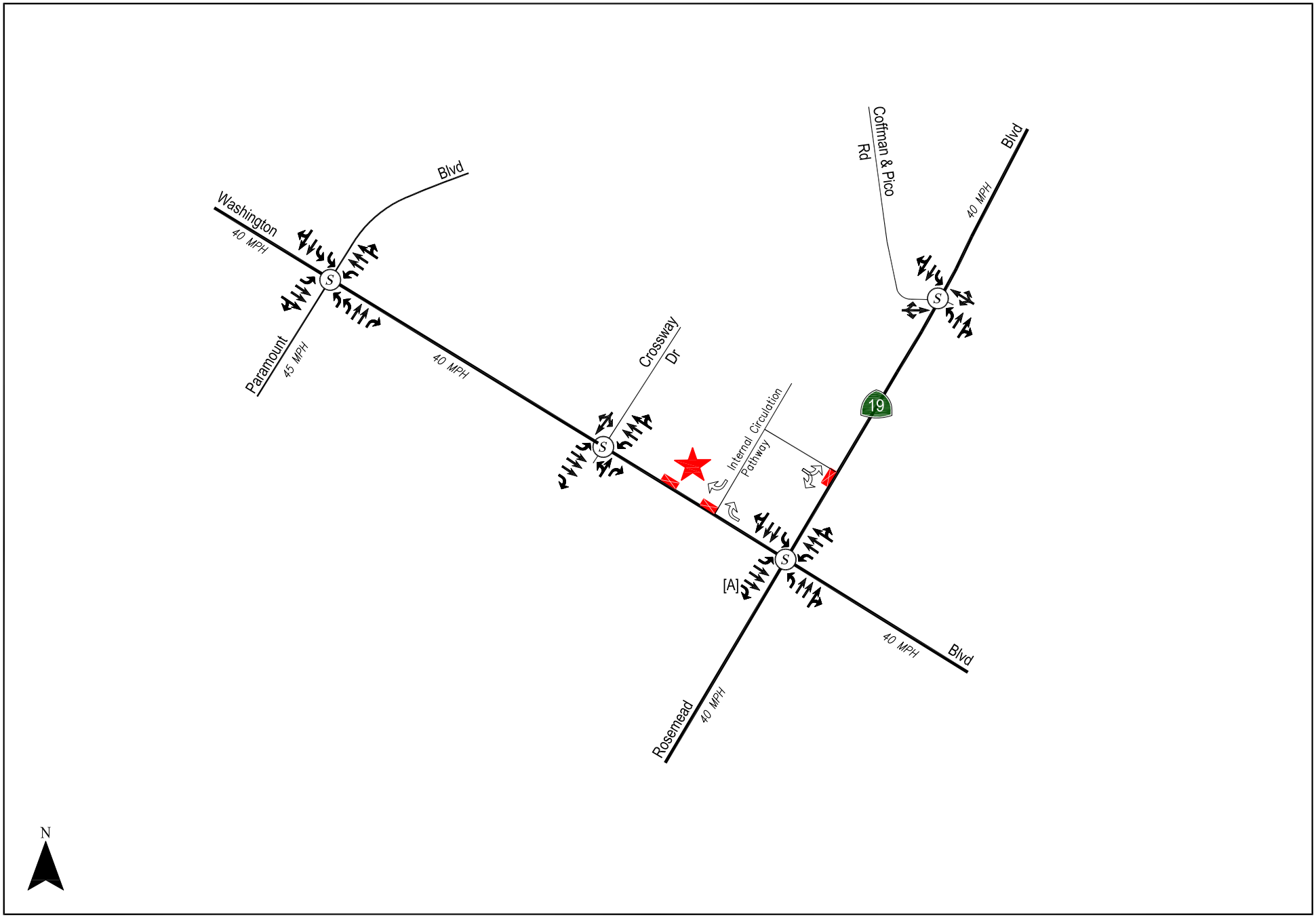
Manual counts of vehicular turning movements by vehicle classification were conducted at each of the study intersections during the weekday morning (AM) and afternoon (PM) commute periods to determine the peak hour traffic volumes. The manual counts were conducted by an independent traffic count subconsultant (City Traffic Counters) at the study intersections from 7:00 to 9:00 AM to determine the weekday AM peak commute hour, and from 4:00 to 6:00 PM to determine the weekday PM peak commute hour. In conjunction with the manual turning movement vehicle counts, a count of bicycle and pedestrian volumes were also collected during the peak periods. Traffic volumes at the study intersections show the typical peak periods between 7:00 to 9:00 AM and 4:00 to 6:00 PM generally associated with metropolitan Los Angeles area weekday peak commute hours. It should be noted that while the traffic counts were conducted during various days in March 2021 (i.e., at a time when some Covid-19 business and school restrictions were still in effect), the count data were compared with prior (2019), non-pandemic count data provided by the City. Based on those comparisons, the through traffic volumes along Rosemead Boulevard were increased by 7.5 percent (7.5%) per year, or by a total of 15 percent (15%) to reflect pre-Covid conditions. No annual adjustments were necessary along Washington Boulevard. In addition, minor adjustments were made to some traffic movements to ensure peak hour traffic flow consistency on a corridor-level basis.

The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are shown in ***Figures 3-5*** and ***3-6***, respectively. Summary data worksheets of the manual traffic counts at the study intersections are contained in ***Appendix D***.

3.5 Cumulative Development Projects

3.5.1 *Cumulative Projects*

A forecast of on-street traffic conditions prior to (i.e., without) implementation of the proposed project was prepared by incorporating the potential trips associated with other known development projects (cumulative projects) in the area. With this information, the potential impact of the proposed project can be evaluated within the context of likely future development that would be in place when the project becomes operational. The cumulative projects research was based on information on file at the City of Pico Rivera Community and Economic Development Department, County of Los Angeles Department of Regional Planning, and City of Montebello. In addition, cumulative projects lists from recently approved transportation impact study memoranda of understanding (MOUs) and transportation impact studies in the project vicinity were also reviewed. The list of cumulative projects in the project site area is presented in ***Table 3-3***. The location of the cumulative projects is shown in ***Figure 3-7***.



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Project Site

(S) Signalized Intersection

[A] Overlap Phase

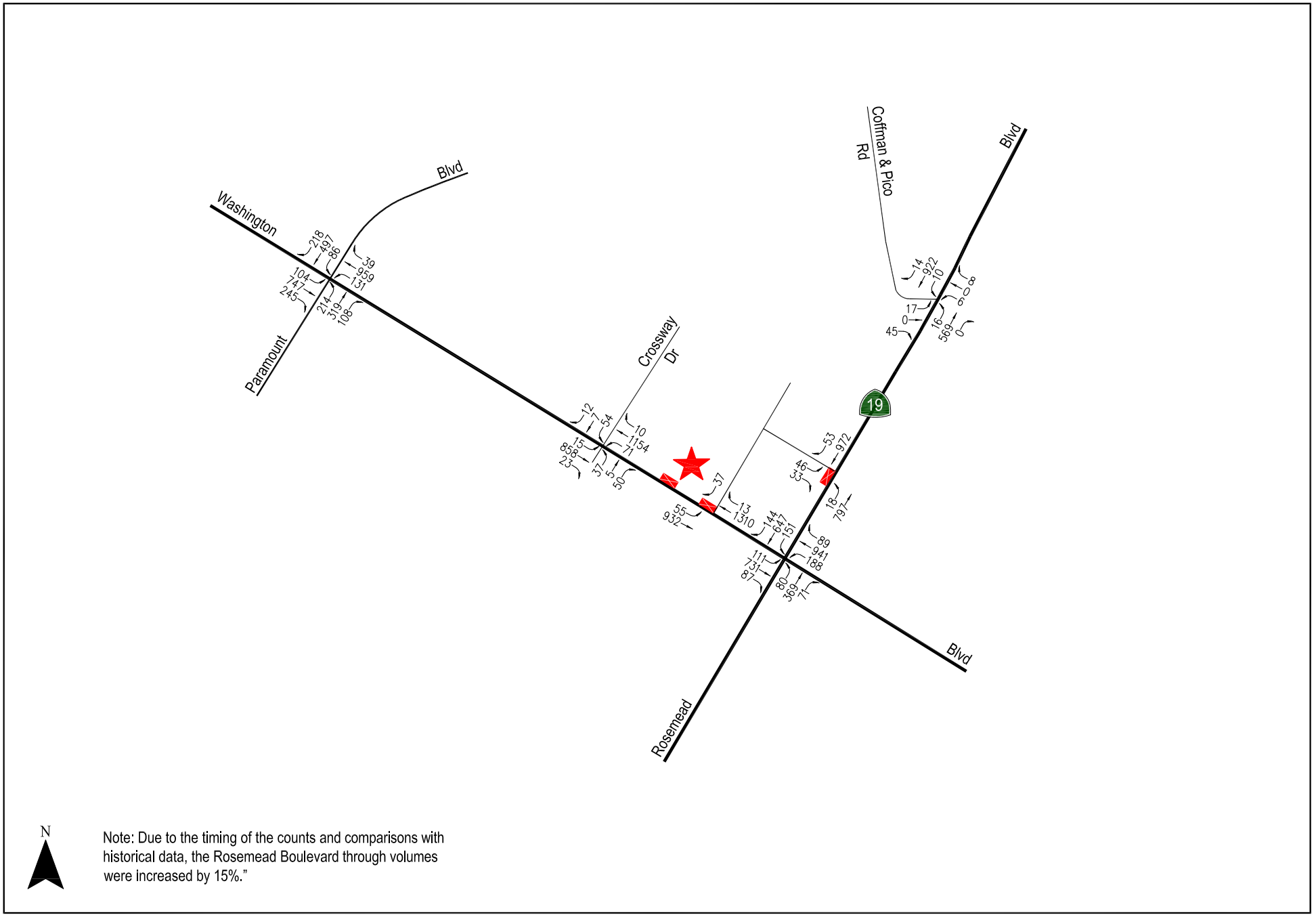
Figure 3-4
Existing Lane Configurations

The Mercury Project

Table 3-2
EXISTING ROADWAY DESCRIPTIONS

ROADWAY	CLASSIFICATION [1]	TRAVEL LANES		MEDIAN TYPES [4]	SPEED LIMIT
		DIRECTION [2]	NO. LANES [3]		
Paramount Boulevard	Major Arterial	NB-SB	4	N/A	30
Crossway Drive	Local Street	NB-SB	2	N/A	25
Rosemead Boulevard	Major Arterial	NB-SB	4	N/A	35
Coffman & Pico Road	Local Street	EB-NB	2	2WLT	35
Washington Boulevard	Major Arterial	EB-WB	6 [11]	2WLT	35

Notes:
[1] Roadway classifications obtained from the *City of Pico Rivera General Plan Circulation Element,* October 2014.
[2] Direction of roadways in the project area: NB-SB = northbound and southbound; and EB-WB = eastbound and westbound.
[3] Number of lanes in both directions on the roadway. Variations in number of travel lanes due to time restricted on-street parallel parking are noted below.
[4] Median type of the road: RMI = Raised Median Island; 2WLT = 2-Way Left-Turn Lane; and N/A = Not Applicable.
[5] Tow Away No Stopping 4 PM to 7 PM in the northbound direction.
[6] Tow Away No Stopping 7 AM to 9 AM and 4 PM to 6 PM in the southbound direction.
[7] Tow Away No Stopping 7 AM to 9 AM in the southbound direction.
[8] Class III Bike Route
[9] Class II Bike Lane
[10] Tow Away No Stopping 4 PM to 7 PM in the northbound and southbound direction.
[11] Tow Away No Stopping 4 PM to 7 PM in the eastbound direction and westbound direction.
[12] Tow Away No Stopping 7 AM to 9 AM and 4 PM to 6 PM in the westbound direction.



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Note: Due to the timing of the counts and comparisons with historical data, the Rosemead Boulevard through volumes were increased by 15%."

Project Site

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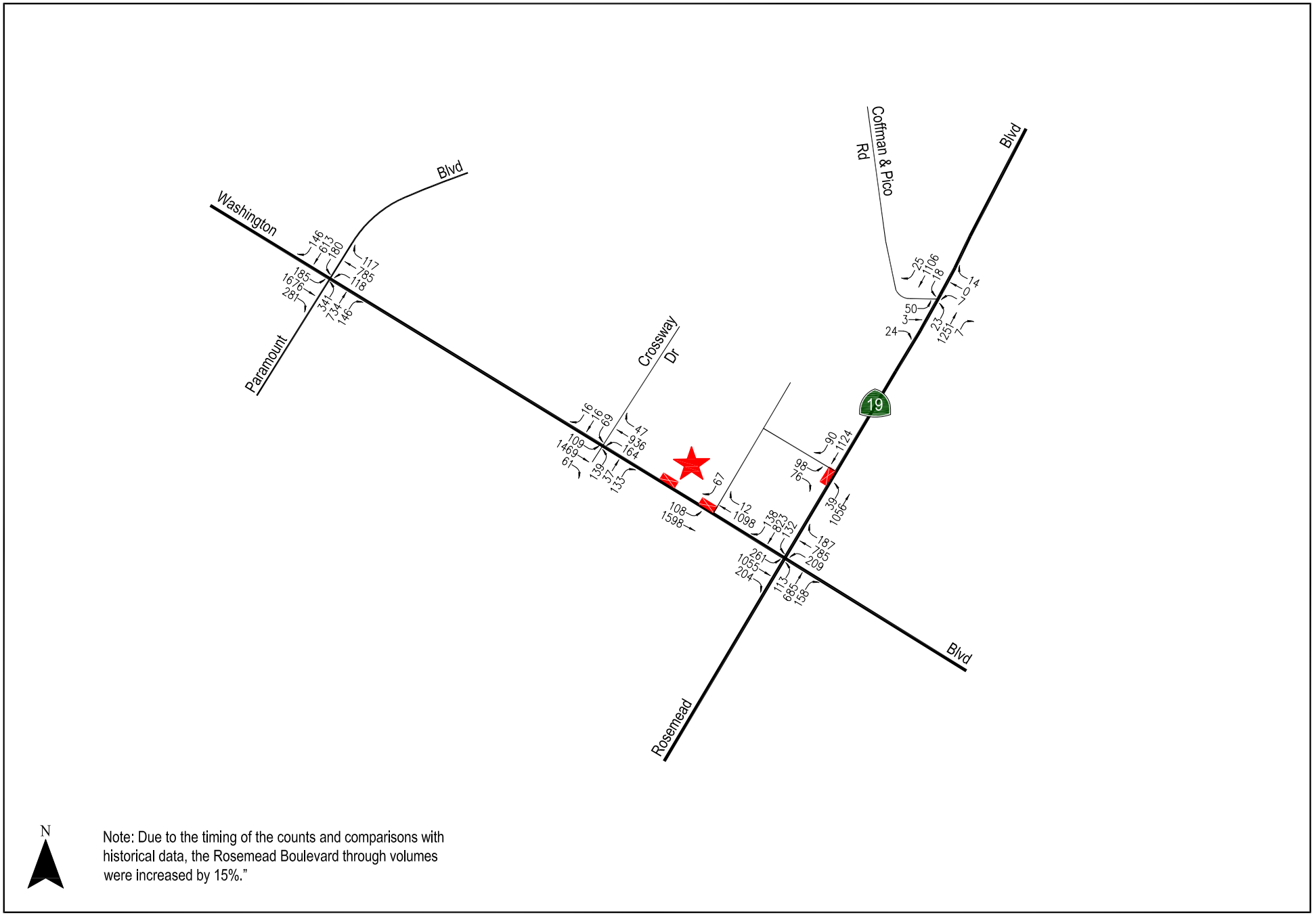
Figure 3-5
Existing Traffic Volumes
Weekday AM Peak Hour
The Mercury Project



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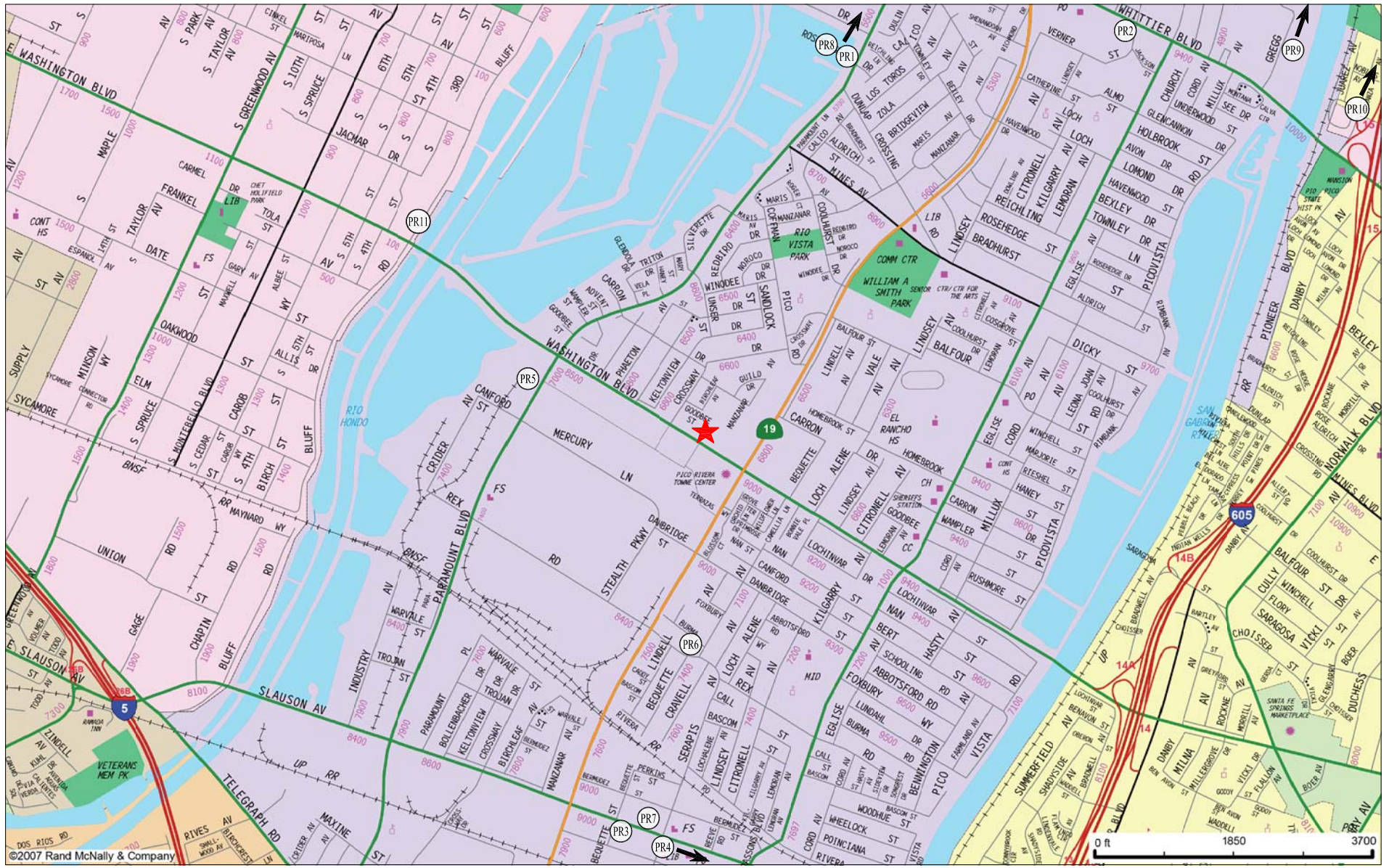
★ Project Site

Figure 3-6
Existing Traffic Volumes
Weekday PM Peak Hour
The Mercury Project

Table 3-3
CUMULATIVE PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
City of Pico Rivera												
PR1	Proposed	5201-5211 Paramount Boulevard	Medical Office Building	10,000 GSF	[3]	348	22	6	28	10	25	35
PR2	Proposed	Southwest Corner of Durfee Avenue and Whittier Boulevard	Bank	12,925 GSF	[4]	1,293	71	52	123	132	132	264
PR3	Proposed	9102 Slauson Avenue	Apartment	6 DU	[5]	44	1	2	3	2	1	3
PR4	Proposed	Westside of San Gabriel River at Burke Street	Single-Family Residential	18 DU	[6]	170	3	10	13	11	7	18
PR5	Entitled	7105 Paramount Boulevard	Industrial	28,458 GSF	[7]	141	18	2	20	2	16	18
PR6	Entitled	9056 Burma Road	Apartment	4 DU	[5]	29	0	2	2	1	1	2
PR7	Entitled	9141 Slauson Avenue	Fitness Center	675 GSF	[8]	None	1	0	1	1	1	2
PR8	Proposed	Village Walk Shopping Center 8580 Whittier Boulevard	Fast Food Restaurant Restaurant Retail Coffee Shop	3,432 GSF 2,000 GSF 1,800 GLSF 1,800 GSF	[9]	1,575	49	46	95	50	46	96
PR9	Proposed	Beverly Boulevard Warehouse Project Beverly Boulevard & San Gabriel River	Warehouse Copy, Print, Express Ship Store	375,903 GSF 2,500 GSF	[10]	808	50	17	67	27	61	88
PR10	Proposed	Baybar Distribution Building 3900 Baybar Road	Light Industrial	44,620 GSF	[11]	221	27	4	31	4	24	28
PR11	Proposed	301 Jacmar Drive	Townhomes	31 DU	[12]	227	3	11	14	11	6	17
TOTAL						4,856	245	152	397	251	320	571

[1] Sources: City of Pico Rivera Community & Economic Development Division and County of Los Angeles Department of Regional Planning, except as noted below and by applying trip rates as provided in the ITE "Trip Generation Manual", 10th Edition, 2017.
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 720 (Medical-Dentist Office Building) trip generation average rates.
[4] ITE Land Use Code 912 (Drive-in Bank) trip generation average rates.
[5] ITE Land Use Code 220 (Multifamily Housing Low-Rise) trip generation average rates.
[6] ITE Land Use Code 210 (Single Family Detected Housing) trip generation average rates.
[7] ITE Land Use Code 110 (Light Industrial) trip generation average rates.
[8] ITE Land Use Code 492 (Health/Fitness Club) trip generation average rates.
[9] Source: "Village Walk Shopping Center TIS", prepared by LLG Engineers, dated February 2018.
[10] Source: "Beverly Boulevard Warehouse VMT Assessment", prepared by Michael Baker International, dated November 2020.
[11] Source: "Baybar Distribution Building", prepared by E P D Solutions, Inc., dated June 2020.
[12] Source: "301 Jacmar Drive Project Trip Generation & Site Access/Circulation Study", prepared by Ganddini Group, dated September 2020.



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★ Project Site

(PR) City of Pico Rivera Cumulative Project

Figure 3-7
Location of Cumulative Projects

Traffic volumes expected to be generated by the cumulative projects were calculated using rates provided in the ITE *Trip Generation Manual,* or they were obtained from other recently approved transportation impact studies. The cumulative projects' respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in *Table 3-3*. The cumulative projects traffic volumes were distributed and assigned to the street system based on their locations in relation to the study intersections, their proximity to major traffic corridors, proposed land uses, nearby population and employment centers, etc. The distribution of the cumulative projects traffic volumes to the study intersections during the weekday AM and PM peak hours are displayed in ***Figures 3-8*** and ***3-9***, respectively.

3.5.2 *Ambient Traffic Growth*

Horizon year background traffic growth estimates have been calculated using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown future projects in the study area as well as account for typical growth in traffic volumes due to the development of projects outside the study area. Ambient traffic growth in the Downey area (i.e., included in Regional Statistical Area 22 [RSA 22] that includes Pico Rivera), which is presented in the *2010 Congestion Management Program*[13], indicates existing traffic volumes are expected to increase at an annual rate of approximately 0.24 percent (0.24%) per year between years 2020 and 2025. An annual growth rate of one percent (1.0%) until the year 2024 (i.e., the anticipated project build-out year) was selected for this analysis in consultation with City staff. Therefore, application of this one percent (1.0%) ambient growth factor in addition to the forecast traffic generated by the known cumulative projects allows for a conservative forecast of future traffic volumes in the project study area as incorporation of both (i.e., an ambient traffic growth rate and a detailed list of cumulative development projects) is expected to overstate potential future traffic volumes. The cumulative development projects should already be incorporated as part of the growth rate projection per the adopted, local and regional planning documents (i.e., which account for the future population, housing, and employment [socio-economic data] projections).

[13] *2010 Congestion Management Program*, Los Angeles County Metropolitan Transportation Authority, October 2010.

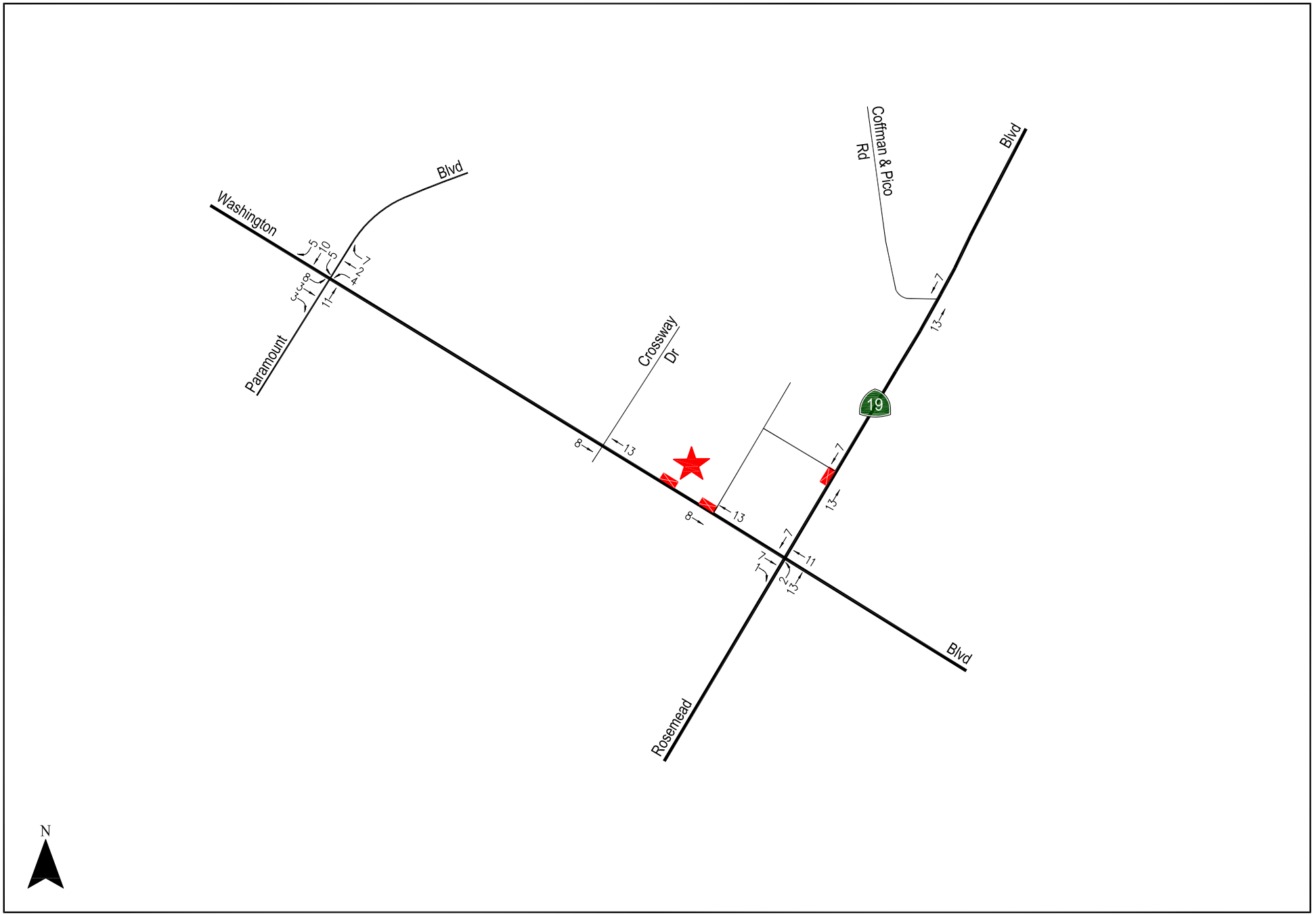

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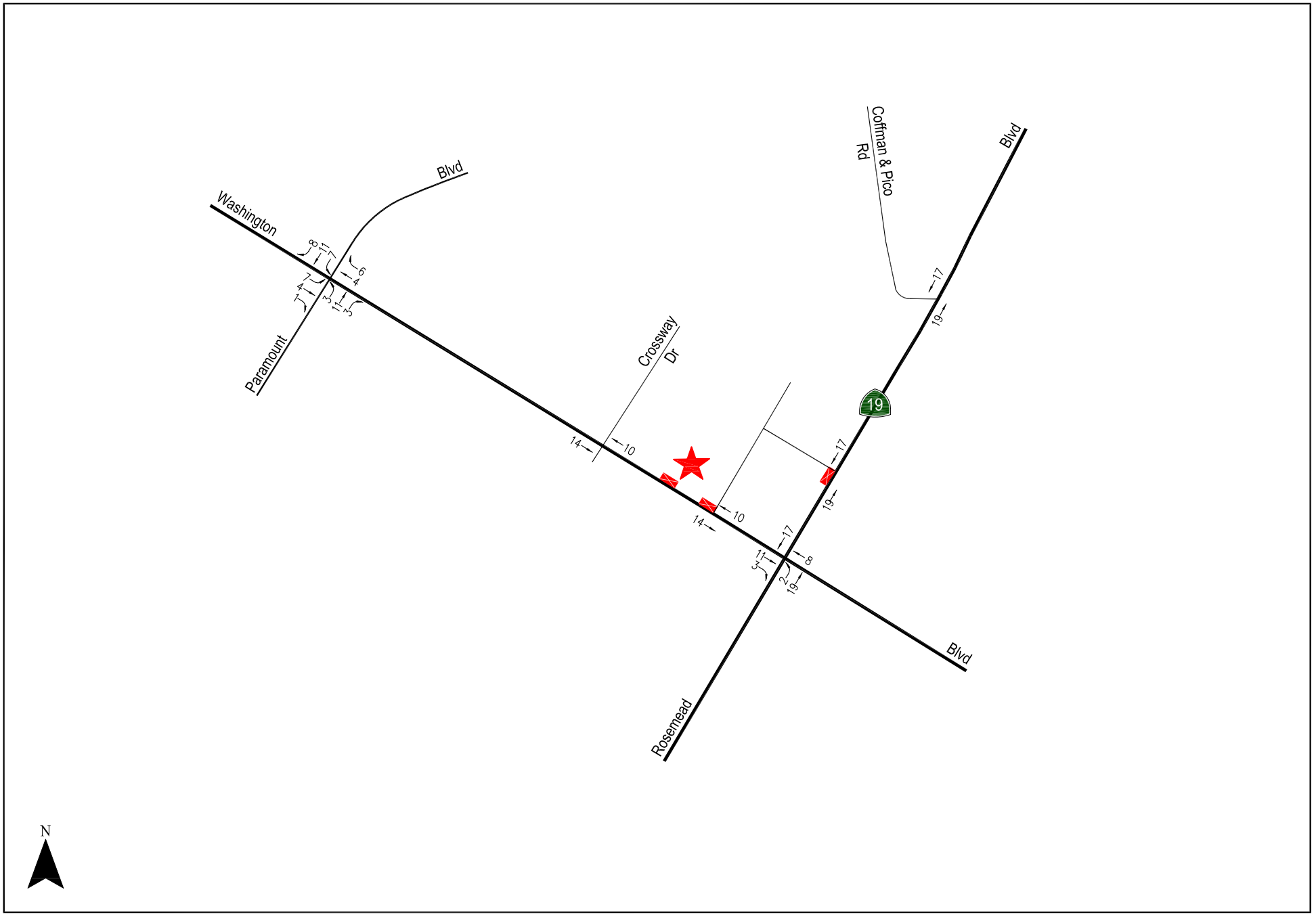
Figure 3-8
Cumulative Projects Traffic Volumes
Weekday AM Peak Hour
The Mercury Project



Project Site

Figure 3-9
Cumulative Projects Traffic Volumes
Weekday PM Peak Hour
The Mercury Project

4.0 CEQA TRANSPORTATION ANALYSIS

4.1 Vehicle Miles Traveled Analysis

The State of California Governor's Office of Planning and Research (OPR) issued proposed updates to the CEQA guidelines in November 2017 and an accompanying technical advisory guidance finalized in December 2018 (*OPR Technical Advisory*) that amends the Appendix G question for transportation impacts to delete reference to vehicle delay and level of service and instead refer to Section 15064.3, subdivision (b)(1) of the CEQA Guidelines asking if the project will result in a substantial increase in vehicle miles traveled (VMT). The California Natural Resources Agency certified and adopted the CEQA Guidelines in December of 2018, and as of July 1, 2020 the provisions of the new section are in effect statewide. Concurrently, OPR developed the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018), which provides non-binding recommendations on the implementation of VMT methodology which has significantly informed the way VMT analyses are conducted in the State. Accordingly, for the purpose of environmental review under CEQA, the City of Pico Rivera has established criteria for transportation impacts based on VMT for land use projects and plans which is generally consistent with the recommendations provided by OPR in the *Technical Advisory*.

4.1.1 *Screening Criteria*

Traditionally, public agencies have set certain thresholds to determine whether a project requires detailed transportation analysis or if it could be assumed to have less than significant environmental impacts without additional study. Consistent with the OPR's *Technical Advisory*, the City of Pico Rivera has determined the following screening criteria for certain land development projects that may be presumed to result in a less than significant VMT impact:

- Projects that result in a net increase of 110 or less daily vehicle trips
- Projects located in a High-Quality Transit Area (i.e., within half-mile distance of an existing rail transit station or located within half-mile of two or more existing bus routes with a frequency of service interval of 15 minutes or less during morning and evening peak hours)
- Project is locally serving retail (less than 50,000 square feet), including gas stations, banks, restaurants, shopping center.
- Local-serving community colleges, K-12 schools, local parks, daycare centers, etc.
- Residential projects with 100 percent affordable housing
- Community institutions project (public library, fire station, local government)
- Local-serving hotels (e.g., non-destination hotels)
- Local-serving assembly uses (places of worship, community organizations)

- Public parking garages and parking lots
- Assisted living or senior housing projects
- Affordable, supportive, or transitional housing projects

Proposed projects are not required to satisfy all of the screening criteria in order to screen out of further VMT analysis; satisfaction of one criterion is sufficient for screening purposes. Although the commercial (retail/restaurant) portion of the project screens out since it is less than 50,000 square feet and therefore locally-serving, a VMT analysis is still required for the proposed residential component of the project.

4.1.2 *Impact Criteria and Methodology*

A project that does not meet the screening criteria requires preparation of a detailed VMT analysis to determine whether the project would result in a significant transportation impact. The recommended threshold for residential projects presented in the *Technical Advisory* is as follows: "A proposed project exceeding a level of 15 percent below existing VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as regional VMT per capita or as city VMT per capita." Therefore, a proposed project's VMT per capita must be 85% or less of the existing VMT per capita.

The most readily available Southern California Association of Governments Regional Travel Demand Model (SCAG RTDM) at the time of study preparation has been utilized to determine the residential VMT per capita for the City of Pico Rivera. The baseline residential VMT per capita utilizing SCAG RTDM for the City of Pico Rivera is provided below:

- City of Pico Rivera residential VMT: 14.39 residential VMT per capita
- Residential significance threshold: 12.23 VMT per capita (i.e., 15% below the existing baseline residential VMT per capita)

As the commercial (retail/restaurant) portion of the project screens out, since it is less than 50,000 square feet and therefore locally-serving, the residential VMT per capita associated with the project is then compared to the City of Pico Rivera baseline residential VMT per capita in order to determine whether or not the project would be expected to result in a significant impact.

4.1.3 *Project VMT Analysis*

Project-specific regional travel demand modeling was conducted using the most readily available SCAG RTDM at the time of study preparation. The Project is located within Traffic Analysis Zone (TAZ) 21804400. The Project development totals were converted into socio-economic data, which describes both demographic and economic characteristics of the region by TAZ, and were then coded into the SCAG RTDM. The VMT analysis results for the project using the SACG RTDM are provided below:

- The estimated residential VMT per capita for the proposed project is estimated at 14.13 residential VMT per capita.

4.1.4 *CAPCOA Guidance and Project Design Features*

The California Air Pollution Control Officers Association's (CAPCOA*) Handbook for Analyzing Greenhouse Gas Emissions Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*[14] ("2021 Handbook") provides a comprehensive set of guidelines for assessing and quantifying reductions in greenhouse gas emissions. The emissions reduction measures are grouped by emission sector into nine categories, including transportation, energy, water, and other related areas. Transportation emissions can be reduced by improving the emissions profile of the vehicle fleet, or by reducing VMT. Reductions in VMT are achieved when any of the following occurs: 1) vehicle ownership declines, 2) vehicle trips are reduced, 3) vehicle trip lengths are reduced, or 4) any combination of the first three variables. The 2021 Handbook lists 30 quantified measures covering a total of six transportation subsectors, including land use, trip reduction programs, parking or road pricing/management, neighborhood design, transit, and clean vehicles and fuels. The majority of the measures quantified in the 2021 Handbook aim to reduce VMT, although two strategies are aimed at improving the emissions profile of the vehicle fleet and thus do not result in quantified VMT reductions. The VMT reducing strategies are broadly referred to as transportation demand management (TDM) strategies due to the focus on reducing the amount of automobile travel generated by a project.

The following TDM strategies have been determined to be applicable as project design features (PDF):

- T-1. Increase Residential Density (9.79%)

  This measure accounts for the VMT reduction achieved by a project that is designed with a higher density of dwelling units (DU) compared to the average residential density in the country. When reductions are being calculated from a baseline derived from a travel demand model, the residential density of the relevant TAZ is used for the comparison instead. Increased densities affect the distance people travel and provide greater options for the mode of travel they choose. Increasing residential density results in shorter and fewer trips by single-occupancy vehicles and thus a reduction in VMT.

  The project-generated VMT is derived from the SCAG travel demand model data. Therefore, the proposed project's potential VMT reduction is determined by comparing the residential density in TAZ 21804400 without and with the residential development. The residential density of the TAZ was determined based on parcel-level data obtained from the Los Angeles County Office of the Assessor, which reports the type of residential development (e.g., single family, duplex, multi-family), the number of units, and the acreage of each parcel.

[14] *Handbook for Analyzing Greenhouse Gas Emissions Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity Final Draft*, California Air Pollution Control Officers Association, December 2021, adopted December 15, 2021.

- T-4: Integrate Affordable and Below Market Rate Housing (1.43%)

  This measure requires inclusion of below market rate (BMR) housing. BMR housing provides greater opportunity for lower income families to live closer to job centers and achieve a jobs/housing match near transit. Increasing affordable housing creates the opportunity for a greater diversity of people to be closer to their desired destinations and the resources they may need to access. Close proximity to destinations allows for more opportunities to use active transportation and transit and to be less reliant on private vehicles.

- T-15: Limit Residential Parking Supply (3.84%)

  This measure will reduce the total parking supply available at a residential project or site. Limiting the amount of parking available creates scarcity and adds additional time and inconvenience to trips made by private auto, thus disincentivizing driving as a mode of travel. Reducing the convenience of driving results in a shift to other modes and decreased VMT and thus a reduction in GHG emissions. This strategy changes the on-site parking supply to provide less than the amount of vehicle parking required by Code. Based on published literature and other site-specific parking surveys of other mixed-use projects' actual peak parking demands, lower than Code-required parking supplies have been determined to be sufficient. Through the Specific Plan, lower parking requirements and types of supply within the project site are being incorporated to encourage smart growth development and alternative transportation choices by project residents and employees. The proposed residential on-site parking supply (i.e., a total of 390 spaces) is planned to be less than the amount of vehicle parking that would have otherwise been required for the residential portion of the project through strict application of the City's Code (i.e., a residential Code requirement of 542 spaces). Parking restrictions will be implemented and enforced at the existing Pico Marketplace to prohibit tenants from parking in the center overnight. The signage will also include verbiage that notes that any violations of the parking restriction are subject to towing.

The combination of the TDM measures discussed above results in a 14.49 percent (14.49%) reduction in VMT. The residential VMT per capita for the proposed project would subsequently be reduced to 12.08 residential VMT per capita, which is below the calculated City significance threshold of 12.23 residential VMT per capita. Therefore, the TDM measures which have been incorporated into the project design are expected to reduce the project's VMT to a less than significant level.

4.1.5 *Summary of Cumulative VMT Analysis*

As stated in the County's TIA Guidelines (refer to page 13), analyses should consider both short-term and long-term project effects on VMT. Short-term effects are evaluated in the detailed project-level VMT analysis summarized above. Long-term, or cumulative, effects are determined through a consistency check with the Southern California Association of Government's (SCAG's) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The RTP/SCS is the regional plan that demonstrates compliance with air quality conformity requirements and greenhouse gas

(GHG) reduction targets. As such, projects that are consistent with this plan in terms of development, location, density, and intensity, are part of the regional solution for meeting air pollution and GHG reduction goals. Projects that are deemed to be consistent would have a less than significant cumulative impact on VMT. Development in a location where the RTP/SCS does not specify any development may indicate a significant impact on transportation. However, as noted in the County's TIA Guidelines, for projects that do not demonstrate a project impact by applying an efficiency-based impact threshold (i.e., VMT per capita, VMT per employee, or VMT per service population) in the impact analysis, a less than significant project impact conclusion is sufficient in demonstrating there is no cumulative VMT impact. Projects that fall under the County's efficiency-based impact thresholds are already shown to align with the long-term VMT and GHG reduction goals of SCAG's RTP/SCS. The County's TIA Guidelines also note that projects which demonstrate VMT impacts through application of efficiency-based thresholds, and which are deemed inconsistent with the RTP/SCS, could contribute toward a significant cumulative impact on VMT. Since the expected significant residential VMT per capita project-related impact can be reduced to a less than significant level, it is also concluded that the project would also result in a less than significant cumulative impact on VMT.

4.2 Active Transportation and Public Transit Analysis

Pursuant to current CEQA Guidelines, a significant impact may also occur "if the project conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decreases the performance or safety of such facilities". The following section provides a brief review of the City's adopted policies, plans, and programs pertaining to active transportation and public transit analysis.

4.2.1 *Adopted Policies, Plans, or Programs*

The City's current Circulation Element of the General Plan sets forth goals and policies pertaining to complete streets, transit and public transportation, and bicycle routes and pedestrian facilities, safety, among other things. Relevant adopted policies include:

- Policy 5.1-1 Multimodal Options. Make transportation mode shifts possible by designing, operating, and maintaining streets to enable safe and convenient access and travel for all users—pedestrians, bicyclists, transit riders, and people of all ages and abilities, as well as freight and motor vehicle drivers—and to foster a sense of place in the public realm.

- Policy 5.1-2 Serve All Users. Provide a safe, efficient, and accessible transportation network that meets the needs of all users in the community, including seniors, youth, and the disabled, and contributes to the community's quality of life.

- Policy 5.1-3 Complete Streets. Accommodate other modes of travel such as bicycling and walking when implementing roadway improvements, where feasible.

- Policy 5.4-1 Continuous Network. Provide a safe and continuous bicycle and pedestrian network that links neighborhoods, parks, schools, libraries, commercial development, major

employers, and other frequently visited destinations as a means of improving health in the city.

- Policy 5.4-3 Bicycle Network. Design and implement a functional bicycle network by expanding bicycle routes, striping bicycle lanes where feasible, providing signage for bicycle routes, and providing adequate bicycle parking at City facilities.

- Policy 5.4-4 Bicycle Support Facilities. Require bicycle parking and support facilities at new industrial, commercial, institutional developments, and transit facilities, as appropriate.

- Policy 5.4-6 Pedestrian Network. Improve the pedestrian network by incorporating streetscape improvements such as shade trees, plantings, lighting, and street furniture.

- Policy 5.4-7 Sidewalk Deficiencies. Improve areas with sidewalk deficiencies to increase walking in Pico Rivera.

- Policy 5.4-8 ADA. Incorporate American with Disabilities Act (ADA) requirements to create an accessible pedestrian system that can serve all users.

4.2.2 *Qualitative Impact Conclusions*

The proposed project is not expected to have a significant impact on active transportation or public transit in the vicinity of the project site. As described in *Section 3.1.1* herein, the project site is planned to accommodate pedestrian and bicycle access via exclusive walkways which connect the proposed project to the public sidewalks. The walkways minimize the extent of pedestrian and bicycle interaction with vehicles at the site and provide a comfortable, convenient, and safe environment which in turn can encourage use of active transportation modes. The project site is further planned to provide bicycle parking facilities for use by residents, retail employees and the public. The proposed project is therefore found to be in alignment with the City's General Plan Circulation Element goals to promote pedestrian and bicycle safety and provide appropriate and supportive active transportation infrastructure.

The proposed project is located along Washington Boulevard, which is currently served by public bus transit service provided by Montebello Bus Line 50. As noted in *Section 3.1*, the project site is within easy walking distance from existing bus stops located along Washington Boulevard. The proposed project is not expected to affect access or safety at the existing bus stops, nor is it expected to hinder public transit service along Washington Boulevard. Further, the proposed project is not expected to preclude the City from constructing bicycle facilities or pursuing bicycle network improvements along local roadways within the study area. Development of the proposed project will not prevent the City from completing any proposed transit, bicycle, or pedestrian facilities.

Since the proposed project is not found to result in conflicts with adopted policies, plans, or programs, nor is it expected to negatively affect the performance or safety of existing or planned pedestrian, bicycle, or transit facilities, it is determined that the proposed project will have a less than significant impact on active transportation and public transit in the vicinity of the project site.

5.0 OPERATIONAL ANALYSIS

In order to estimate the proposed project's effect on intersection operations (non-CEQA), a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area. The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area. The proposed project's forecast trip generation, distribution, and assignment is presented in *Section 2.5* herein. With the forecasting process complete and project traffic assignments developed, the effect of the proposed project is isolated by comparing operational conditions at the selected study intersections and site driveways using existing and expected future traffic volumes without and with forecast project traffic.

5.1 Intersection Level of Service Analysis

5.1.1 *Analysis Methodology*

The study intersections were evaluated using the Intersection Capacity Utilization (ICU) method of analysis which determines Volume-to-Capacity (*v/c*) ratios on a critical lane basis. The ICU method is intended for signalized intersection analysis and determines the *v/c* ratios on a critical lane basis (i.e., based on the individual *v/c* ratios for key conflicting traffic movements). The ICU numerical value represents the percent signal (green) time, and thus capacity, required by existing and/or future traffic. It should be noted that the ICU methodology assumes uniform traffic distribution per intersection approach lane and optimal signal timing. The overall intersection *v/c* ratio is subsequently assigned a Level of Service (LOS) value to describe intersection operations. Level of Service varies from LOS A (free flow) to LOS F (jammed condition). A description of the ICU method and corresponding Level of Service is provided in ***Appendix F***.

As noted in the City of Pico Rivera's *Traffic Impact Analysis Guidelines*, the ICU calculations are based on a lane capacity of 1,600 vehicles per hour (vph) for left-turn, through, and right-turn lanes, and a dual turn-lane capacity of 2,880 vph. A clearance interval of 0.15 is also included in the ICU calculations.

5.1.2 *Analysis Criteria and Thresholds*

The relative effect of the added project traffic volumes expected to be generated by the proposed project during the weekday AM and PM peak hours was evaluated based on analysis of existing and future operating conditions at the study intersections, without and with the proposed project. The previously discussed capacity analysis procedures were utilized to evaluate the future *v/c* relationships and service level characteristics at each study intersection.

The potential effect of project-generated traffic at the study intersections was identified using the criteria set forth in the City of Pico Rivera's *Traffic Impact Analysis Guidelines*. According to the City's guidelines, a detrimental effect is determined based on the threshold criteria presented in ***Table 5-1***.

Table 5-1
CITY OF PICO RIVERA
INTERSECTION ANALYSIS THRESHOLD CRITERIA

Level of Service	Project Related Increase in *v/c*
C	equal to or greater than 0.04
D	equal to or greater than 0.02
E / F	equal to or greater than 0.01

The City's guidelines require improvement measures whenever traffic generated by the proposed development exceeds the criteria above.

5.1.3 *Transportation Analysis Scenarios*

Pursuant to the City's guidelines, LOS calculations have been prepared for the following scenarios:

[a] Existing conditions.

[b] Existing with project conditions.

[c] Condition [b] with implementation of improvement measures, where necessary.

[d] Condition [a] plus 1.0 percent (1.0%) annual ambient traffic growth through year 2024 and with completion and occupancy of the cumulative projects (i.e., future without project conditions).

[e] Condition [d] with completion and occupancy of the proposed project.

[f] Condition [e] with implementation of improvement measures, where necessary.

The traffic volumes for each new condition were added to the volumes in the prior condition to determine the change in capacity utilization at the study intersections.

The transportation analysis prepared for the study intersections using the ICU methodology is summarized in ***Table 5-2***. The ICU data worksheets for the analyzed intersections are contained in *Appendix F*.

Table 5-2
SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2021 EXISTING V/C or DELAY	[1] LOS [a]	[2] YEAR 2021 EXISTING W/ PROJECT V/C or Delay	[2] LOS [a]	[2] CHANGE V/C or DELAY [(2)-(1)]	[2] SIGNIF. IMPACT [b]	[4] YEAR 2024 FUTURE PRE-PROJECT V/C or DELAY	[4] LOS [a]	[5] YEAR 2024 FUTURE W/ PROJECT V/C or DELAY	[5] LOS [a]	[5] CHANGE V/C or DELAY [(5)-(4)]	[5] SIGNIF. IMPACT [b]
1	Paramount Boulevard/	AM	0.736	C	0.743	C	0.007	No	0.762	C	0.769	C	0.007	No
	Washington Boulevard	PM	0.987	E	0.994	E	0.007	No	1.021	F	1.028	F	0.007	No
2	Crossway Drive/	AM	0.471	A	0.477	A	0.006	No	0.483	A	0.489	A	0.006	No
	Washington Boulevard	PM	0.712	C	0.719	C	0.007	No	0.731	C	0.739	C	0.008	No
3	Rosemead Boulevard/	AM	0.495	A	0.497	A	0.002	No	0.507	A	0.509	A	0.002	No
	Coffman & Pico Road	PM	0.607	B	0.609	B	0.002	No	0.627	B	0.630	B	0.003	No
4	Rosemead Boulevard/	AM	0.649	B	0.657	B	0.008	No	0.669	B	0.677	B	0.008	No
	Washington Boulevard	PM	0.786	C	0.801	D	0.015	No	0.812	D	0.826	D	0.014	No

[a] Level of Service (LOS) is based on the reported ICU value for signalized intersections and the delay value for unsignalized intersections.

[b] According to the City of Pico Rivera Traffic Impact Study Guidelines, July 2020, an impact is considered significant if the project-related increase in the volume-to-capacity ratio (v/c) equals or exceeds the thresholds shown the following table:

Final v/c	LOS	Project Related Increase in v/c
> 0.710 - 0.800	C	equal to or greater than 0.04
> 0.810 - 0.900	D	equal to or greater than 0.02
> 0.910	E,F	equal to or greater than 0.01

5.1.4 *Existing Conditions*

As indicated in column [1] of *Table 5–2*, three of the four study intersections currently operate at LOS D or better during the weekday AM and PM peak hours. The following study intersection is expected to operate at LOS E during the peak hour shown below:

- Int. No. 1: Paramount Boulevard/Washington Boulevard: Weekday PM Peak Hour

The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in *Figures 3–5* and *3–6*, respectively.

5.1.5 *Existing With Project Conditions*

As shown in column [2] of *Table 5–2,* the project-related effects in the *v/c* ratios at the study intersections are not expected to exceed the City's threshold criteria. Therefore, based on the results of the operation evaluation, no project-specific intersection improvements are required or proposed at the study intersections. The existing with project traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figures 5–1*** and ***5–2***, respectively.

5.1.6 *Future Without Project Conditions*

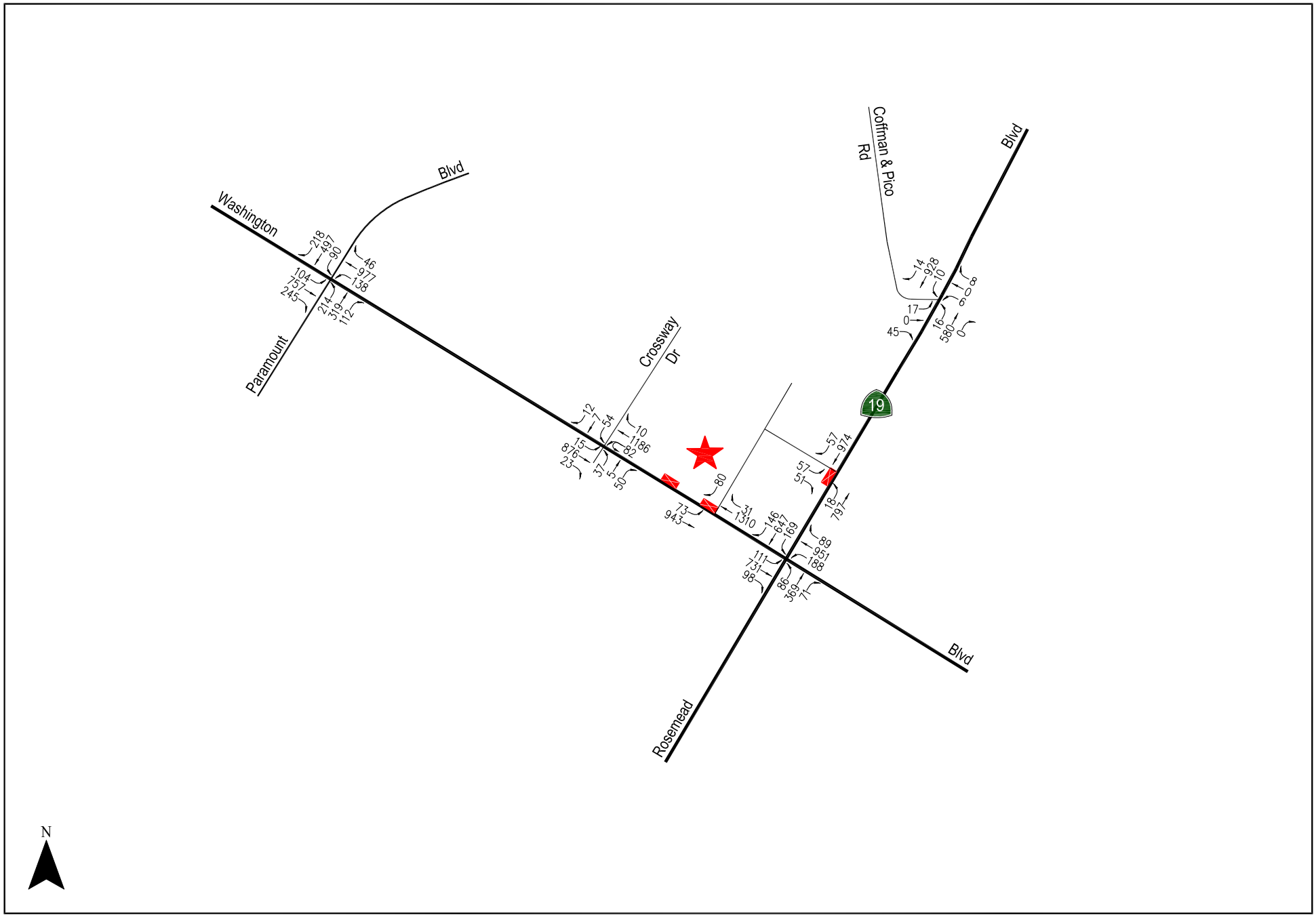
The future cumulative baseline conditions were forecast based on the addition of traffic generated by the completion and occupancy of the cumulative projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The *v/c* ratios at all of the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the cumulative projects listed in *Table 3–3*. As presented in column [3] of *Table 5–2*, three of the four study intersections are expected to operate at LOS D or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and cumulative projects traffic under the future without project conditions. The following study intersection is expected to operate at LOS F during the peak hour shown below with the addition of growth in ambient traffic and cumulative projects traffic under the future without project conditions:

- Int. No. 1: Paramount Boulevard/Washington Boulevard: Weekday PM Peak Hour

The future without project (existing, ambient growth and cumulative projects) traffic volumes at the study intersections during the weekday AM and PM peak hours are presented in ***Figures 5–3*** and ***5–4***, respectively.

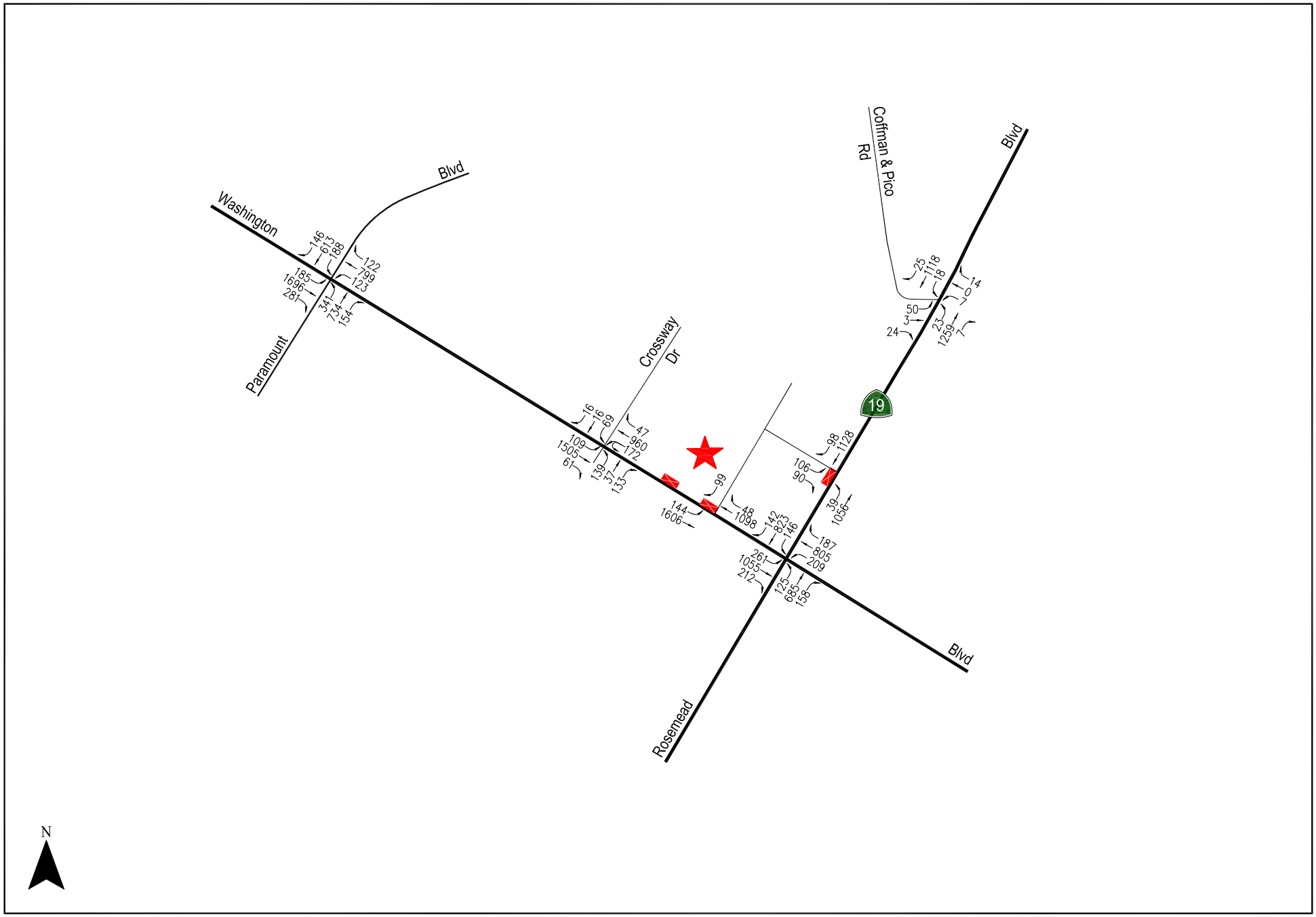
5.1.7 *Future With Project Conditions*

As shown in column [4] of *Table 5–2,* the project-related effects in the *v/c* ratios at the study intersections are not expected to exceed the City's threshold criteria. Therefore, based on the results of the operation evaluation, no project-specific intersection improvements are required or proposed. The future with project (existing, ambient growth, cumulative projects and project) traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figures 5–5*** and ***5–6***, respectively.



Project Site

Figure 5-1
Existing With Project Traffic Volumes
Weekday AM Peak Hour
The Mercury Project



LINSCOTT LAW & GREENSPAN engineers

Figure 5-2
Existing With Project Traffic Volumes
Weekday PM Peak Hour
The Mercury Project

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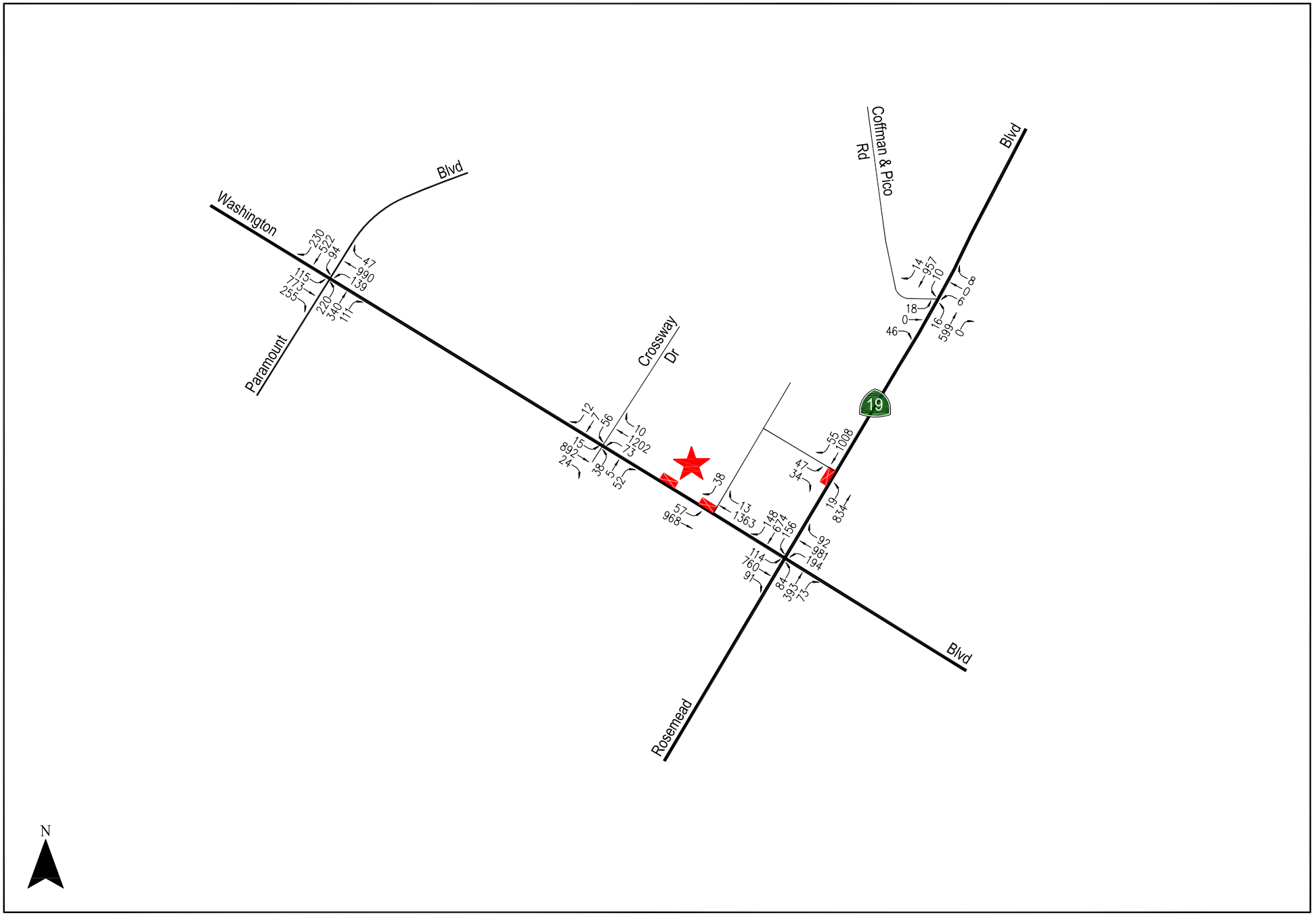

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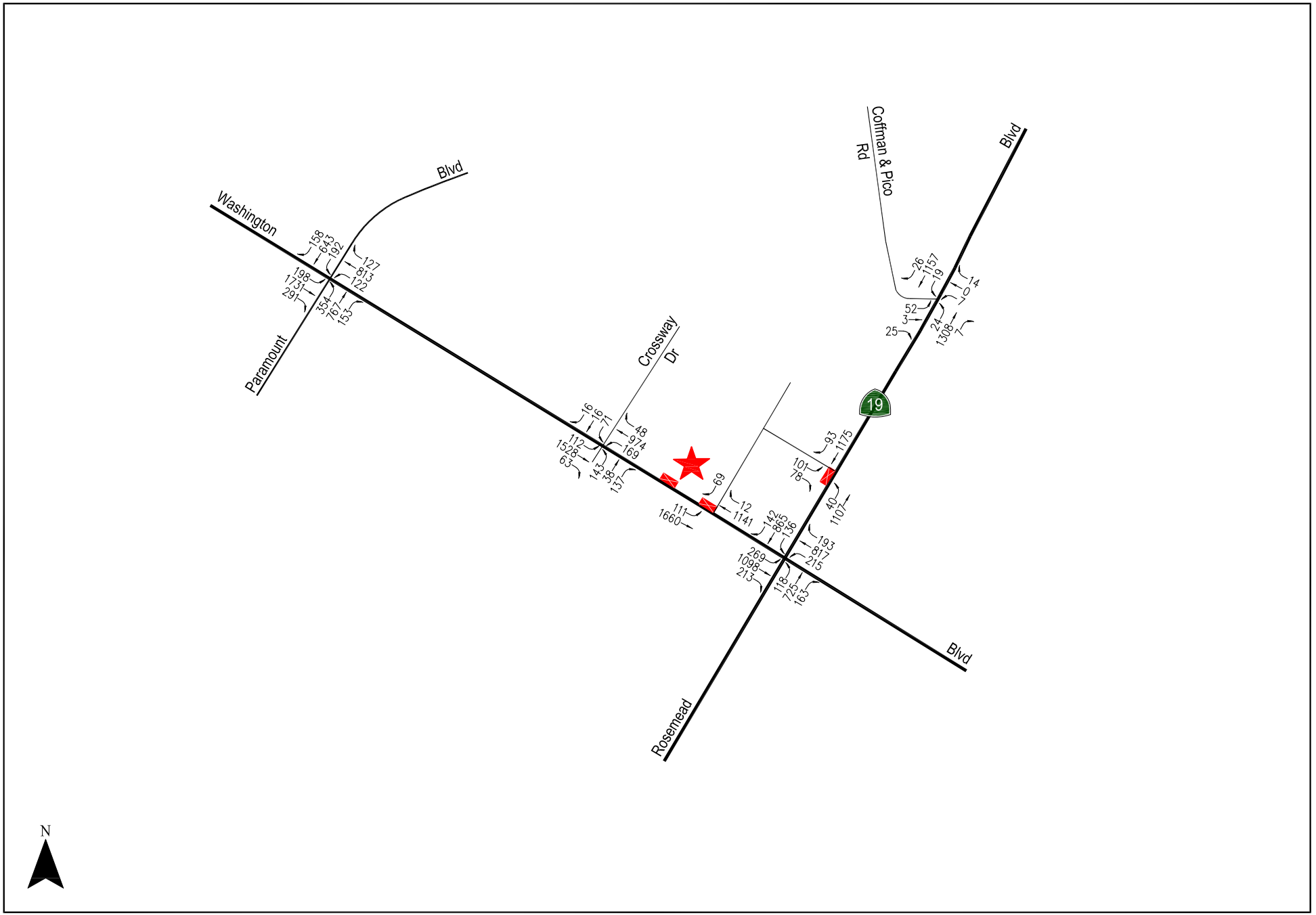
Project Site

Figure 5-3

Future Without Project Traffic Volumes

Weekday AM Peak Hour

The Mercury Project



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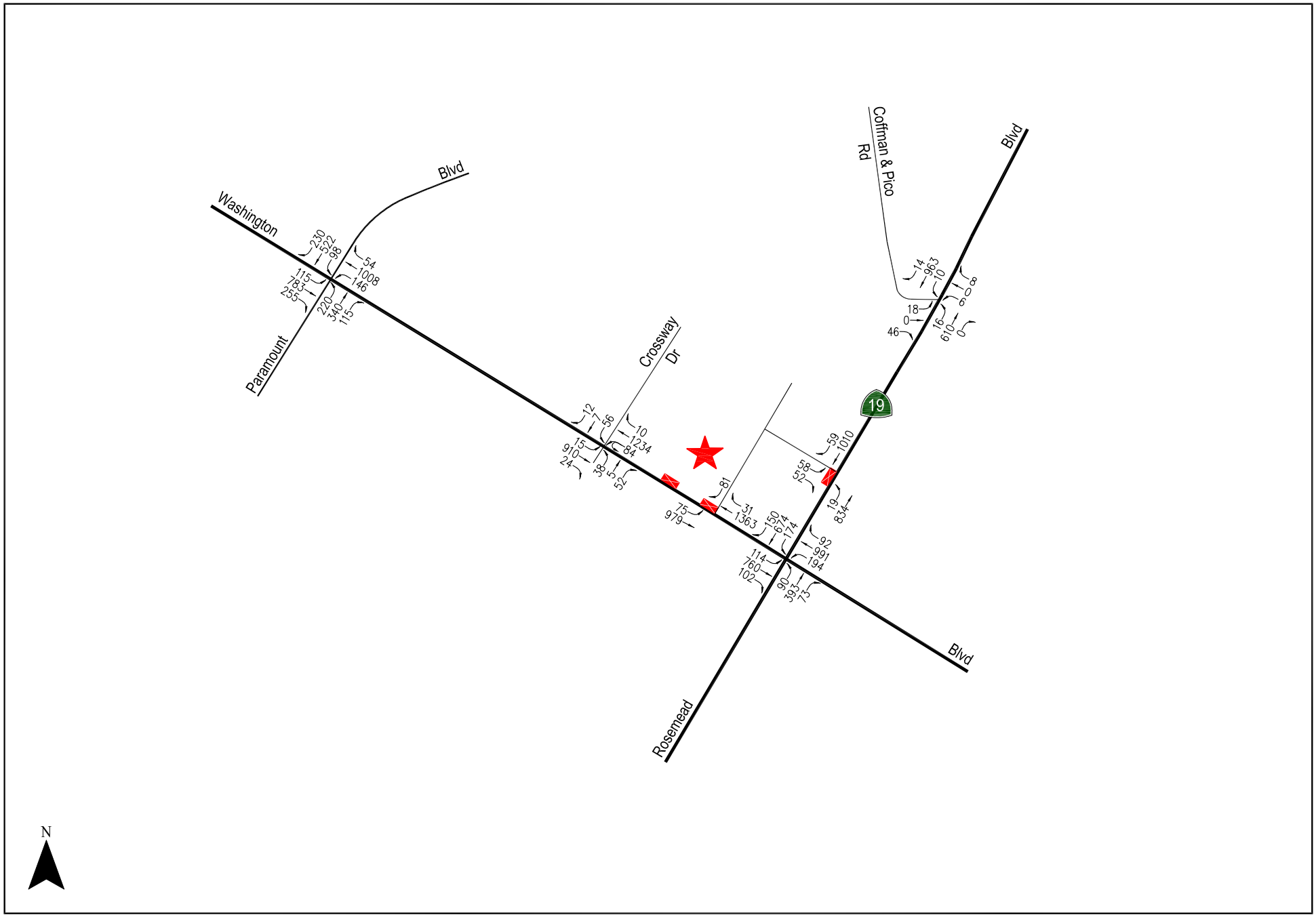
Project Site

Figure 5-4

Future Without Project Traffic Volumes

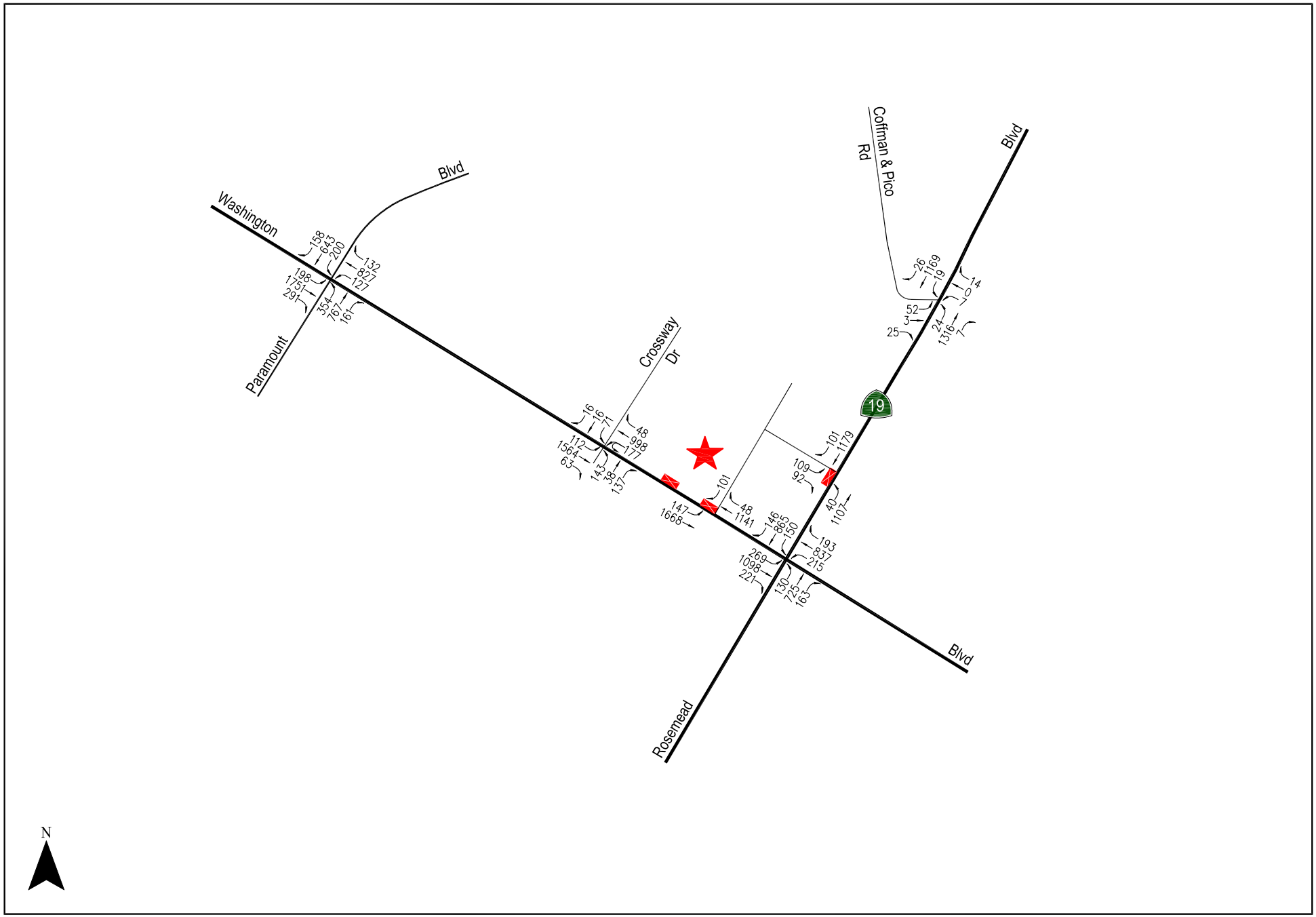
Weekday PM Peak Hour

The Mercury Project



Project Site

Figure 5-5
Future With Project Traffic Volumes
Weekday AM Peak Hour
The Mercury Project



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LINSCOTT LAW & GREENSPAN engineers

Project Site

Figure 5-6

Future With Project Traffic Volumes

Weekday PM Peak Hour

The Mercury Project

5.2 Access and Circulation Review

The access and circulation have been evaluated for the project. The analysis of site driveways was prepared based on the *Highway Capacity Manual*[15] (HCM) operational analysis methodology. The driveway analyses were prepared utilizing the *Synchro 11* software package, which implements the Highway Capacity Manual operational methods. A *Synchro* network was created based on existing conditions field reviews at the site driveways. In addition, specifics such as traffic volume data, lane configurations, available vehicle storage lengths, crosswalk locations, posted speed limits, traffic signal timing and phasing for signalized locations, etc., were coded to complete the roadway network. Traffic volume data were obtained from manual counts conducted at the site driveways during the weekday morning and afternoon commute periods and are contained in *Appendix D*.

The operational analysis of vehicle queuing at the site driveways was prepared for the following conditions:

[a] Existing conditions.

[b] Condition [a] plus 1.0 percent (1.0%) annual ambient traffic growth through year 2024 (i.e., project build-out) and with completion and occupancy of the related projects (i.e., future without project conditions).

[c] Condition [b] with completion and occupancy of the proposed project (i.e., future with project conditions).

The HCM methodology for signalized and unsignalized intersections was utilized to calculate vehicle queuing. The operational analysis reports the 95th percentile queues (in feet) for all approaches for the signalized intersections and the minor street approaches for the unsignalized intersections. The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes. The HCM 6th Edition methodology worksheets report queues in number of vehicles. As such, an average vehicle length of 25 feet, which includes the length of the vehicle and spacing between vehicles, was assumed for analysis purposes. The reported queues therefore represent the calculated maximum back of queue in feet. The summary of the operational analysis of the site driveways is provided in ***Table 5-3.*** As presented in *Table 5-3*, it is concluded the proposed project weekday AM and PM peak hour traffic volumes will not cause or substantially extend vehicle queuing at the site driveways. The HCM methodology worksheets for the site driveways are contained in ***Appendix G***.

[15] *Highway Capacity Manual 6th Edition*, Transportation Research Board of the National Academies of Sciences-Engineering-Medicine, 2016.

Table 5-3
SUMMARY OF VEHICLE QUEUING [1]
WEEKDAY AM AND PM PEAK HOURS

NO.	DRIVEWAY	TRAFFIC CONTROL	MOVEMENT	PEAK HOUR	95th PERCENTILE QUEUES (FEET PER LANE) [2]			
					EXISTING	YEAR 2024 FUTURE W/O PROJECT	YEAR 2024 FUTURE W/ PROJECT	CHANGE IN QUEUE [3]
1	Project Driveway/ Washington Boulevard	Unsignalized	EB Left	AM	25	28	40	15
				PM	43	48	80	37
			WB Right	AM	0	0	0	0
				PM	0	0	0	0
2	Rosemead Boulevard/ The Marketplace	Signalized	NB Left	AM	3	3	3	0
				PM	8	8	8	0
			SB Right	AM	113	120	145	32
				PM	238	255	270	32

[1] Pursuant to LA County Public Works' *Transportation Impact Analysis Guidelines* , July 2020, the Highway Capacity Manual (HCM) methodology for intersections was utilized to calculate vehicle queuing.

[2] The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes. The HCM 6th Edition methodology worksheets report queues in number of vehicles per lane, however an average vehicle length of 25 feet was assumed for analysis purposes. The reported queues therefore represent the calculated maximum back of queue in feet per lane.

[3] Represents the change in calculated maximum back of queue (in feet per lane) due to the addition of project-related traffic.

6.0 PROJECT CONSTRUCTION PHASE ANALYSIS

The project construction evaluation addresses activity associated with project construction and major in-street construction of infrastructure projects. The analysis addresses the effect of a project's construction activity on existing pedestrian, bicycle, transit, or vehicular circulation in the vicinity. Factors which are to be considered include the location of the project site, functional classification of the adjacent streets, availability of alternate routes or additional capacity, temporary loss of bicycle parking, temporary loss of bus stops or rerouting of transit lines, duration of temporary loss of access, affected land uses, and magnitude of the temporary construction activities.

While detailed construction plans have not yet been developed, the project applicant has provided preliminary information regarding the overall construction activities in order to identify the potential construction traffic generation. The following general construction details are provided based on information provided by the project applicant team:

Construction of the project is expected to occur within 24 months, beginning in 2022 with an estimated completion and project occupancy by 2024. Construction activities would be permitted between the hours of 7:00 AM and 4:00 PM, Monday through Friday. No construction would occur on Saturday or Sunday. Earthwork activities necessary for construction would require an estimated 27,400 cubic yards of export. All earthwork volumes have been adjusted to account for swelling and shrinking. Exported soil materials likely would be disposed of at the Azusa Landfill.

Based on the modeling data provided by the project team, the construction vehicles that are planned to be utilized for import and export activities will have a capacity of 14 cubic yards per truck. A total of 3,196 truck trips would be required for complete export of material associated with the project. During peak grading activities (20-32 workdays), up to 143 truck trips per day and 30 workers can be expected. Following the completion of the site grading, building construction would occur during the following 20 months, requiring 60 workers per day. Asphalt paving and architectural coating would occur during the final two months of construction, requiring 12-15 workers per day.

It is assumed that the equipment staging area during construction would occur on/within the project site. Construction worker parking also could occur on-site. Based on the above construction hours it is assumed that workers would generally arrive at the site by 7:00 AM and depart the site by 4:30 PM (i.e., after a nine-hour workday including a lunch break), except when overtime is necessary to maintain the schedule. At this time, it is not known if temporary travel lane closures will be necessary during the course of project construction. However, any such travel lane closures would be expected to occur outside the weekday AM and PM commute hours so as to maintain roadway capacity when the street system is typically most heavily constrained. In addition, access to the existing Pico Rivera Marketplace will not be impeded as the other existing access points along Washington Boulevard and Rosemead Boulevard for the center will remain open during construction.

Based on a review of the construction phasing, it is determined that the overall highest construction peak hour traffic generation is expected to occur during grading activities. Other phases such as demolition, building construction, asphalt paving and architectural coating are expected to be less intensive in terms of overall construction traffic generation during the weekday AM and PM peak hours. In addition, with implementation of a Construction Staging and Traffic Management Plan (CSTMP), as discussed further below, it is anticipated that most haul truck activity to and from the project site could occur outside of the morning and afternoon peak hours. Accordingly, construction traffic associated with the other phases are not expected to result in any construction traffic impacts given implementation of the CSTMP.

6.1 Screening Criteria

In order to determine the appropriateness and applicability of construction phase analysis for land use development projects, the County's Guidelines provide the following questions for consideration, with discussion of the proposed project's expected construction activities provided below:

- For projects that require construction activities to take place within the right-of-way of a highway or arterial, would it be necessary to close any temporary lanes, alleys, or streets for more than one day (including day and evening hours, and overnight closures if on a residential street)?
    - No. The project is not expected to require construction activities for more than one day within the right-of-way of Washington Boulevard, which is designated as a major arterial in the City's General Plan Circulation Element.
- For projects that require construction activities to take place within the right-of-way of a Local Street, would it be necessary to temporarily close any lanes, alleys, or streets for more than seven days (including day and evening hours, and including overnight closures if on a residential street)?
    - No. The project is not expected to require construction activities within the right-of-way of any Local Street as designated in the City's General Plan Circulation Element.
- Would in-street construction activities result in the loss of any vehicle, bicycle, or pedestrian access, including loss of existing bicycle parking to an existing land use for more than one day, including day and evening hours and overnight closures if access is lost to residential units?
    - No. The project is not expected to result in the loss of vehicle, bicycle, or pedestrian access to any adjacent existing land uses. The majority of construction activity is expected to take place internal to the project site.
- Would in-street construction activities result in the loss of any ADA access to an existing transit station, stop, or facility (e.g., layover zone)?
    - No. The project is not expected to result in the loss of ADA access to an existing transit station, stop, or facility.

- Would in-street construction activities restrict access to any bus stops for more than one day, or necessitate any rerouting of a bus route?
    - No. The project is not expected to restrict access to any bus stops for more than one day, or necessitate any rerouting of a bus route.
- Would construction of a project interfere with pedestrian, bicycle, transit, or vehicle circulation and accessibility to adjoining areas?
    - No. The project is not expected to interfere with pedestrian, bicycle, transit, or vehicle circulation and accessibility to adjoining areas.

As the answer is no to all of the screening criteria above, further analysis of project construction is not required. While it is concluded that the proposed project would not result in the closure of travel lanes, alleys, or streets for more than one day, would not relocate existing bus transit stops or routes, and would not interfere with pedestrian, bicycle, transit, or vehicle circulation and accessibility during construction, it is recommended that a construction work site traffic control plan be submitted to the City for review and approval prior to the start of construction activity. The construction work site traffic control plan is required to identify the location of any temporary roadway lane and/or sidewalk closures needed during project construction, including the construction of the new (replacement) project driveway and handicap accessible ramp, and installation of new curb and gutter near the driveway that is planned for closure. As the new driveway will be designed to meet City standards, no hazards with respect to driveway design and/or safety are expected.

Section 6.0 above notes that the project applicant would be required to prepare a detailed CSTMP, which would include any applicable street/lane/sidewalk closure information, a detour plan, haul route(s), and a staging plan. The plan would be based on the nature and timing of the Project's specific construction activities and would consider other projects under construction in the immediate vicinity of the Project Site, if any. The CSTMP also would include features such as notification to adjacent project owners and occupants of upcoming construction activities, advance notification regarding any temporary transit stop relocations, and limitation of any potential roadway lane closure(s) to off-peak travel periods, to the extent feasible.

Specifically, the CSTMP will include, but not be limited to, the following measures:

- Advance notification of adjacent property owners and occupants of upcoming construction activities, including durations and daily hours of operation.

- Temporary traffic control during all construction activities adjacent to public rights-of-way to improve traffic flow on public roadways (e.g., flag person/s).

- Scheduling of construction activities to reduce the effect on traffic flow on surrounding arterial streets.

- Potential sequencing of construction activity for the Project to reduce the amount of construction-related traffic on arterial streets.

- Containment of construction activity within the Project Site boundaries, per the Worksite Traffic Control Plan.

- Prohibition on construction-related vehicles/equipment parking on surrounding public streets.

- Coordination with transit service provider/s to address any potential conflicts with existing transit service.

- Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate.

- Schedule delivery of construction materials and hauling/transport of oversize loads to non-peak travel periods, to the extent possible. No hauling or transport shall be allowed during nighttime hours, Sundays, or federal holidays unless required by the City and/or Caltrans.

- Installation of appropriate traffic signs around the project site to ensure pedestrian, bicycle, and vehicle safety, as may be necessary.

- Installation of truck crossing signs within 300 feet of the exit of the Project Site in each direction.

- Securing of loads by trimming and watering or covering to prevent the spilling or blowing of the earth material.

- Cleaning of trucks and loads at the export site to prevent blowing dirt and spilling of loose earth.

- Identification of a construction manager and provision of a telephone number for any inquiries or complaints from residents regarding construction activities. The telephone number shall be posted at the site readily visible to any interested party during site preparation, grading, and construction.

- Obtain a Caltrans transportation permit for use of oversized transport vehicles on Caltrans facilities, if needed.

7.0 SUMMARY AND CONCLUSIONS

- ***Project Description*** – The project site is located at 8825 Washington Boulevard (APN: 6370-027-018) situated along the north side of Washington Boulevard, west of Rosemead Boulevard in the City of Pico Rivera. The existing 2.85-acre project site is currently vacant, formerly occupied by a commercial building that operated as a nightclub until March 2015 and was subsequently demolished in 2020. The project applicant, Mercury Bowl, LLC: Green Rivera, LLC, is seeking approval from the City of Pico Rivera for implementation of the Washington and Rosemead Mixed-Use Specific Plan that reflects the proposed development of a mixed-use building with subterranean parking, ground-floor retail, and residential uses. If the Specific Plan is approved by the City, it would allow for the development of 255 residential dwelling units including 13 affordable units, 5,730 square feet of commercial/retail space; 1,750 square feet of ground-floor lobby/leasing space; and 13,500 square feet of recreational amenities for future residential tenants. The proposed residential unit mix consists of 35 studio units, 159 one-bedroom units, 57 two-bedroom units, and 4 three-bedroom units. Amenities for the proposed mixed-use development include a swimming pool, jacuzzi, poolside cabanas, clubhouse, gym, barbecue area, and garden/green areas. Construction and occupancy of the proposed project is expected to occur by the end of year 2024.

- ***Project Site Access*** – Vehicular access to the project site is planned to be accommodated by a total of two (2) driveways: one (1) existing driveway on Washington Boulevard and one (1) existing driveway on Rosemead Boulevard. The curb cut for the existing westerly site driveway on Washington Boulevard will remain and will be used solely for emergency/fire access but not for vehicular access. Pedestrian and bicycle access to the project site is planned to be accommodated via exclusive walkways which would connect to the public right-of-way.

- ***Project Trip Generation*** – The proposed project is expected to generate 111 vehicle trips (40 inbound trips and 71 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 134 net new vehicle trips (80 inbound trips and 54 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 1,594 daily trip ends during a typical weekday (797 inbound trips and 797 outbound trips).

- ***Transportation Demand Management Measures*** – Transportation demand management (TDM) measures are proposed to be incorporated as project design features.

- ***VMT Analysis****:* It is concluded that development of the project is not expected to result in a significant residential (household) VMT impact based on the City's significance thresholds contained herein. Further, based on the project-related VMT analysis and the conclusions reported in Section 4.1.5 (i.e., which conclude that the proposed project aligns with the long-term VMT and GHG reduction goals of SCAG's RTP/SCS), no cumulative VMT impacts are anticipated.

- ***CEQA Active Transportation and Public Transit Assessment*** –The proposed project is found to be in alignment with the City's General Plan Circulation Element goals to promote pedestrian and bicycle safety and provide appropriate and supportive active transportation infrastructure. Further, development of the proposed project will not prevent the City from completing any proposed transit, bicycle, or pedestrian facilities. It is therefore determined that the proposed project will have a less than significant impact on active transportation and public transit in the vicinity of the project site.

- ***Intersection Level of Service Analysis*** – – A total of four (4) study intersections were selected for analysis in consultation with City staff in order to determine potential effects related to the proposed project. The study locations were evaluated using the Intersection Capacity Utilization (ICU) methodology. It is concluded that the project-related effects in the *v/c* ratios at the study intersections are not expected to exceed the City's threshold criteria under either the Existing With Project or Future With Project conditions. Therefore, based on the results of the operation evaluation, no project-specific intersection improvements are required or proposed.

- ***Project Access and Circulation Review*** – A review of the project site driveways was conducted. It is concluded that the proposed project weekday AM and PM peak hour traffic volumes will not cause or substantially extend vehicle queuing at the site driveways.

- ***Project Construction Phase Analysis*** – While it is concluded the proposed project would not result in the closure of through travel lanes, alleys, or streets, would not relocate existing bus transit stops or routes, and would not interfere with pedestrian, bicycle, transit, or vehicle circulation and accessibility during construction, it is recommended that a construction work site traffic control plan be submitted to the City for review and approval prior to the start of construction activity should any travel lane closure/s be proposed. The project applicant would also prepare a detailed Construction Staging and Traffic Management Plan, which includes any applicable street/lane/sidewalk closure information, a detour plan, haul route(s), and a staging plan. No hazards or other safety concerns are expected at the project driveways and the new Washington Boulevard driveway will be designed in accordance with City standards and be in very close proximity to the existing driveway which is planned for closure.

APPENDIX A

SCOPE OF STUDY FORM

DRAFT

Scope of Study Form-Part A

To be completed by the preparer of a traffic study and approved by the City's Public Works Department prior to start of a traffic study

Project Name:	Washington and Rosemead Mixed-Use		
Project Address:	8825 Washington Boulevard		
Project Description:	255 Apartments (13 affordable), 5,500 SF retail/restaurant, 27,000 SF Self-Storage		
Developer's Name:	Mercury Bowl, LLC, Green Rivera, LLC		
Address:	1801 Century Park East, Suite 2100, Los Angeles, CA 90067		
Telephone No.	586-419-0927	Fax Number:	
Email Address:	jerome@optimuspropertiesllc.com		

Trip Generation Rates From:	ITE		Ed.	Other:	ITE 10th Edition, LADOT TAG

Trip Generation For:	Refer to attached Table 2-1		
Land Use (1)		Land Use (2)	
ITE Land Use Code		ITE Land Use Code	
Daily Trips		Daily Trips	
AM Peak Hour Trips		AM Peak Hour Trips	
Inbound		Inbound	
Outbound		Outbound	
Total		Total	
PM Peak Hour Trips		PM Peak Hour Trips	
Inbound		Inbound	
Outbound		Outbound	
Total		Total	

(Use Additional Sheet(s), if necessary)

Pass-by Trips (%), if applicable: %

Trip Credits, if applicable for any existing use: None

Land Use (1)		Land Use (2)	
ITE Land Use Code		ITE Land Use Code	
Daily Trips		Daily Trips	
AM Peak Hour Trips		AM Peak Hour Trips	
Inbound		Inbound	
Outbound		Outbound	
Total		Total	
PM Peak Hour Trips:		PM Peak Hour Trips:	
Inbound		Inbound	
Outbound		Outbound	
Total		Total	

Project Opening Year:	2024	**Build-out Year**:	2024
Study Intersections: 1	Paramount Blvd/Washington Blvd	6	
2	Crossway Drive/Washington Blvd	7	
3	Rosemead Blvd/Coffman-Pico	8	
4	Rosemead Blvd/Washington Blvd	9	
5		10	

(Use Additional Sheet(s), if necessary)

Scope of Study form(continued)					
Study Segments:	Washington Bl, btwn Rosemead Bl & Paramount	6			
2	Rosemead Bl, btwn Washington Bl & Whittier Bl	7			
3		8			
4		9			
5		10			
(Use Additional Sheet(s), if necessary)					

Ambient Growth Rate:	0.24	%	Source: LA County CMP, RSA 22									
Trip Distribution:	East	25	%	West	25	%	North	25	%	South	25	%
Include exhibit showing trip distribution/ assignment and a map showing the project's trips at the study intersections and project driveways												
Comments	Trip distribution/assignment will be provided after study intersections have been confirmed and intersection manual traffic counts are conducted and reviewed											
	(Use Additional Sheet(s), if necessary)											
Preparer's Name:	Francesca Bravo, Linscott, Law & Greenspan, Engineers											
Address:	600 South Lake Avenue, Suite 500, Pasadena, CA 91106											
Telephone No.	(626) 796-2322 ext. 223			Fax Number:			(626) 792-0941					
Email Address:	bravo@llgengineers.com											
Signature:				Date:			March 1, 2021					

Part B- VMT Analysis

1. Project Screening

   The project does not meet screening criteria.

2. Project Generated VMT Methodology

   To Be Determined

3. VMT Methodology Benchmarks

   To Be Determined

Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (To be filled out by City Staff)

Scoping Agreement Submitted on _March 1, 2021_____

Revised on _____, _____, _____,_____

Approved Scoping Agreement:

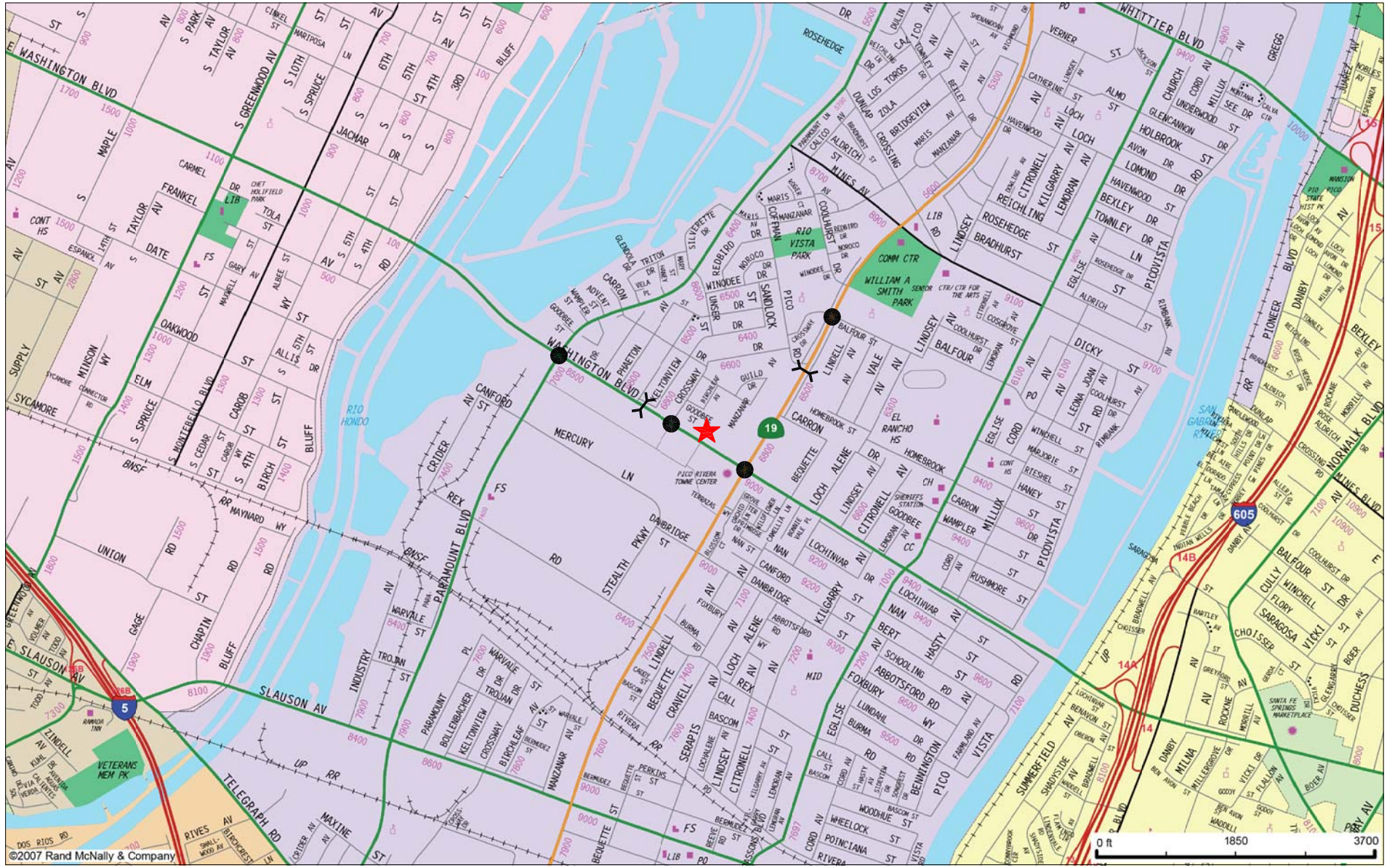
Approved By (Department of Public Works):

Signature: _____ Date: _____

Name: _____ Title: _____

APPROVED

3/24/2021



MAP SOURCE: RAND MCNALLY & COMPANY

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LINSCOTT LAW & GREENSPAN engineers

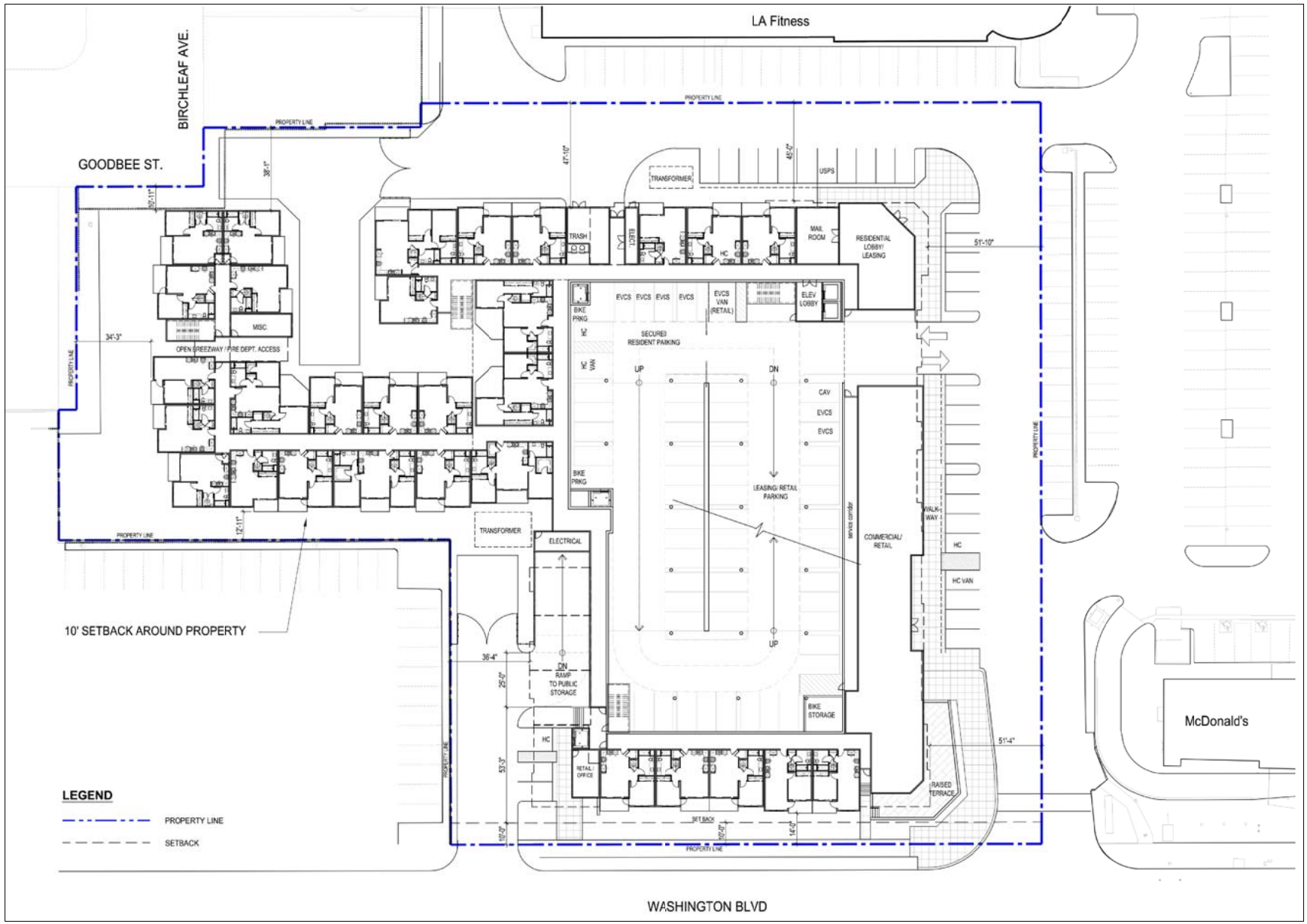
★ Project Site

● Study Intersection

Street Segment Location

Figure 1-1
Vicinity Map

Washington-Rosemead Mixed-Use Project



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LINSCOTT LAW & GREENSPAN engineers

Figure 2-2
Site Plan

Table 2-1
PROJECT TRIP GENERATION [1]

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	AM PEAK HOUR VOLUMES [2] OUT	AM PEAK HOUR VOLUMES [2] TOTAL	PM PEAK HOUR VOLUMES [2] IN	PM PEAK HOUR VOLUMES [2] OUT	PM PEAK HOUR VOLUMES [2] TOTAL
Apartment [3]	242 DU	1,316	23	64	87	65	41	106
- Less 15% Internal Capture/Captive Market [4]		(197)	(3)	(10)	(13)	(10)	(6)	(16)
Affordable Housing [5]	13 DU	54	3	4	7	3	2	5
- Less 15% Internal Capture/Captive Market [4]		(8)	0	(1)	(1)	0	0	0
Retail [6]	2,750 GLSF	104	2	1	3	5	5	10
Restaurant [7]	2,750 GSF	308	15	12	27	17	10	27
Self-Storage [8]	27,000 GSF	41	2	1	3	2	3	5
TOTAL		**1,618**	**42**	**71**	**113**	**82**	**55**	**137**

[1] Source: ITE "Trip Generation Manual", 10th Edition, 2017 and Transportation Assessment Guidelines (TAG), City of Los Angeles Department of Transportation (LADOT), July 2020.

[2] Trips are one-way traffic movements, entering or leaving.

[3] ITE Land Use Code 221 (Multi-Family [Mid-Rise]) trip generation average rates.
- Daily Trip Rate: 5.44 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.36 trips/dwelling units; 26% inbound/74% outbound
- PM Peak Hour Trip Rate: 0.44 trips/dwelling units; 61% inbound/39% outbound

[4] Source: ITE "Trip Generation Handbook", 3rd Edition, 2017 and the National Cooperative Highway Research Program (NCHRP) Report 684 - "Enhanced Internal Trip Capture Estimation for Mixed-Use Developments", 2011. Internal capture and Captive markets trips are trips made to and from other components of the project and other uses in the immediate vicinity of the site. A 15% internal capture/captive market reduction factor has been applied to reflect the internal trip making between the project land uses and other uses in the area.

[5] LADOT trip generation average rates for Family Affordable Housing.
- Daily Trip Rate: 4.16 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.52 trips/dwelling unit; 38% inbound/62% outbound
- PM Peak Hour Trip Rate: 0.38 trips/dwelling unit; 55% inbound/45% outbound

[6] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
- Daily Trip Rate: 37.75 trips/1,000 SF; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.94 trips/1,000 SF; 62% inbound/38% outbound
- PM Peak Hour Trip Rate: 3.81 trips/1,000 SF; 48% inbound/52% outbound

[7] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.
- Daily Trip Rate: 112.18 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 9.94 trips/1,000 SF of floor area; 55% inbound/45% outbound
- PM Peak Hour Trip Rate: 9.77 trips/1,000 SF of floor area; 62% inbound/38% outbound

[8] ITE Land Use Code 151 (Mini-Warehouse) trip generation average rates.
- Daily Trip Rate: 1.51 trips/1,000 SF; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.10 trips/1,000 SF; 60% inbound/40% outbound
- PM Peak Hour Trip Rate: 0.17 trips/1,000 SF; 47% inbound/53% outbound

APPENDIX B

EMPIRICAL PARKING DEMAND DATA

Appendix Table B-1
SUMMARY OF PARKING DEMAND RATIOS AT COMPARABLE SITES [1]

SITES	TOTAL NO. OF DWELLING UNITS [2]	UNIT OCCUPANCY LEVELS [2]	EXISTING ON-SITE [3]		EXISTING OBSERVED [4]		AT FULL OCCUPANCY [5]	
			ON-SITE PARKING SUPPLY	PARKING SUPPLY RATIO (SPACES/UNIT)	PEAK PARKING DEMAND	PEAK PARKING DEMAND RATIO (SPACES/UNIT)	PEAK PARKING DEMAND	PEAK PARKING DEMAND RATIO (SPACES/UNIT)
1. Paragon at Old Town	163	95.7%	404	2.48	231	1.42	241	1.48
2. Trio Apartments	304	94.0%	480	1.58	348	1.14	370	1.22
3. Main Street Village	481	93.8%	1,020	2.12	639	1.33	681	1.42
TOTALS (1 + 2 + 3)	**948**	**94.5%**	**1,904**	**2.01**	**1,218**	**1.28**	**1,292**	**1.36**

[1] The parking demand ratios were developed based on the number of dwelling units and parking spaces provided at each observation site, as well as the results of the parking accumulation surveys conducted for each site (on-site and on-street as applicable) in September 2012 (refer to Appendix A for a summary of the parking surveys for each site).

[2] The site characteristics, including number of residential units and the site occupancy levels at the time of the parking accumulation surveys were provided by Lincoln Property Company representatives.

[3] The parking supply was inventoried by LLG Engineers in September 2012. The parking supply includes all marked parking spaces provided on-site (i.e., regular, handicap, visitor, etc.) for residents, guests, vendors. The existing supply parking ratios are based on the number of spaces provided on-site divided by the total number of dwelling units.

[4] The existing peak parking demand was observed to occur at 11:00 PM for the Paragon at Old Town and at 12:00 AM midnight for the Trio Apartments and Main Street Village. The existing peak parking demand for the Paragon at Old Town and Trio Apartments included on-site and on-street observed parking demand associated with residents/guests for the sites. The weekday parking demand ratios are based on the parking demand observed for each site divided by the total number of dwelling units.

[5] Peak parking demand was forecasted at full (100%) occupancy for each site. The peak parking demand ratios at full occupancy were derived by dividing the peak parking demand by the total number of dwelling units.

APPENDIX C

LADOT AFFORDABLE HOUSING TRIP GENERATION STUDY

LADOT

Transportation Assessment Guidelines

July 2020

For comments or questions regarding the transportation study review policies and practice of the City of Los Angeles, please contact:

City of Los Angeles Department of Transportation

Bureau of Planning & Development Services

Eddie Guerrero, P.E., Transportation Engineer, Metro and West Los Angeles Office

David Somers, Transportation Planning and Policy

calibration of the simulation model.

Land Use Development Projects

Project Trip Generation

A land use project's daily vehicle trips and trip generation may be estimated using the VMT Calculator tool or information from the most recent edition of the ITE Trip Generation Manual. However, if the project is in a Transportation Specific Plan (TSP) area, then the procedures and trip rates identified in the TSP should be applied. If other rates are proposed, then these rates must first be submitted with the appropriate background survey data for approval by LADOT. A table presenting the estimated number of daily trips and AM and PM peak-hour trips generated by the proposed project entering and exiting the site must be included.

The following adjustments may apply to some projects (any trip generation rate adjustments must be approved by LADOT during the scoping process):

- ITE 10th Edition – The 10th Edition of the ITE Trip Generation manual, released in September 2017 introduces trip generation rates for select land uses categorized by area type: Rural, General Urban/Suburban, Dense Multi-Use Urban, and City Core. The manual provides descriptions of the area types and guidance on how these rates should be applied. As part of the MOU process, LADOT should be consulted to confirm the appropriate ITE area type for the project location. If Dense Multi-Use Urban or City Core rates are to be used, care should be taken to ensure that the sample size within the ITE database is appropriate, in accordance with guidance in the *ITE Trip Generation Handbook*.

In addition, locally available trip generation rates developed from counts conducted at market-rate residential properties in the City of Los Angeles are higher than the ITE 10th Edition rates for mid-rise and high-rise multifamily uses in dense multi-use urban areas. The empirical rates presented in **Table 3.3-1** should be used for these uses.

Table 3.3-1: Local Trip Generation Rates for Multifamily Mid-Rise and High-Rise Residential Land Uses in Dense Multi-Use Urban Areas

LAND USE	*AM PEAK HOUR* (trips per DU)	*PM PEAK HOUR* (trips per DU)
Multifamily Mid-Rise	0.31	0.30
Multifamily High-Rise	0.23	0.30

- Unique Developments – Unique types of development may require trip generation studies of similar facilities in order to establish a trip rate for use in the analysis. These developments may include land uses for which trip generation rates are not available in the ITE Trip Generation manual, or land uses for which the rates in the ITE Trip Generation manual are based on a small sample of surveyed sites. The procedures and the results of the trip generation studies must be approved by LADOT.
- Existing or Qualified Terminated Use – When estimating the Project's net new trips either when evaluating a land use project's deficiencies toward access and circulation, or for screening a project from VMT analysis, any claim for trip credits for an existing or terminated land use generally requires that the use of land must have been active for at least 6 consecutive months during the past 2 years from the time of the base year vehicle trip counts. To fully ensure that trip credit claims are validated by LADOT, appropriate supporting documentation must be submitted, such as copies of any building permit, certificate of occupancy, business license, lease agreement, affidavits, utility bills, or photographs, as well as documentation as to when the previous land use

was terminated, if applicable. Documentation of any previous environmental review should be included in this submittal. The absence of documentation of previous environmental review may result in denial of the claim for trip credits. Note that some TSP ordinances allow different time frames for the determination of existing use trip credits and of any applicable trip fees.

- Mixed-Use Internalization – Internal trip credits are a reduction to the trip generation estimates for individual land uses within a mixed-use development to account for trips internal to the site. Methods for determining internalization are provided in the Institute of Transportation Engineers Trip Generation Handbook, Transportation Research Board (TRB) National Cooperative Highway Research Program (NCHRP) Report 684: Enhancing Internal Trip Capture Estimation for Mixed-Use Developments, and the United States Environmental Protection Agency's Mixed-Use Trip Generation Tool (MXD).
- Pass-by Trips[39] – Any claim for "pass-by" trip generation adjustments must use the trip rates summarized in **Attachment H** titled "Pass-By Trip Rates," which are based on rates published by ITE. However, these rates may be superseded by additional guidelines provided in specific plans. For the purpose of analyzing project driveways, the pass-by trip adjustment does not apply to the project driveway trips.
- Transit-friendly Projects – LADOT encourages project applicants to design and construct transit-friendly Projects that create safe and walkable site design and facilities that connect Project patrons to and from transit stations and stops. Consistent with City policy goals to promote the use of transit and walking, LADOT, at its discretion, may allow up to a 25% transit/walk trip generation reduction, subject to the following guidelines, on a case by case basis:
    - Developments above or adjacent to a Metro Rail, Metrolink, or Orange Line station, or to a similar dedicated transit line station with convenient pedestrian access to the station may qualify for a maximum 25% trip generation adjustment. The actual adjustment provided should be determined by an analysis of the transit service frequency and density at the specified transit station.
    - Developments within a 1/4-mile walking distance of a transit station, or of a Rapid Bus stop, may qualify for up to a 15% trip generation adjustment. The actual adjustment provided will be determined by an analysis of the transit service frequency and density at the specified transit station or Rapid Bus stop.
    - If the development project is not within ¼-mile walking distance of a transit station or a Rapid Bus stop but is within a ¼-mile walking distance of other public bus stops, the project may still qualify for up to 10% trip generation adjustment. The actual adjustment provided will be determined by an analysis of the transit service frequency and density at the nearby bus stop(s).

Transit trip adjustment will not be automatically granted to development projects located in an area with infrequent transit service. However, all reasonable efforts by the developer to promote the use of public transit or walking will be considered for transit adjustments on a case-by-case basis. Refer to **Section 2.2** of these Guidelines for transit-related mitigation measures.

Since the Dense Multi-Use Urban and City Core trip generation rates discussed previously were derived from data collected in dense urban areas with convenient and frequent transit service and the ability to walk to complementary land uses, etc., these effects are inherent in the rates. If Dense Multi-Use Urban or City Core rates are being used for land uses in a project, care should therefore be taken to avoid overestimating these

39 Pass-by trips are defined as patrons already traveling from an origin to a primary trip destination who make an intermediate stop at the project site without a route diversion.

effects by taking additional transit or walk credits.

- TDM Trip Reduction – Features and amenities that may qualify a project for this adjustment include the TDM measures to achieve the minimum point value in the TDM Program Description and TDM measures in the VMT Calculator (see **Attachment G**).
- Affordable Housing Projects – Residential or mixed-use developments that include Affordable Housing Units [as defined in LAMC 12.22-A.25(b)] are eligible to use the locally-collected trip generation rates presented in **Table 3.3-2**, which are based on the total number and type of dwelling units reserved as affordable. These trip generation rates are based on vehicle trip count data collected at affordable housing sites in the City of Los Angeles in 2016.

Table 3.3-2: Trip Generation Rates for Affordable Housing Projects

AFFORDABLE HOUSING TYPES		*DAILY RATE* (Trips per DU)	*AM PEAK HOUR RATE* (Trips per DU)	*% AM TRIPS IN*	*% AM TRIPS OUT*	*PM PEAK HOUR RATE* (Trips per DU)	*% PM TRIPS IN*	*% PM TRIPS OUT*
Average	Family	4.16	0.52	38%	62%	0.38	55%	45%
	Seniors	1.72	0.12	38%	62%	0.15	52%	48%
	Special Needs	1.49	0.17	43%	57%	0.11	54%	46%
	Permanent Supportive	1.23	0.08	67%	33%	0.13	53%	47%
Inside TPA Area	Family	4.16	0.49	37%	63%	0.35	56%	44%
	Seniors	1.31	0.13	38%	62%	0.13	47%	53%
	Special Needs	1.00	0.10	30%	70%	0.05	67%	33%
	Permanent Supportive	0.87	0.08	62%	38%	0.09	59%	41%
Outside TPA Area	Family	4.15	0.55	40%	60%	0.43	55%	45%
	Seniors	1.97	0.11	38%	62%	0.17	55%	45%
	Special Needs	1.98	0.24	54%	46%	0.16	44%	56%
	Permanent Supportive	1.50	0.09	71%	29%	0.16	49%	51%

Family affordable housing offers affordable dwelling units designed for lower income households with children, or lower income households with single or multiple adults without children. Senior affordable housing provides affordable dwelling units designed for mature residents. The category of special needs housing includes facilities serving a variety of populations, including foster youth, disabled, mentally ill, and HIV/AIDs. Permanent supportive housing provides long-term housing with supportive services designed to enable homeless persons and individuals/families at risk of homelessness to ensure that they remain housed and live as independently as possible.

Project Trip Distribution

The estimation of distribution patterns for project trips should consider a number of factors including, but not limited to, the following: the characteristics of the street system serving the project site; the level of accessibility of routes to and from the proposed project site; locations of employment and commercial centers to which residents of a residential project would be drawn; and residential areas from which the commercial patrons, employees, or school students would be drawn. The distribution analysis can be supported by data from the City of Los Angeles TDF model,

VMT CALCULATOR DOCUMENTATION:

https://ladot.lacity.org/sites/default/files/documents/vmt_calculator_documentation-2020.05.18.pdf

City of Los Angeles VMT Calculator Documentation

Version 1.3

Los Angeles Department of Transportation (LADOT) and
Los Angeles Department of City Planning (DCP)

May 2020

APPENDIX B

AFFORDABLE HOUSING TRIP GENERATION STUDY

FEHR PEERS

Measuring the Miles
Developing new metrics for vehicle travel in LA

MEMORANDUM

Date: April 20, 2017

To: Claire Bowin & David Somers, Los Angeles Department of City Planning

Cc: Tom Carranza, Los Angeles Department of Transportation

From: Tom Gaul & Cary Bearn, Fehr & Peers

Subject: ***Infill and Complete Streets Study***
Task 2.1A Local Affordable Housing Trip Generation Study

Ref: LA15-2755

This memo serves as a summary of Task 2.1A, Local Affordable Housing Trip Generation Study, as part of the City of Los Angeles' *Infill and Complete Streets: Capturing VMT Impacts & Benefits Pursuant to CEQA* study. As part of Task 2.1A, vehicle trip generation and parking utilization surveys were conducted at numerous affordable housing locations throughout the City of Los Angeles in order to provide an improved understanding of vehicle trip generation and parking demand characteristics of affordable housing uses in Los Angeles.

The empirical trip generation data collected through this effort will be used to customize and calibrate the MXD model for Los Angeles to be integrated into the vehicle miles traveled (VMT) VMT Calculator to be developed for the City as part of later tasks in the study.

METHODOLOGY

Twenty-four hour driveway vehicle counts were conducted at the various survey sites using video cameras. Manual overnight parking utilization sweeps were also conducted.

Criteria for selection of the survey sites included:

- Sample Size – The Institute of Transportation Engineers (ITE) recommends that at least three and preferably five independent survey sites be used to establish a local trip generation rate for a particular land use. This recommendation was exceeded for all land use types included in this study, including for each of the subcategories of affordable housing sites.
- 100% Affordable – The affordable housing site must be 100% affordable (other than the manager's unit). This was to ensure that the counts reflect the trip generation behavior solely of affordable units.
- Isolatable Use – The sites must be standalone and not part of a mixed-use development.

- Countable Driveway(s) – Driveways must be serving parking lots for the use of the site and not also serving parking lots for other land uses in the surrounding area.
- Successful Development – The development should be mature, be located in a mature environment, and appear to be economically healthy.
- Permission of Property Owners/Managers – Permission was obtained in order to survey a site.

AFFORDABLE HOUSING TRIP GENERATION AND PARKING

Data Collection

Twenty-four hour driveway counts and overnight parking sweeps were conducted at a total of 42 affordable housing sites within the City of Los Angeles (35 sites counted in May-June 2016 and seven additional sites counted in November 2016). The affordable housing study locations were identified in consultation with the City of Los Angeles Department of City Planning and the City of Los Angeles Housing+Community Investment Department. The sites were categorized according to two criteria considered to influence the level of vehicle ownership and tripmaking but also considered to be available and applicable to future projects (i.e., measureable and able to be determined using a readily available data source): proximity to transit and affordable housing type:

- Proximity to Transit – The Southern California Association of Governments (SCAG) has defined "Transit Priority Areas" (TPAs) as the area within ½ mile of an existing major transit stop, and defines a major transit stop as either a rail station or an intersection of 2 or more major bus routes with peak service frequencies of 15 minutes or less. The transit priority area defined by SCAG applies a ½ mile radial from the station or intersection. For this study, a ½ mile walkshed along the transportation network was used in lieu of the ½ mile radius. Additionally, stations for the Metro Orange Line and Silver Line Busways were not included in the SCAG definition but were added as part of the rail stations. These busways provide peak hour service less than 15 minutes and operate in dedicated rights-of-way. Study locations were defined as either inside or outside a transit priority area. Twenty of the study locations were within a TPA and 22 were outside of a TPA.
- Housing Type – Affordable housing type was categorized as serving families, seniors, special needs, or permanent supportive. Family affordable housing offers affordable dwelling units designed for households with children. Senior affordable housing provides affordable dwelling units designed for mature residents. The category of special needs housing includes facilities serving a variety of populations, including foster youth, disabled, mentally ill, and HIV/AIDs. Permanent supportive housing provides long-term housing with supportive services designed to enable homeless persons and individuals/families at risk of homelessness to ensure that they remain housed and live as independently as possible. Fourteen of the study sites were designated as family housing, thirteen were senior, eight were special needs, and seven were permanent supportive. Each of these categories were divided roughly equally between sites within a TPA and sites outside of a TPA.

Retail job density was also considered as a possible variable influencing tripmaking but, based on exploratory data analysis and discussions with LADOT, the final trip generation analysis was disaggregated based on proximity to transit and housing type only.

Table 1 presents the list of properties included in the analysis. Table 2 shows the aggregated vehicle trip generation results based on proximity to transit and housing type. Table 2 also shows relevant trip generation rates from ITE's *Trip Generation, 9th Edition*, for comparison. Table 3 shows the aggregated parking demand and utilization results based on proximity to transit and housing type. For comparison, Table 3 also shows relevant parking requirements from the Los Angeles Municipal Code (LAMC).

Property managers for 36 of the 42 surveyed sites provided information regarding selected characteristics of the sites. All of the respondents stated that they provide parking but do not charge residents for parking on-site. None of the respondents provide partially or fully-subsidized transit passes to residents, none provide car-share services, and one provides a shuttle to grocery stores.

Results

Reviewing Table 2, the following observations can be made:

- The empirical vehicle trip generation rates across the affordable housing survey sites are higher for the affordable family units relative to the senior, special needs, and permanent supportive affordable units.
- The empirical trip generation rates are generally lower for units located within a TPA than for units located outside of a TPA.
- The empirical trip generation rates averaged across all 42 of the affordable housing survey sites are lower than the ITE trip rates for standard apartments for all three time periods (daily, AM peak hour, and PM peak hour). This holds true as well for almost all of the disaggregated subcategories (the sole exception being affordable family units outside of a TPA during the AM peak hour).
- Affordable family units both inside and outside of a TPA are the only categories with empirical rates higher than the ITE high-rise apartment rates (an ITE category which primarily consists of buildings within urban areas).
- The empirical rates for senior, special needs, and permanent supportive affordable housing are far lower than both the ITE apartment and ITE high-rise apartment rates.
- The empirical rates for the senior affordable housing are lower than ITE rates for senior adult housing.

Reviewing Table 3, the following observations can be made:

- The empirical parking demand ratios are higher for the affordable family units relative to the senior, special needs, and permanent supportive units.

- The empirical parking demand ratios for each of the subcategorizations of the affordable housing survey sites (by affordable housing type and by transit proximity) are lower than the LAMC parking requirement for apartments.
- The empirical parking demand ratios for family affordable housing range from 0.82 to 0.85 spaces per unit and are lower than the parking requirements under the LAMC Affordable Housing Density Bonus Option 2 (LAMC 12.22A.25(d)(2)) for restricted affordable units (1 space per unit).
- The empirical parking demand ratios for senior, special needs, and permanent supportive affordable housing range from 0.20 to 0.48 spaces per unit and are lower than the parking requirements under the LAMC Affordable Housing Density Bonus Option 2 (LAMC 12.22A.25(d)(2)) for units restricted to low or very low income senior citizen or disabled (0.5 spaces per unit).
- The empirical parking demand ratios are lower for units located within a TPA than for units located outside of a TPA for the senior, special need, and permanent supportive units but not for the family units.

SOURCES

Trip Generation, 9th Edition, Institute of Transportation Engineers, 2012.

Trip Generation Handbook, 3rd Edition, Institute of Transportation Engineers, 2014.

Los Angeles Municipal Code.

TABLE 1

Affordable Housing Trip Generation and Parking Utilization Survey Locations

Count	Name	Address	Transit Priority Area	Housing Type
1	Barnsdall Court	1632 N Normandie Ave, Hollywood, CA 90027	Inside	Family
2	Parkside Apartments	900 S Grand Ave, Los Angeles, CA 90015	Inside	Family
3	El Dorado Family Apts	12129 N El Dorado Ave, Los Angeles, CA 91342	Inside	Family
4	Union Point	420 Union Dr, Los Angeles, CA 90017	Inside	Family
5	Coronita Family	204 S Lucas Ave, Los Angeles, CA 90026	Inside	Family
6	New Venice 1A	535 Santa Clara Ave, Venice, CA 90291	Inside	Family
7	New Venice 2C	1002 5th Ave, Venice, CA 90291	Inside	Family
8	Sichel Family Apts	1805 Sichel St, Los Angeles, CA 90031	Inside	Family
9	Bonnie Brae Village	208 S Bonnie Brae St, Los Angeles, CA 90057	Inside	Permanent Supportive
10	Gower Street Apts	1140 N Gower St, Los Angeles, CA 90038	Inside	Permanent Supportive
11	The Villas At Gower	1726 N Gower St, Hollywood, CA 90028	Inside	Permanent Supportive
12	NoHo Seniors Villa	5525 Klump Ave, North Hollywood, CA 91601	Inside	Seniors
13	Morgan Place Senior Apts	7301 S Crenshaw Blvd, Los Angeles, CA 90043	Inside	Seniors
14	Figueroa Senior Housing	7621 S Figueroa St, Los Angeles, CA 90044	Inside	Seniors
15	Hollenbeck Terrace	610 S Saint Louis St, Los Angeles, CA 90023	Inside	Seniors
16	Ward Villas	1177 W Adams Blvd, Los Angeles, CA 90007	Inside	Seniors
17	Vermont Manzanita	1225 S Vermont Ave, Los Angeles, CA 90006	Inside	Special Needs
18	New Carver	1624 S Hope St, Los Angeles, CA 90015	Inside	Special Needs
19	Charles Cobb Apts	521 S San Pedro St, Los Angeles, CA 90013	Inside	Special Needs
20	New Genesis	452 S Main St, Los Angeles, CA 90013	Inside	Special Needs
21	Rio Vista Apts	3000 N Verdugo Rd, Los Angeles, CA 90065	Outside	Family
22	New Venice 4B	915 7th Ave, Venice, CA 90291	Outside	Family
23	Cuatro Vientos	5331 E Huntington Dr, Los Angeles, CA 90032	Outside	Family
24	Lorena Terrace	611 South Lorena St, Los Angeles, CA 90023	Outside	Family
25	Laurel Village	9700 Laurel Canyon Blvd, Pacoima, CA 91331	Outside	Family
26	New Venice 2D	919 5th Ave, Venice, CA 90291	Outside	Family
27	Cornerstone Apts	14128 Calvert St, Van Nuys, CA 91401	Outside	Permanent Supportive
28	Willis Avenue Apts	14731 W Rayen St, Los Angeles, CA 91402	Outside	Permanent Supportive
29	PATH Villas At Del Rey	11734 Courtleigh Dr, CA 90066	Outside	Permanent Supportive
30	Winnetka Senior Apts	20750 Sherman Way, Los Angeles CA 91306	Outside	Permanent Supportive
31	TELACU Pointe	3100 Fletcher Dr, Los Angeles, CA 90065	Outside	Seniors
32	Asturias Senior Apts	9628 Van Nuys Blvd, Panorama City, CA 91402	Outside	Seniors
33	Cantabria Senior Apts	9640 N Van Nuys Blvd, Los Angeles, CA 91402	Outside	Seniors
34	TELACU Vista	4900 N Via Marisol, Highland Park, CA 90032	Outside	Seniors
35	Andalucia Senior Apts	15305 W Lanark St, Los Angeles, CA 91406	Outside	Seniors
36	TELACU Las Flores	12793 Mercer St, Pacoima, CA 91331	Outside	Seniors
37	Buckingham Sr. Housing	4020 S Buckingham Rd, Los Angeles, CA 90008	Outside	Seniors
38	Villa Valley	15950 Sherman Way, Los Angeles, CA 91406	Outside	Seniors
39	Allesandro Street Apts	1934 Allesandro St, Los Angeles, CA 90039	Outside	Special Needs
40	Innes Heights, Lp	1245 Innes Ave, Los Angeles, CA 90026	Outside	Special Needs
41	Woodland Terrace	15532 W Nordhoff St, North Hills, CA 91343	Outside	Special Needs
42	Guy Gabaldon Apts	3553 Beswick St, Los Angeles, CA 90023	Outside	Special Needs

TABLE 2

Vehicle Trip Rates for Affordable Housing Sites in Los Angeles

(By Transit Priority Area and Affordable Housing Type)

Counts conducted May, June, and November 2016

TPA Area	Affordable Housing Type	Bin	Sample Size	Daily Rate (Trips per DU)	Average AM Peak Hour Rate (Trips per DU)	AM Percent In	AM Percent Out	Average PM Peak Hour Rate (Trips per DU)	PM Percent In	PM Percent Out
Inside	-		20	2.32	0.26	40%	60%	0.20	56%	44%
Outside	-		22	2.48	0.25	46%	54%	0.24	52%	48%
-	Family		14	4.16	0.52	38%	62%	0.38	55%	45%
-	Seniors		13	1.72	0.12	38%	62%	0.15	52%	48%
-	Special Needs		8	1.49	0.17	43%	57%	0.11	54%	46%
-	Permanent Supportive		7	1.23	0.08	67%	33%	0.13	53%	47%
Inside	Family	Inside, Family	8	4.16	0.49	37%	63%	0.35	56%	44%
Inside	Seniors	Inside, Seniors	5	1.31	0.13	38%	62%	0.13	47%	53%
Inside	Special Needs	Inside, Special Needs	4	1.00	0.10	30%	70%	0.05	67%	33%
Inside	Permanent Supportive	Inside, Permanent Supportive	3	0.87	0.08	62%	38%	0.09	59%	41%
Outside	Family	Outside, Family	6	4.15	0.55	40%	60%	0.43	55%	45%
Outside	Seniors	Outside, Seniors	8	1.97	0.11	38%	62%	0.17	55%	45%
Outside	Special Needs	Outside, Special Needs	4	1.98	0.24	54%	46%	0.16	44%	56%
Outside	Permanent Supportive	Outside, Permanent Supportive	4	1.50	0.09	71%	29%	0.16	49%	51%

ITE for Comparison

ITE Record Number	Description	Sample Size	Daily Rate (Trips per DU)	Average AM Peak Hour Rate (Trips per DU)	AM Percent In	AM Percent Out	Average PM Peak Hour Rate (Trips per DU)	PM Percent In	PM Percent Out
ITE 220	Apartment	78-90	6.65	0.51	20%	80%	0.62	65%	35%
ITE 222	High-Rise Apartment	9-17	4.20	0.30	25%	75%	0.35	61%	39%
ITE 252	Senior Adult Housing-Attached	5-10	3.44	0.20	34%	66%	0.25	54%	46%
ITE 253	Congregate Care Facility	2-3	2.02	0.06	59%	41%	0.17	55%	45%
ITE 255	Continuing Care Retirement Community	4-6	2.40	0.14	65%	35%	0.16	39%	61%

TABLE 3

Parking Demand Rates for Affordable Housing Sites in Los Angeles

(By Transit Priority Area and Affordable Housing Type)

Surveys conducted May, June, and November 2016

TPA Area	Affordable Housing Type	Sample Size	Parking Demand Per Dwelling Unit	Parking Utilization
Inside	-	20	0.53	64%
Outside	-	22	0.56	63%
-	Family	14	0.84	72%
-	Seniors	13	0.46	71%
-	Special Needs	8	0.32	43%
-	Permanent Supportive	7	0.37	56%
Inside	Family	8	0.85	74%
Inside	Seniors	5	0.44	73%
Inside	Special Needs	4	0.20	34%
Inside	Permanent Supportive	3	0.29	64%
Outside	Family	6	0.82	70%
Outside	Seniors	8	0.48	69%
Outside	Special Needs	4	0.44	52%
Outside	Permanent Supportive	4	0.43	50%

LAMC for Comparison

		Parking Requirement per Unit
Apartments (LAMC 12.21A.4(a))		
	<3 habitable rooms	1
	3 habitable rooms	1.5
	>3 habitable rooms	2
Projects with Affordable Housing Density Bonus - Option 1 (applies to all units, not just restricted units) (LAMC 12.22A.25(d)(1))		
	0-1 bedroom	1
	2-3 bedrooms	2
	4 or more bedrooms	2.5
Projects with Affordable Housing Density Bonus - Option 2 (applies to restricted units only) (LAMC 12.22A.25(d)(2))		
	restricted affordable units	1
	restricted to low or very low income senior citizen or disabled	0.5
	restricted affordable units in residential hotel	0.25

APPENDIX D

COUNT DATA

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Paramount_Washington_Passenger
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- Passenger

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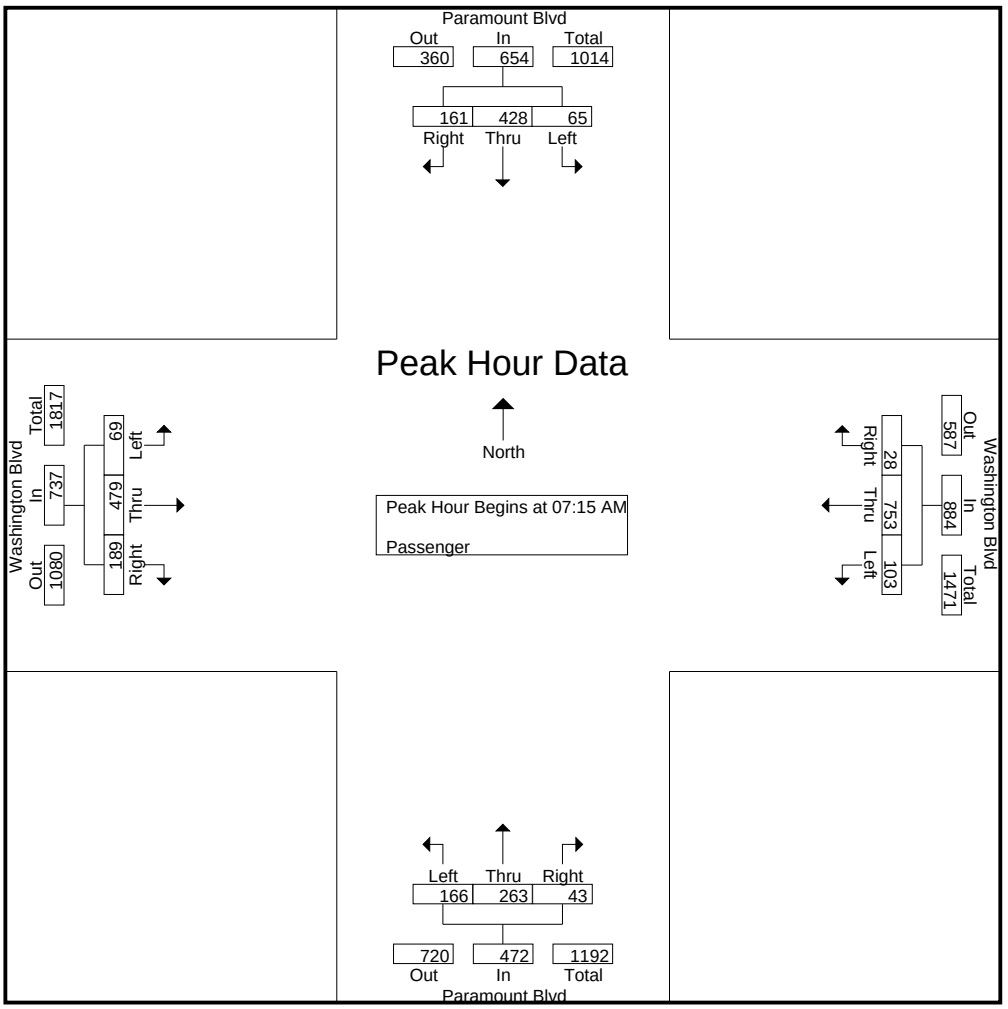
07:00 AM	20	82	35	19	144	4	37	49	10	10	111	32	553
07:15 AM	19	100	49	27	198	9	29	54	8	15	111	43	662
07:30 AM	12	117	54	25	219	7	40	67	8	14	109	31	703
07:45 AM	16	111	34	32	199	6	52	67	12	21	143	73	766
Total	67	410	172	103	760	26	158	237	38	60	474	179	2684
08:00 AM	18	100	24	19	137	6	45	75	15	19	116	42	616
08:15 AM	17	92	31	22	138	8	36	65	17	10	106	42	584
08:30 AM	15	77	24	21	129	12	41	58	8	18	107	30	540
08:45 AM	19	70	28	13	140	8	52	76	9	15	103	30	563
Total	69	339	107	75	544	34	174	274	49	62	432	144	2303
04:00 PM	42	118	27	21	125	32	74	149	27	47	277	63	1002
04:15 PM	33	130	34	27	157	29	67	161	20	50	322	50	1080
04:30 PM	40	119	26	18	165	20	88	165	24	43	320	52	1080
04:45 PM	46	154	29	24	159	19	72	181	37	39	360	59	1179
Total	161	521	116	90	606	100	301	656	108	179	1279	224	4341
05:00 PM	31	136	26	18	151	31	81	173	32	36	326	57	1098
05:15 PM	52	134	39	23	155	22	71	157	27	43	400	59	1182
05:30 PM	48	131	24	30	157	35	75	163	31	50	415	54	1213
05:45 PM	53	141	18	23	135	32	69	130	28	45	370	58	1102
Total	184	542	107	94	598	120	296	623	118	174	1511	228	4595
Grand Total	481	1812	502	362	2508	280	929	1790	313	475	3696	775	13923
Apprch %	17.2	64.8	18	11.5	79.6	8.9	30.6	59	10.3	9.6	74.7	15.7	
Total %	3.5	13	3.6	2.6	18	2	6.7	12.9	2.2	3.4	26.5	5.6	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Paramount_Washington_Passenger
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Paramount Blvd Southbound				Washington Blvd Westbound				Paramount Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**19**	100	49	168	27	198	**9**	234	29	54	8	91	15	111	43	169	662
07:30 AM	12	**117**	**54**	**183**	25	**219**	7	**251**	40	67	8	115	14	109	31	154	703
07:45 AM	16	111	34	161	**32**	199	6	237	**52**	67	12	131	**21**	**143**	**73**	**237**	**766**
08:00 AM	18	100	24	142	19	137	6	162	45	**75**	**15**	**135**	19	116	42	177	616
Total Volume	65	428	161	654	103	753	28	884	166	263	43	472	69	479	189	737	2747
% App. Total	9.9	65.4	24.6		11.7	85.2	3.2		35.2	55.7	9.1		9.4	65	25.6		
PHF	.855	.915	.745	.893	.805	.860	.778	.880	.798	.877	.717	.874	.821	.837	.647	.777	.897



CITY TRAFFIC COUNTERS

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File Name : Paramount_Washington_Passenger
Site Code : 00000000
Start Date : 3/9/2021
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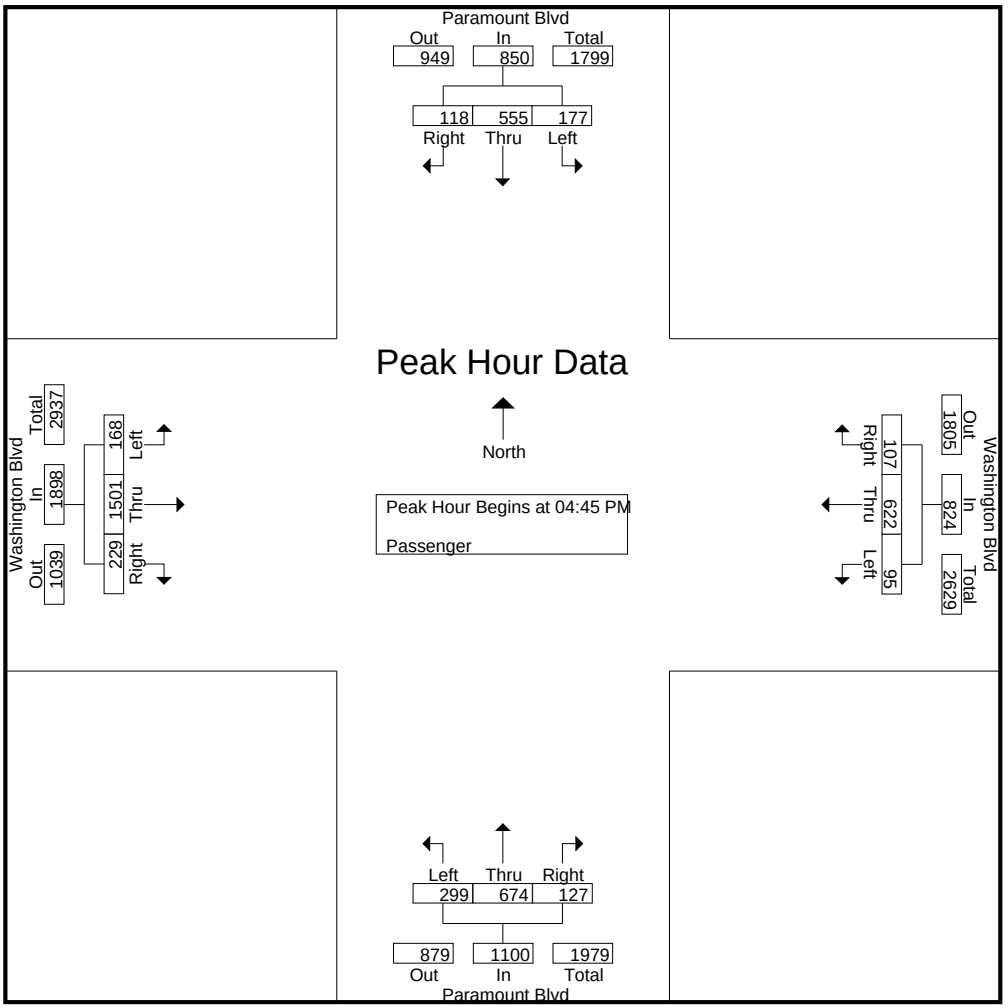
	Paramount Blvd Southbound				Washington Blvd Westbound				Paramount Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	46	**154**	29	**229**	24	**159**	19	202	72	**181**	**37**	**290**	39	360	**59**	458	1179
05:00 PM	31	136	26	193	18	151	31	200	**81**	173	32	286	36	326	57	419	1098
05:15 PM	**52**	134	**39**	225	23	155	22	200	71	157	27	255	43	400	59	502	1182
05:30 PM	48	131	24	203	**30**	157	**35**	**222**	75	163	31	269	**50**	**415**	54	**519**	**1213**
Total Volume	177	555	118	850	95	622	107	824	299	674	127	1100	168	1501	229	1898	4672
% App. Total	20.8	65.3	13.9		11.5	75.5	13		27.2	61.3	11.5		8.9	79.1	12.1		
PHF	.851	.901	.756	.928	.792	.978	.764	.928	.923	.931	.858	.948	.840	.904	.970	.914	.963



CITY TRAFFIC COUNTERS

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File Name : Paramount_Washington_Buses
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- Buses

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07:00 AM	0	0	0	0	1	0	0	0	1	0	0	0	2
07:15 AM	0	0	0	0	1	0	0	0	0	0	2	0	3
07:30 AM	0	0	2	0	0	0	0	0	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
Total	0	0	2	0	2	0	0	0	1	0	4	0	9
08:00 AM	0	1	0	0	0	0	0	1	0	1	0	0	3
08:15 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
08:45 AM	0	1	0	0	1	0	0	0	0	0	1	0	3
Total	0	2	0	0	2	0	0	1	0	1	3	0	9
04:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
04:45 PM	0	1	0	0	1	0	0	0	0	0	1	0	3
Total	0	1	0	0	3	0	0	1	0	0	1	0	6
05:00 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
05:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
Total	0	0	0	0	3	0	0	1	0	0	2	0	6
Grand Total	0	3	2	0	10	0	0	3	1	1	10	0	30
Apprch %	0	60	40	0	100	0	0	75	25	9.1	90.9	0	
Total %	0	10	6.7	0	33.3	0	0	10	3.3	3.3	33.3	0	

CITY TRAFFIC COUNTERS

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File Name : Paramount_Washington_Buses
Site Code : 00000000
Start Date : 3/9/2021
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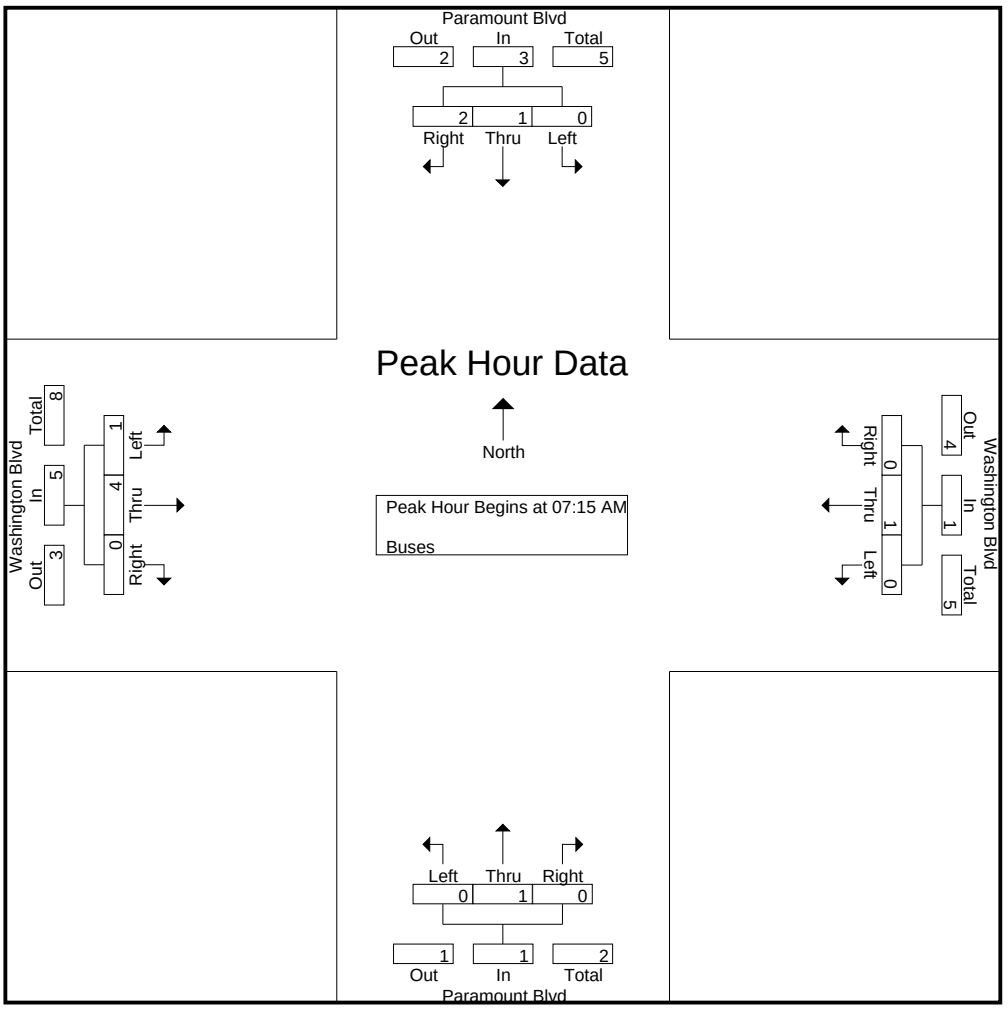
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	**2**	0	**2**	**3**
07:30 AM	0	0	**2**	**2**	0	0	0	0	0	0	0	0	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
08:00 AM	0	**1**	0	1	0	0	0	0	0	**1**	0	**1**	**1**	0	0	1	3
Total Volume	0	1	2	3	0	1	0	1	0	1	0	1	1	4	0	5	10
% App. Total	0	33.3	66.7		0	100	0		0	100	0		20	80	0		
PHF	.000	.250	.250	.375	.000	.250	.000	.250	.000	.250	.000	.250	.250	.500	.000	.625	.833



CITY TRAFFIC COUNTERS

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Start Date : 3/9/2021
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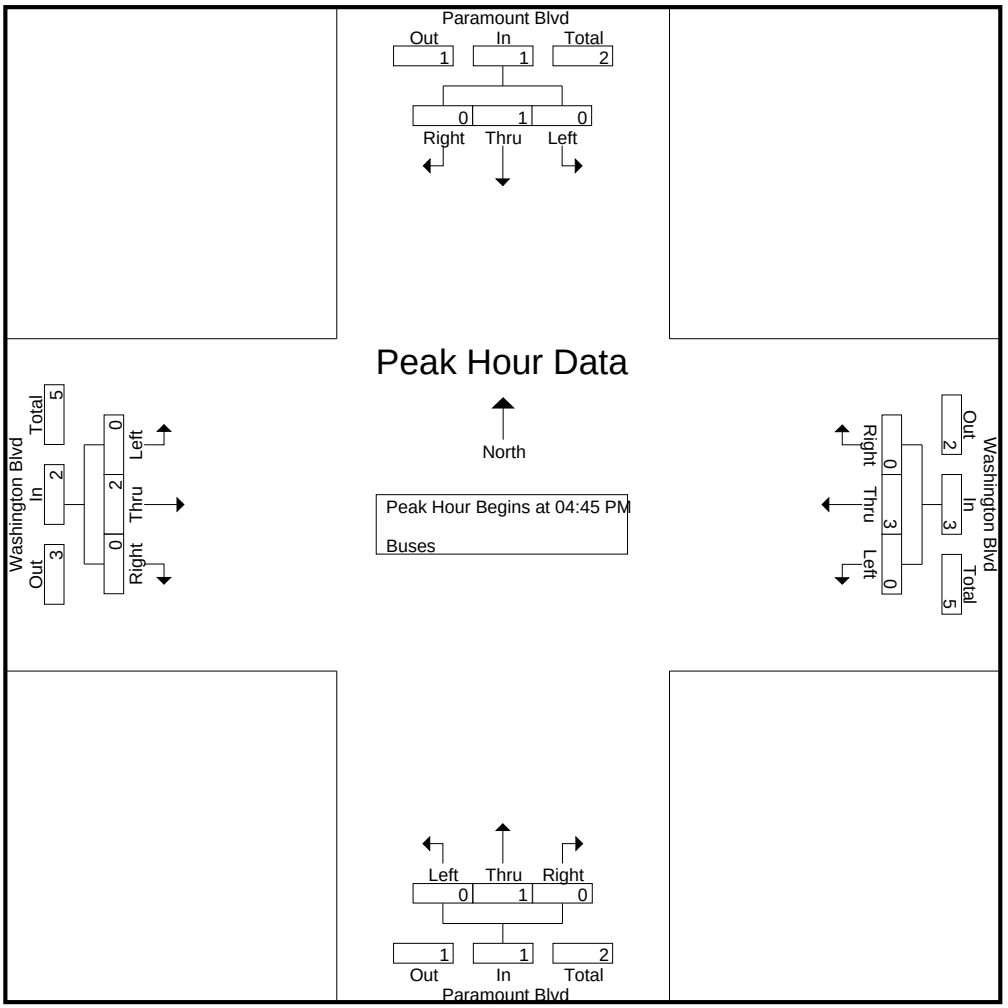
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**1**	0	**1**	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**	**3**
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
Total Volume	0	1	0	1	0	3	0	3	0	1	0	1	0	2	0	2	7
% App. Total	0	100	0		0	100	0		0	100	0		0	100	0		
PHF	.000	.250	.000	.250	.000	.750	.000	.750	.000	.250	.000	.250	.000	.500	.000	.500	.583



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Paramount_Washington_Motorcycles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- Motorcycles

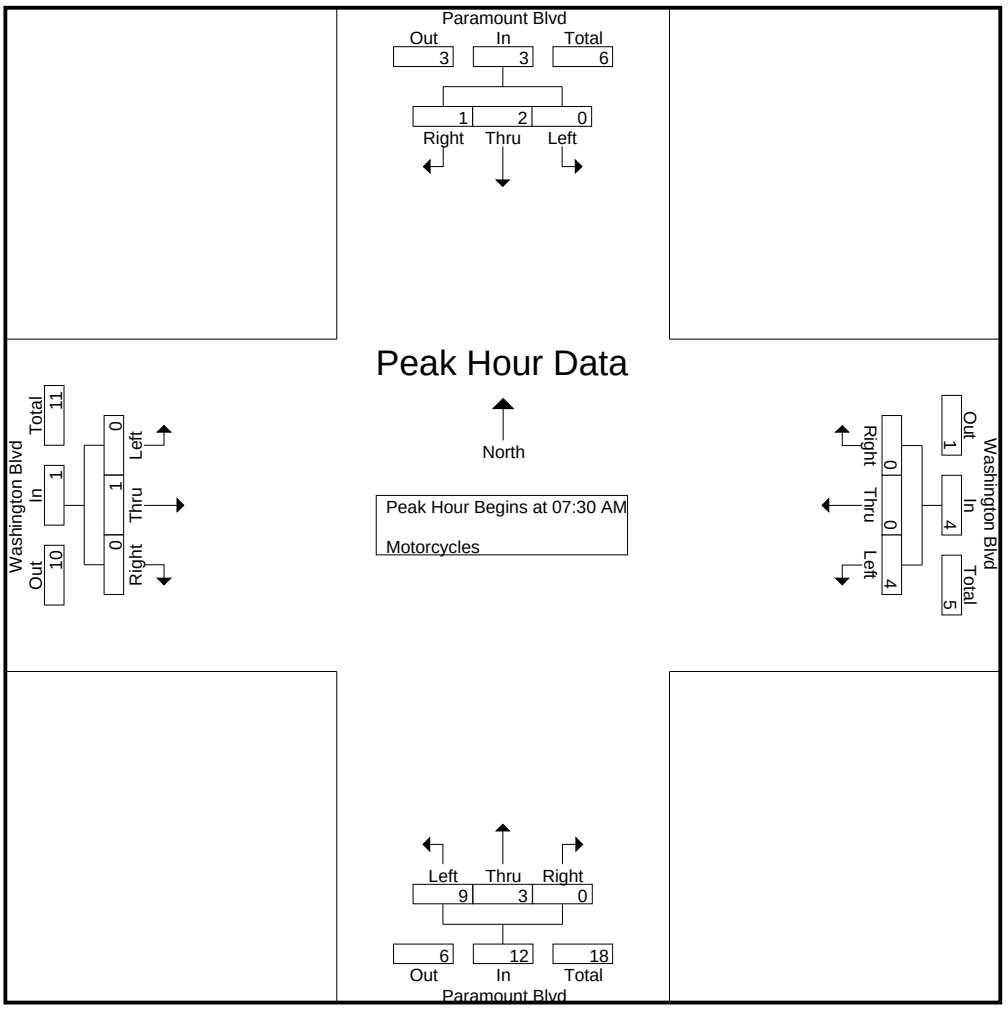
	Paramount Blvd Southbound			Washington Blvd Westbound			Paramount Blvd Northbound			Washington Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	0	1	0	0	2	0	0	0	0	0	3
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	2
07:30 AM	0	1	0	2	0	0	3	2	0	0	1	0	9
07:45 AM	0	0	1	0	0	0	2	0	0	0	0	0	3
Total	0	2	1	4	0	0	7	2	0	0	1	0	17
08:00 AM	0	0	0	0	0	0	2	0	0	0	0	0	2
08:15 AM	0	1	0	2	0	0	2	1	0	0	0	0	6
08:30 AM	0	2	0	0	0	0	1	0	1	0	0	0	4
08:45 AM	0	0	1	2	0	0	1	1	0	0	0	0	5
Total	0	3	1	4	0	0	6	2	1	0	0	0	17
04:00 PM	1	0	0	1	0	0	2	2	0	0	1	0	7
04:15 PM	0	1	1	1	0	0	1	1	1	0	0	1	7
04:30 PM	1	1	0	1	0	0	4	0	0	0	1	0	8
04:45 PM	1	0	0	0	0	0	2	0	0	1	0	0	4
Total	3	2	1	3	0	0	9	3	1	1	2	1	26
05:00 PM	0	2	0	1	0	0	4	0	0	0	1	0	8
05:15 PM	0	1	0	3	0	0	2	0	1	0	1	1	9
05:30 PM	1	0	1	1	0	0	5	0	0	0	1	0	9
05:45 PM	0	1	0	1	0	0	3	0	1	0	0	0	6
Total	1	4	1	6	0	0	14	0	2	0	3	1	32
Grand Total	4	11	4	17	0	0	36	7	4	1	6	2	92
Apprch %	21.1	57.9	21.1	100	0	0	76.6	14.9	8.5	11.1	66.7	22.2	
Total %	4.3	12	4.3	18.5	0	0	39.1	7.6	4.3	1.1	6.5	2.2	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Paramount_Washington_Motorcycles
Site Code : 00000000
Start Date : 3/9/2021

	Paramount Blvd Southbound				Washington Blvd Westbound				Paramount Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**1**	0	**1**	**2**	0	0	**2**	**3**	**2**	0	**5**	0	**1**	0	**1**	**9**
07:45 AM	0	0	**1**	1	0	0	0	0	2	0	0	2	0	0	0	0	3
08:00 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
08:15 AM	0	1	0	1	2	0	0	2	2	1	0	3	0	0	0	0	6
Total Volume	0	2	1	3	4	0	0	4	9	3	0	12	0	1	0	1	20
% App. Total	0	66.7	33.3		100	0	0		75	25	0		0	100	0		
PHF	.000	.500	.250	.750	.500	.000	.000	.500	.750	.375	.000	.600	.000	.250	.000	.250	.556

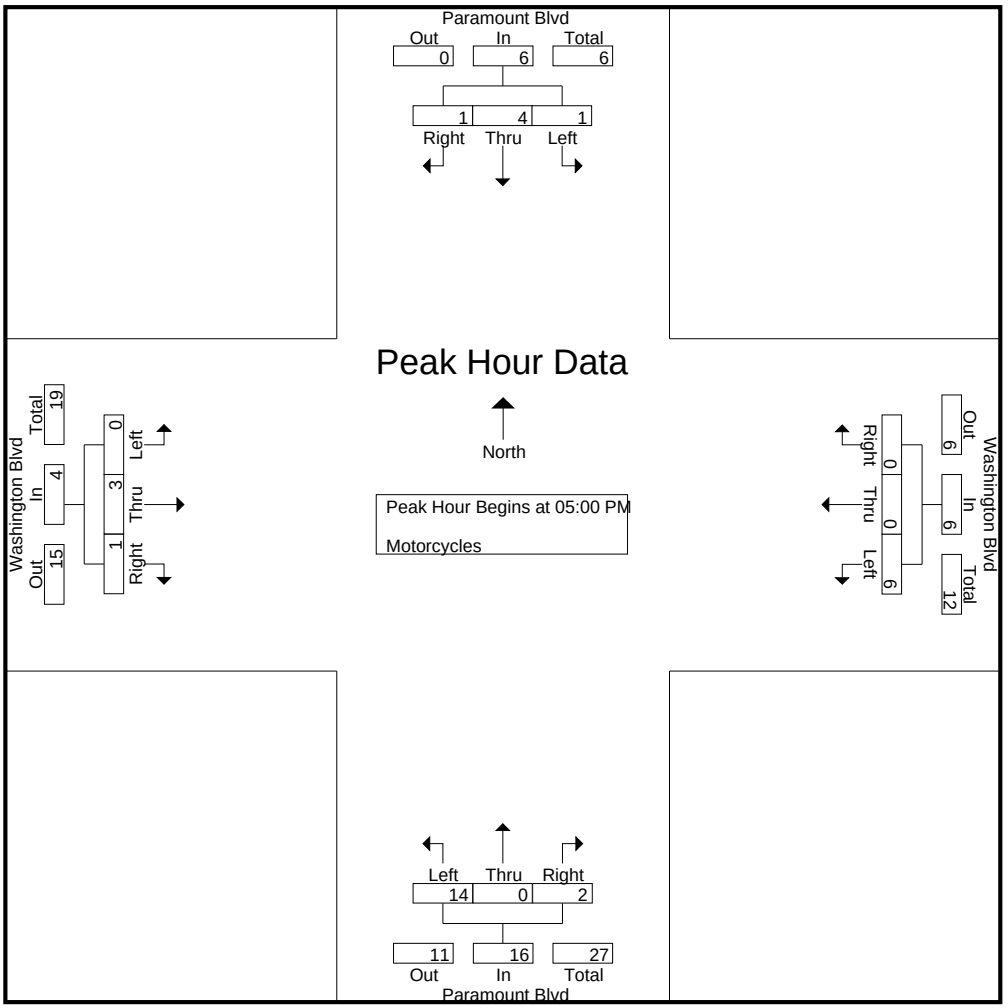


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Paramount_Washington_Motorcycles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Paramount Blvd Southbound				Washington Blvd Westbound				Paramount Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	**2**	0	**2**	1	0	0	1	4	0	0	4	0	**1**	0	1	8
05:15 PM	0	1	0	1	**3**	0	0	**3**	2	0	**1**	3	0	1	**1**	**2**	**9**
05:30 PM	**1**	0	**1**	2	1	0	0	1	**5**	0	0	**5**	0	1	0	1	9
05:45 PM	0	1	0	1	1	0	0	1	3	0	1	4	0	0	0	0	6
Total Volume	1	4	1	6	6	0	0	6	14	0	2	16	0	3	1	4	32
% App. Total	16.7	66.7	16.7		100	0	0		87.5	0	12.5		0	75	25		
PHF	.250	.500	.250	.750	.500	.000	.000	.500	.700	.000	.500	.800	.000	.750	.250	.500	.889



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Paramount_Washington_2-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- 2 Axle

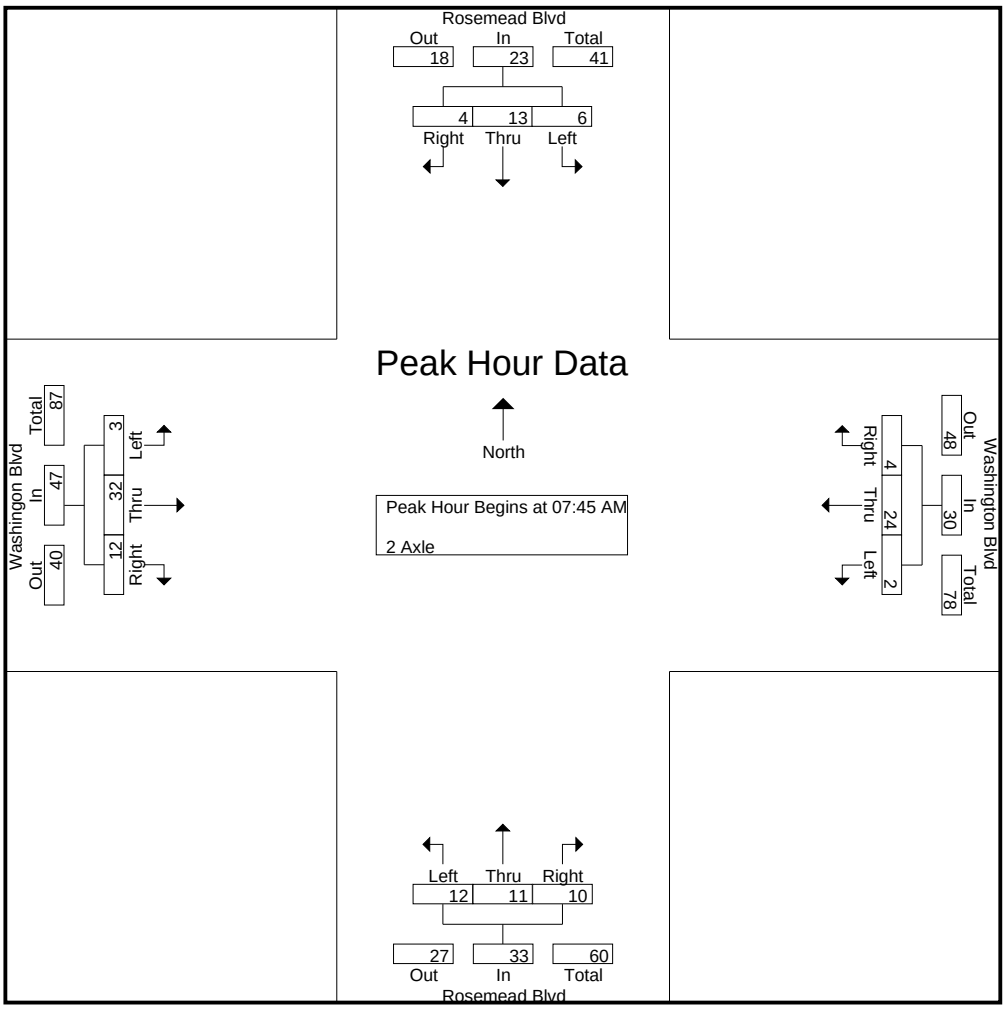
	Rosemead Blvd Southbound			Washington Blvd Westbound			Rosemead Blvd Northbound			Washingon Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	1	6	2	1	3	0	3	2	2	2	3	2	27
07:15 AM	5	6	2	2	5	0	2	2	1	2	7	0	34
07:30 AM	2	4	2	0	10	0	0	5	2	0	6	1	32
07:45 AM	1	5	1	1	7	1	1	4	1	1	2	3	28
Total	9	21	7	4	25	1	6	13	6	5	18	6	121
08:00 AM	1	4	2	0	5	1	3	3	4	0	9	3	35
08:15 AM	1	3	1	0	6	2	4	2	3	1	6	2	31
08:30 AM	3	1	0	1	6	0	4	2	2	1	15	4	39
08:45 AM	0	4	0	2	5	2	1	2	2	1	2	3	24
Total	5	12	3	3	22	5	12	9	11	3	32	12	129
04:00 PM	0	5	0	0	5	0	1	2	2	0	3	4	22
04:15 PM	0	2	1	1	3	1	0	7	0	3	7	2	27
04:30 PM	0	4	0	0	6	1	0	4	1	0	7	1	24
04:45 PM	1	5	1	3	3	0	3	0	1	0	4	2	23
Total	1	16	2	4	17	2	4	13	4	3	21	9	96
05:00 PM	1	0	1	0	5	0	0	1	2	0	4	0	14
05:15 PM	0	0	1	0	1	0	1	0	2	1	3	5	14
05:30 PM	1	2	1	0	2	1	2	3	0	1	11	1	25
05:45 PM	1	0	1	0	1	0	1	1	1	1	2	1	10
Total	3	2	4	0	9	1	4	5	5	3	20	7	63
Grand Total	18	51	16	11	73	9	26	40	26	14	91	34	409
Apprch %	21.2	60	18.8	11.8	78.5	9.7	28.3	43.5	28.3	10.1	65.5	24.5	
Total %	4.4	12.5	3.9	2.7	17.8	2.2	6.4	9.8	6.4	3.4	22.2	8.3	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Paramount_Washington_2-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Rosemead Blvd Southbound				Washington Blvd Westbound				Rosemead Blvd Northbound				Washingon Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	1	**5**	1	**7**	**1**	**7**	1	**9**	1	**4**	1	6	**1**	2	3	6	28
08:00 AM	1	4	**2**	7	0	5	1	6	3	3	**4**	**10**	0	9	3	12	35
08:15 AM	1	3	1	5	0	6	**2**	8	**4**	2	3	9	1	6	2	9	31
08:30 AM	**3**	1	0	4	1	6	0	7	4	2	2	8	1	**15**	**4**	**20**	**39**
Total Volume	6	13	4	23	2	24	4	30	12	11	10	33	3	32	12	47	133
% App. Total	26.1	56.5	17.4		6.7	80	13.3		36.4	33.3	30.3		6.4	68.1	25.5		
PHF	.500	.650	.500	.821	.500	.857	.500	.833	.750	.688	.625	.825	.750	.533	.750	.588	.853



CITY TRAFFIC COUNTERS

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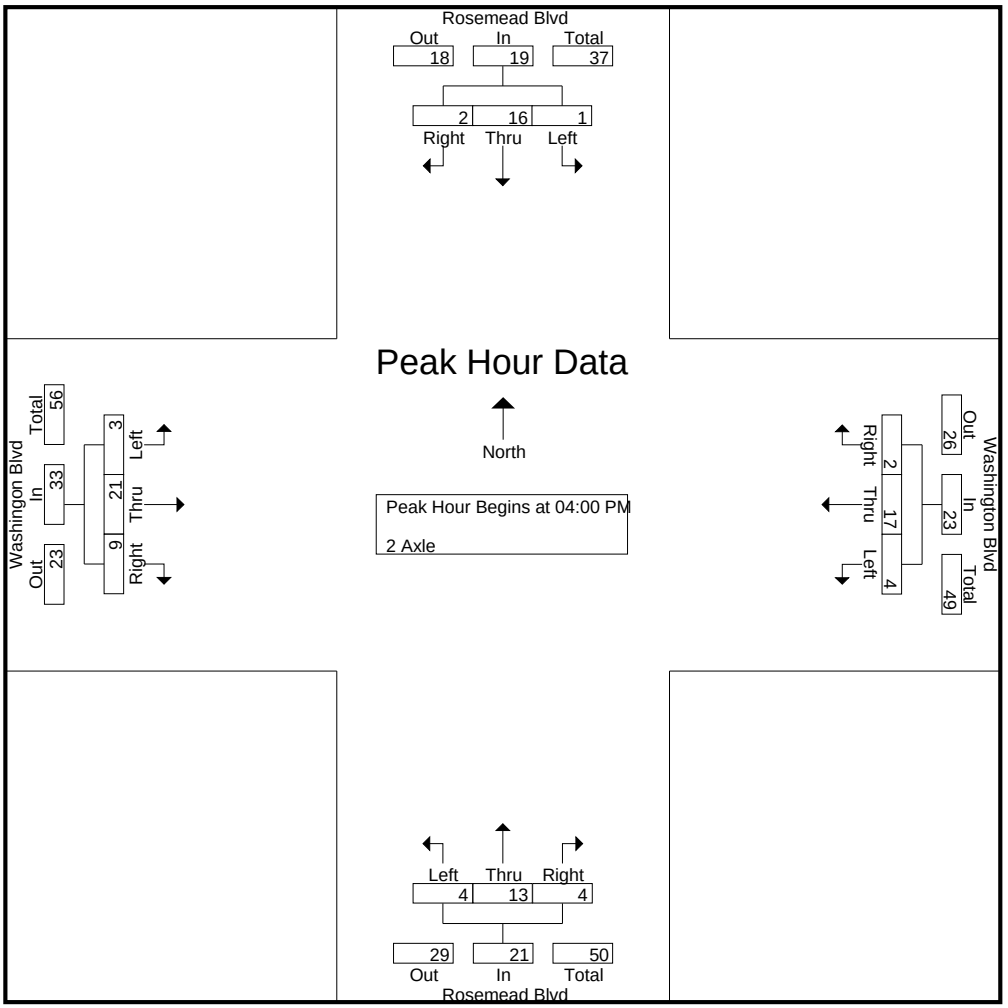
File Name : Paramount_Washington_2-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Rosemead Blvd Southbound				Washington Blvd Westbound				Rosemead Blvd Northbound				Washingon Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**5**	0	5	0	5	0	5	1	2	**2**	5	0	3	**4**	7	22
04:15 PM	0	2	**1**	3	1	3	**1**	5	0	**7**	0	**7**	**3**	**7**	2	**12**	**27**
04:30 PM	0	4	0	4	0	**6**	1	**7**	0	4	1	5	0	7	1	8	24
04:45 PM	**1**	5	1	**7**	**3**	3	0	6	**3**	0	1	4	0	4	2	6	23
Total Volume	1	16	2	19	4	17	2	23	4	13	4	21	3	21	9	33	96
% App. Total	5.3	84.2	10.5		17.4	73.9	8.7		19	61.9	19		9.1	63.6	27.3		
PHF	.250	.800	.500	.679	.333	.708	.500	.821	.333	.464	.500	.750	.250	.750	.563	.688	.889



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Paramount_Washington_3-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- 3 Axle

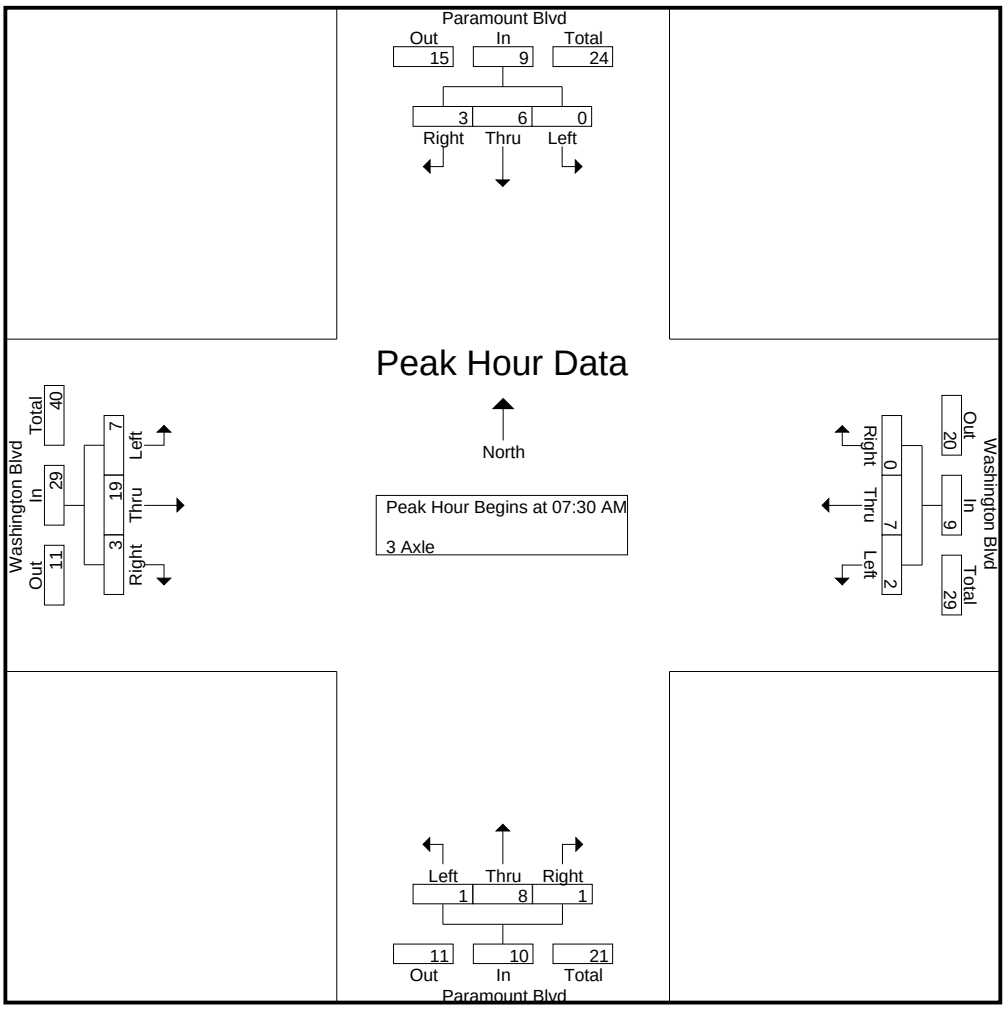
	Paramount Blvd Southbound			Washington Blvd Westbound			Paramount Blvd Northbound			Washington Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	0	0	3	0	1	1	0	0	2	1	8
07:15 AM	0	0	0	0	1	0	0	0	0	0	1	1	3
07:30 AM	0	1	1	1	2	0	0	1	1	0	4	0	11
07:45 AM	0	2	1	0	1	0	1	2	0	1	5	2	15
Total	0	3	2	1	7	0	2	4	1	1	12	4	37
08:00 AM	0	2	0	0	2	0	0	3	0	1	5	0	13
08:15 AM	0	1	1	1	2	0	0	2	0	5	5	1	18
08:30 AM	0	0	0	0	4	0	0	1	0	0	6	0	11
08:45 AM	0	2	2	0	2	0	0	0	0	0	3	0	9
Total	0	5	3	1	10	0	0	6	0	6	19	1	51
04:00 PM	0	0	0	0	5	1	1	0	0	2	5	0	14
04:15 PM	0	2	0	0	2	0	0	2	1	0	2	0	9
04:30 PM	0	0	1	0	3	0	1	0	0	0	3	0	8
04:45 PM	0	1	1	0	3	0	0	1	0	0	2	0	8
Total	0	3	2	0	13	1	2	3	1	2	12	0	39
05:00 PM	0	0	3	1	4	1	0	1	0	2	0	0	12
05:15 PM	0	1	0	0	1	0	0	1	0	3	0	0	6
05:30 PM	1	1	1	1	4	0	0	0	0	0	0	0	8
05:45 PM	1	0	1	0	2	0	0	0	0	0	4	0	8
Total	2	2	5	2	11	1	0	2	0	5	4	0	34
Grand Total	2	13	12	4	41	2	4	15	2	14	47	5	161
Apprch %	7.4	48.1	44.4	8.5	87.2	4.3	19	71.4	9.5	21.2	71.2	7.6	
Total %	1.2	8.1	7.5	2.5	25.5	1.2	2.5	9.3	1.2	8.7	29.2	3.1	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Paramount_Washington_3-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Paramount Blvd Southbound				Washington Blvd Westbound				Paramount Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	1	**1**	2	**1**	**2**	0	**3**	0	1	**1**	2	0	4	0	4	11
07:45 AM	0	**2**	1	**3**	0	1	0	1	**1**	2	0	**3**	1	**5**	**2**	8	15
08:00 AM	0	2	0	2	0	2	0	2	0	**3**	0	3	1	5	0	6	13
08:15 AM	0	1	1	2	1	2	0	3	0	2	0	2	**5**	5	1	**11**	**18**
Total Volume	0	6	3	9	2	7	0	9	1	8	1	10	7	19	3	29	57
% App. Total	0	66.7	33.3		22.2	77.8	0		10	80	10		24.1	65.5	10.3		
PHF	.000	.750	.750	.750	.500	.875	.000	.750	.250	.667	.250	.833	.350	.950	.375	.659	.792

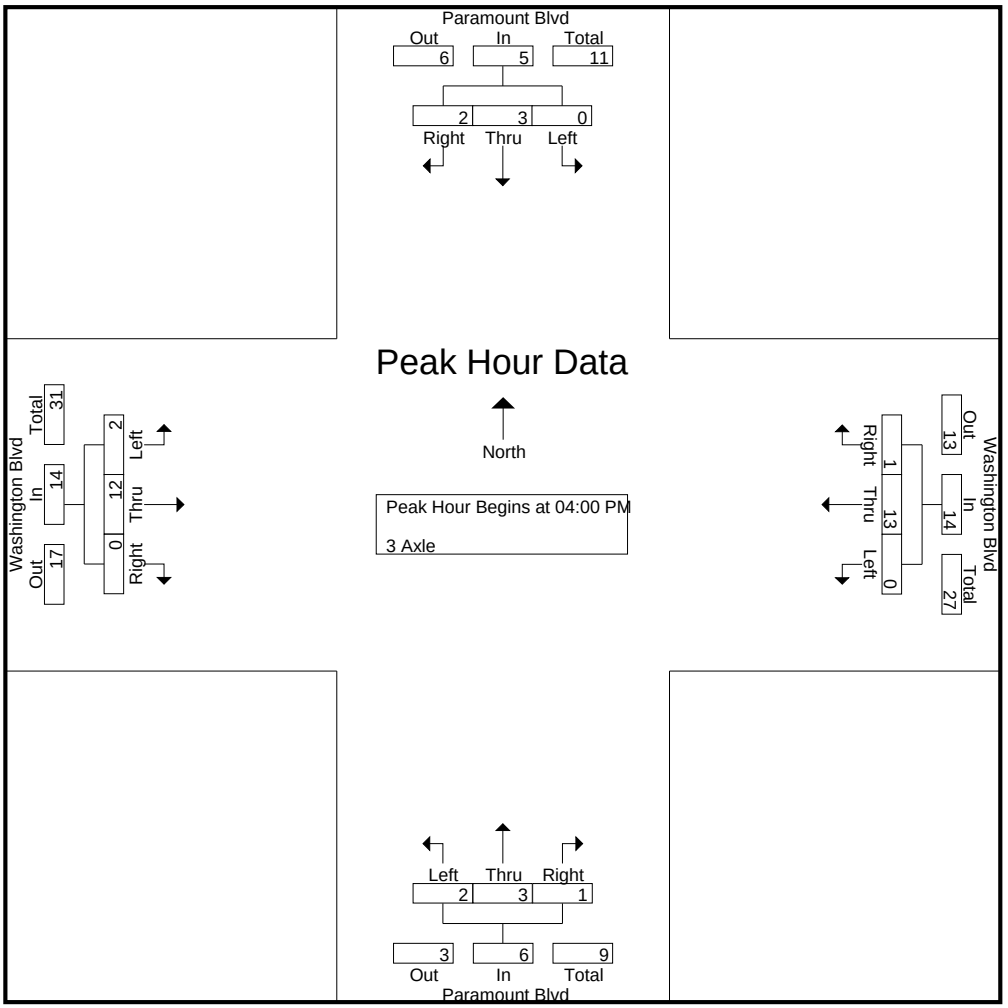


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Paramount_Washington_3-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Paramount Blvd Southbound				Washington Blvd Westbound				Paramount Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	**5**	**1**	**6**	**1**	0	0	1	**2**	**5**	0	**7**	**14**
04:15 PM	0	**2**	0	**2**	0	2	0	2	0	**2**	**1**	**3**	0	2	0	2	9
04:30 PM	0	0	**1**	1	0	3	0	3	1	0	0	1	0	3	0	3	8
04:45 PM	0	1	1	2	0	3	0	3	0	1	0	1	0	2	0	2	8
Total Volume	0	3	2	5	0	13	1	14	2	3	1	6	2	12	0	14	39
% App. Total	0	60	40		0	92.9	7.1		33.3	50	16.7		14.3	85.7	0		
PHF	.000	.375	.500	.625	.000	.650	.250	.583	.500	.375	.250	.500	.250	.600	.000	.500	.696



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Paramount_Washington_4+Axles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- 4+ Axles

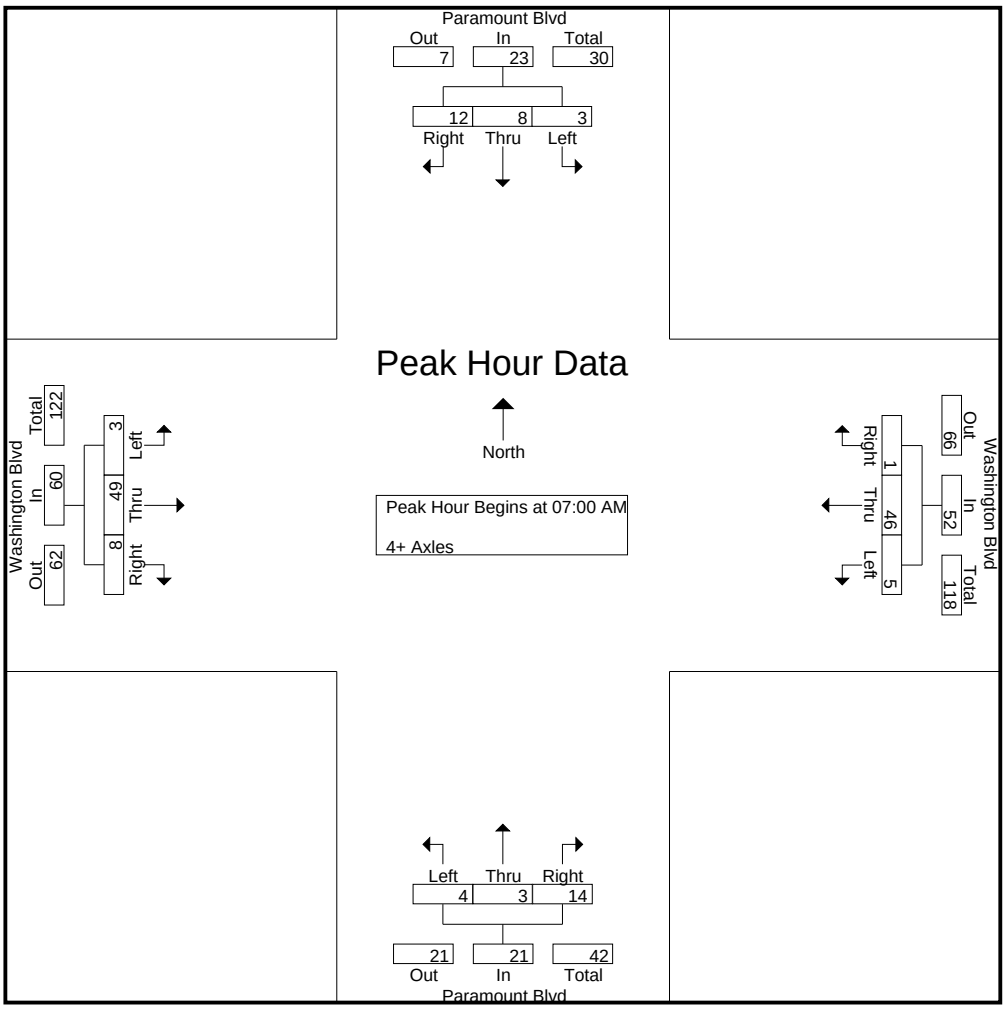
	Paramount Blvd Southbound			Washington Blvd Westbound			Paramount Blvd Northbound			Washington Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	3	3	2	12	0	1	0	6	1	9	4	41
07:15 AM	1	1	1	0	13	0	0	2	5	1	16	1	41
07:30 AM	1	2	5	1	7	1	0	1	2	0	10	2	32
07:45 AM	1	2	3	2	14	0	3	0	1	1	14	1	42
Total	3	8	12	5	46	1	4	3	14	3	49	8	156
08:00 AM	0	0	1	2	9	0	2	4	2	0	9	1	30
08:15 AM	1	1	3	0	8	1	3	4	3	0	10	2	36
08:30 AM	1	0	0	1	11	0	0	5	3	2	11	1	35
08:45 AM	3	3	3	1	8	2	2	3	1	5	10	0	41
Total	5	4	7	4	36	3	7	16	9	7	40	4	142
04:00 PM	0	2	1	0	7	0	1	1	2	1	3	2	20
04:15 PM	0	1	2	3	5	0	1	1	1	0	8	0	22
04:30 PM	0	1	1	1	6	0	3	1	1	1	9	2	26
04:45 PM	0	2	2	1	8	0	1	4	0	0	9	1	28
Total	0	6	6	5	26	0	6	7	4	2	29	5	96
05:00 PM	0	1	2	1	8	1	1	1	1	1	7	3	27
05:15 PM	0	0	1	0	8	0	0	2	0	0	7	5	23
05:30 PM	0	2	1	0	8	0	0	0	0	2	4	0	17
05:45 PM	0	0	1	0	4	0	0	1	0	1	5	0	12
Total	0	3	5	1	28	1	1	4	1	4	23	8	79
Grand Total	8	21	30	15	136	5	18	30	28	16	141	25	473
Apprch %	13.6	35.6	50.8	9.6	87.2	3.2	23.7	39.5	36.8	8.8	77.5	13.7	
Total %	1.7	4.4	6.3	3.2	28.8	1.1	3.8	6.3	5.9	3.4	29.8	5.3	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Paramount_Washington_4+Axles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Paramount Blvd Southbound				Washington Blvd Westbound				Paramount Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	**3**	3	6	**2**	12	0	14	1	0	**6**	**7**	**1**	9	**4**	14	41
07:15 AM	**1**	1	1	3	0	13	0	13	0	**2**	5	7	1	**16**	1	**18**	41
07:30 AM	1	2	**5**	**8**	1	7	**1**	9	0	1	2	3	0	10	2	12	32
07:45 AM	1	2	3	6	2	**14**	0	**16**	**3**	0	1	4	1	14	1	16	**42**
Total Volume	3	8	12	23	5	46	1	52	4	3	14	21	3	49	8	60	156
% App. Total	13	34.8	52.2		9.6	88.5	1.9		19	14.3	66.7		5	81.7	13.3		
PHF	.750	.667	.600	.719	.625	.821	.250	.813	.333	.375	.583	.750	.750	.766	.500	.833	.929

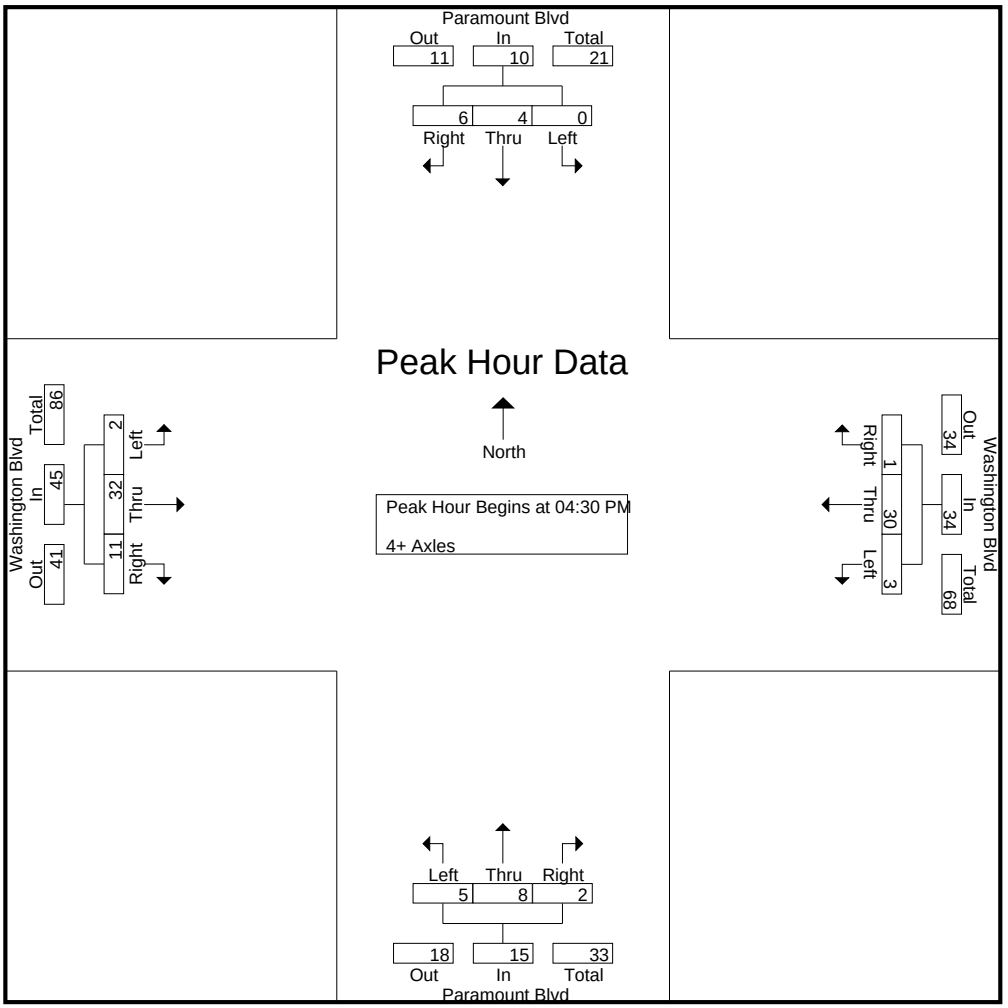


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Paramount_Washington_4+Axles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Paramount Blvd Southbound				Washington Blvd Westbound				Paramount Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	1	1	2	**1**	6	0	7	**3**	1	**1**	**5**	**1**	**9**	2	**12**	26
04:45 PM	0	**2**	**2**	**4**	1	**8**	0	9	1	**4**	0	5	0	9	1	10	**28**
05:00 PM	0	1	2	3	1	8	**1**	**10**	1	1	1	3	1	7	3	11	27
05:15 PM	0	0	1	1	0	8	0	8	0	2	0	2	0	7	**5**	12	23
Total Volume	0	4	6	10	3	30	1	34	5	8	2	15	2	32	11	45	104
% App. Total	0	40	60		8.8	88.2	2.9		33.3	53.3	13.3		4.4	71.1	24.4		
PHF	.000	.500	.750	.625	.750	.938	.250	.850	.417	.500	.500	.750	.500	.889	.550	.938	.929



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Paramount_Washington_BP
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- Bikes & Peds

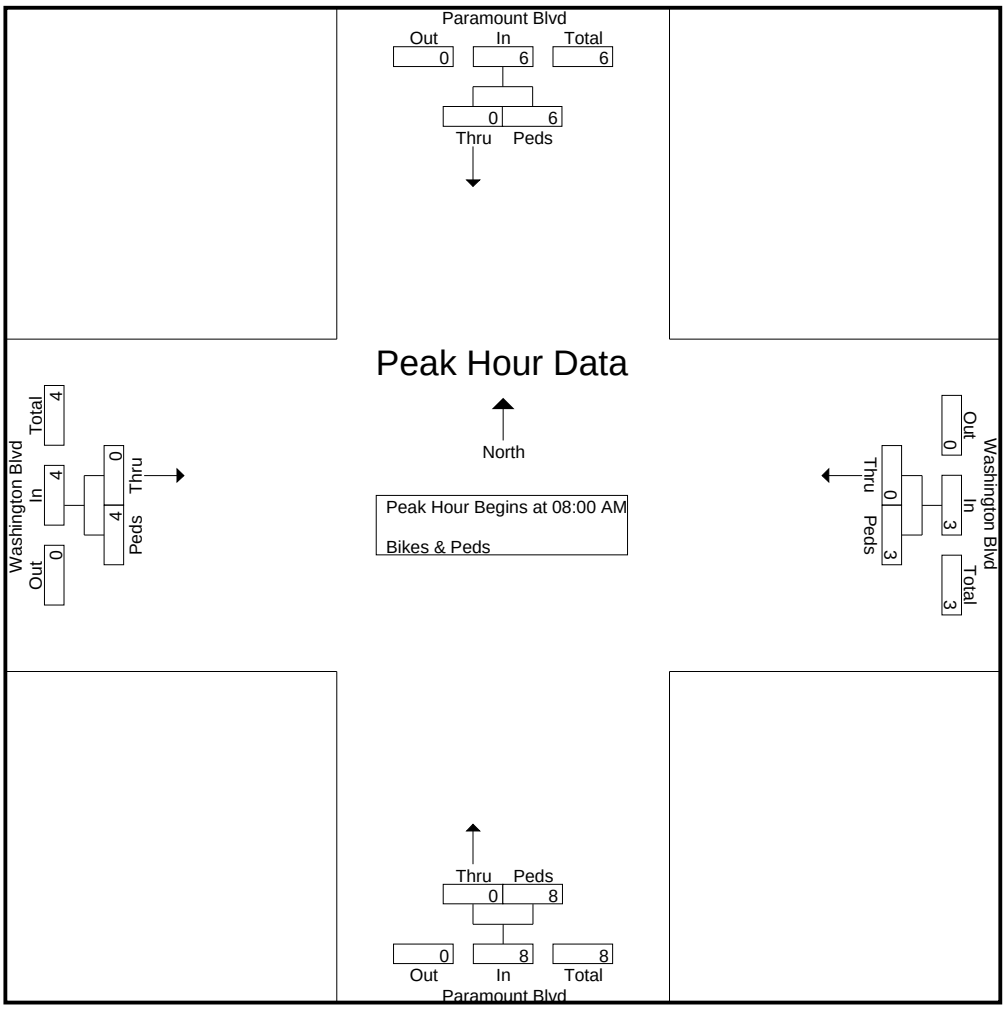
	Paramount Blvd Southbound		Washington Blvd Westbound		Paramount Blvd Northbound		Washington Blvd Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:00 AM	0	0	1	0	0	0	0	0	1
07:15 AM	0	0	0	2	0	7	1	0	10
07:30 AM	0	0	0	0	0	1	0	1	2
07:45 AM	0	0	0	0	1	0	0	0	1
Total	0	0	1	2	1	8	1	1	14
08:00 AM	0	0	0	1	0	2	0	0	3
08:15 AM	0	3	0	2	0	4	0	2	11
08:30 AM	0	1	0	0	0	0	0	2	3
08:45 AM	0	2	0	0	0	2	0	0	4
Total	0	6	0	3	0	8	0	4	21
04:00 PM	1	1	1	2	1	1	1	1	9
04:15 PM	0	2	0	0	0	2	0	1	5
04:30 PM	0	3	0	8	1	1	0	0	13
04:45 PM	2	0	0	0	1	1	0	0	4
Total	3	6	1	10	3	5	1	2	31
05:00 PM	1	1	0	2	0	8	0	3	15
05:15 PM	1	3	0	0	0	1	0	2	7
05:30 PM	2	0	1	0	0	0	0	0	3
05:45 PM	1	2	0	2	1	2	0	0	8
Total	5	6	1	4	1	11	0	5	33
Grand Total	8	18	3	19	5	32	2	12	99
Apprch %	30.8	69.2	13.6	86.4	13.5	86.5	14.3	85.7	
Total %	8.1	18.2	3	19.2	5.1	32.3	2	12.1	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Paramount_Washington_BP
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Paramount Blvd Southbound			Washington Blvd Westbound			Paramount Blvd Northbound			Washington Blvd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	0	0	0	1	1	0	2	2	0	0	0	3
08:15 AM	0	**3**	**3**	0	**2**	**2**	0	**4**	**4**	0	**2**	**2**	**11**
08:30 AM	0	1	1	0	0	0	0	0	0	0	2	2	3
08:45 AM	0	2	2	0	0	0	0	2	2	0	0	0	4
Total Volume	0	6	6	0	3	3	0	8	8	0	4	4	21
% App. Total	0	100		0	100		0	100		0	100		
PHF	.000	.500	.500	.000	.375	.375	.000	.500	.500	.000	.500	.500	.477

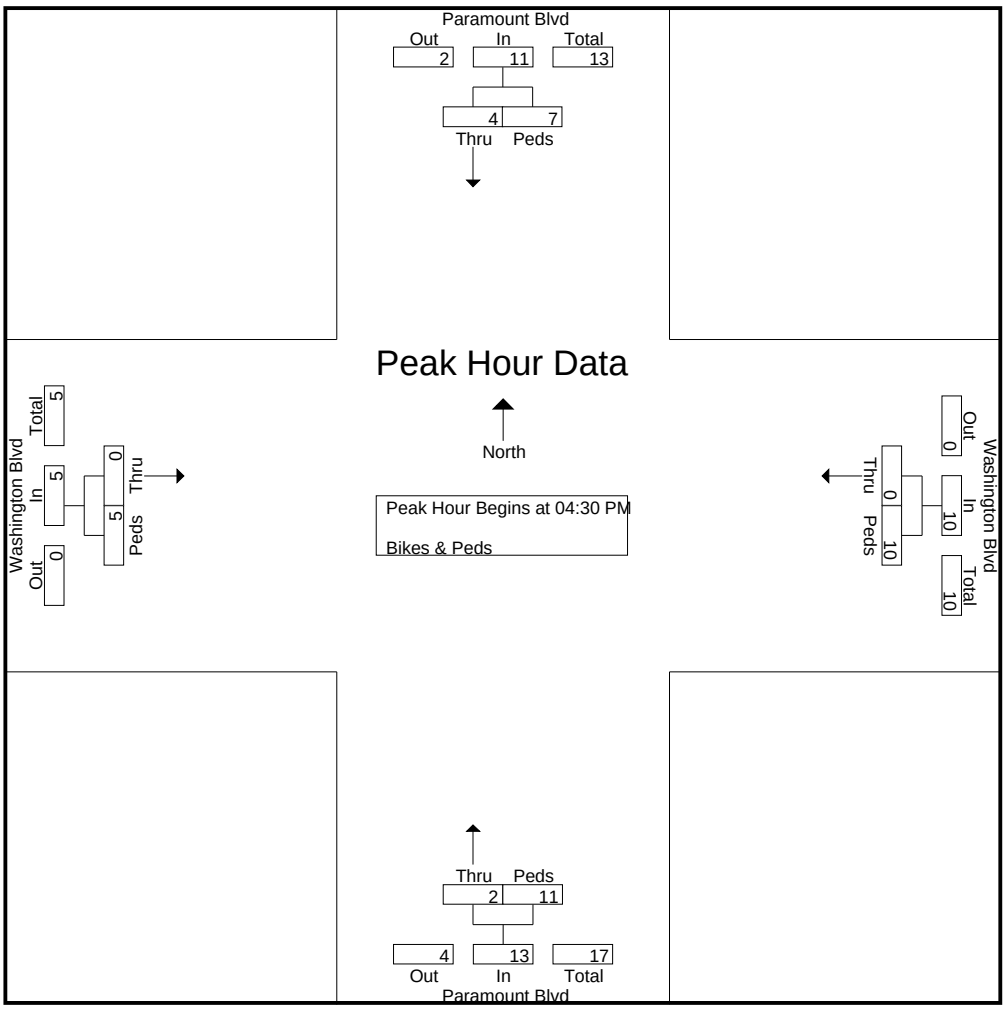


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Paramount_Washington_BP
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Paramount Blvd Southbound			Washington Blvd Westbound			Paramount Blvd Northbound			Washington Blvd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	0	**3**	3	0	**8**	**8**	**1**	1	2	0	0	0	13
04:45 PM	**2**	0	2	0	0	0	1	1	2	0	0	0	4
05:00 PM	1	1	2	0	2	2	0	**8**	**8**	0	**3**	**3**	**15**
05:15 PM	1	3	**4**	0	0	0	0	1	1	0	2	2	7
Total Volume	4	7	11	0	10	10	2	11	13	0	5	5	39
% App. Total	36.4	63.6		0	100		15.4	84.6		0	100		
PHF	.500	.583	.688	.000	.313	.313	.500	.344	.406	.000	.417	.417	.650



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Crossway_Washington_Passenger
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- Passenger

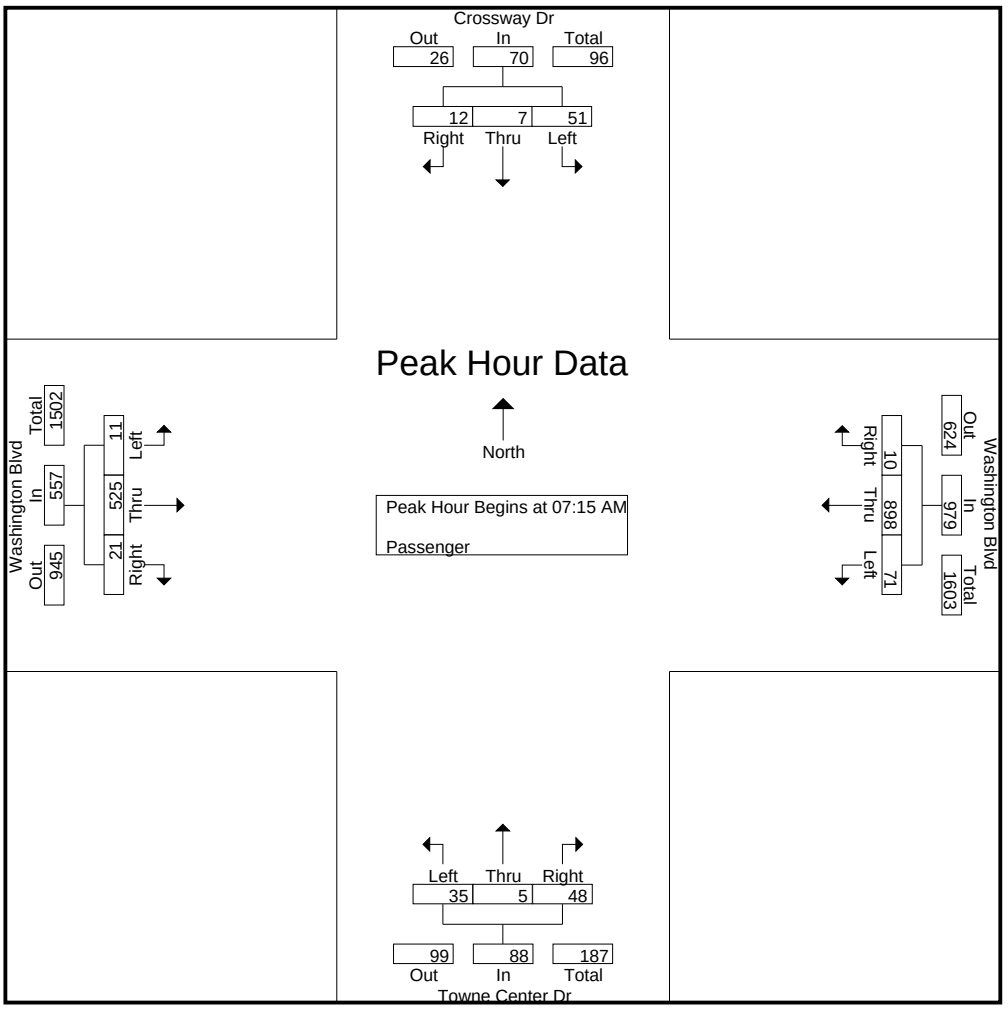
	Crossway Dr Southbound			Washington Blvd Westbound			Towne Center Dr Northbound			Washington Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	11	2	5	14	167	2	11	1	6	0	146	1	366
07:15 AM	17	2	2	14	235	1	12	2	6	1	102	8	402
07:30 AM	7	2	1	22	270	3	7	0	16	4	137	2	471
07:45 AM	15	1	6	24	217	2	9	2	11	3	149	7	446
Total	50	7	14	74	889	8	39	5	39	8	534	18	1685
08:00 AM	12	2	3	11	176	4	7	1	15	3	137	4	375
08:15 AM	11	2	1	18	176	8	6	2	5	2	121	4	356
08:30 AM	7	3	4	16	157	8	9	1	9	2	127	5	348
08:45 AM	6	5	4	18	173	8	1	1	15	4	116	6	357
Total	36	12	12	63	682	28	23	5	44	11	501	19	1436
04:00 PM	7	3	2	44	170	11	32	8	36	34	280	12	639
04:15 PM	14	5	5	41	194	11	40	11	33	31	290	15	690
04:30 PM	13	7	4	40	206	13	31	10	39	36	300	19	718
04:45 PM	12	2	2	43	181	12	40	10	32	21	326	18	699
Total	46	17	13	168	751	47	143	39	140	122	1196	64	2746
05:00 PM	18	5	4	33	194	13	36	10	35	24	303	14	689
05:15 PM	22	2	6	45	179	9	30	7	27	24	339	10	700
05:30 PM	18	5	2	33	175	18	36	8	33	15	359	15	717
05:45 PM	20	4	7	38	143	12	49	5	30	16	313	18	655
Total	78	16	19	149	691	52	151	30	125	79	1314	57	2761
Grand Total	210	52	58	454	3013	135	356	79	348	220	3545	158	8628
Apprch %	65.6	16.2	18.1	12.6	83.6	3.7	45.5	10.1	44.4	5.6	90.4	4	
Total %	2.4	0.6	0.7	5.3	34.9	1.6	4.1	0.9	4	2.5	41.1	1.8	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Crossway_Washington_Passenger
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Crossway Dr Southbound				Washington Blvd Westbound				Towne Center Dr Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**17**	**2**	2	21	14	235	1	250	**12**	**2**	6	20	1	102	**8**	111	402
07:30 AM	7	2	1	10	22	**270**	3	**295**	7	0	**16**	**23**	**4**	137	2	143	**471**
07:45 AM	15	1	**6**	**22**	**24**	217	2	243	9	2	11	22	3	**149**	7	**159**	446
08:00 AM	12	2	3	17	11	176	**4**	191	7	1	15	23	3	137	4	144	375
Total Volume	51	7	12	70	71	898	10	979	35	5	48	88	11	525	21	557	1694
% App. Total	72.9	10	17.1		7.3	91.7	1		39.8	5.7	54.5		2	94.3	3.8		
PHF	.750	.875	.500	.795	.740	.831	.625	.830	.729	.625	.750	.957	.688	.881	.656	.876	.899

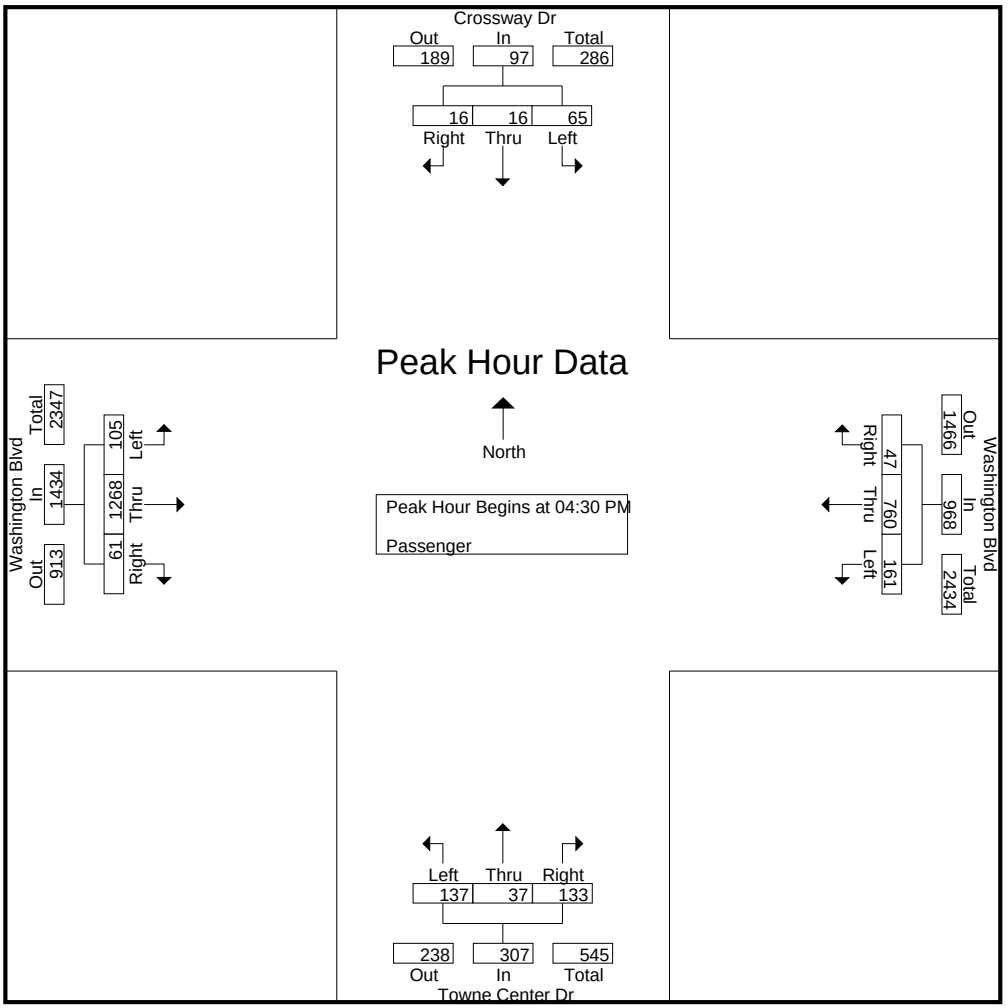


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Crossway_Washington_Passenger
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Crossway Dr Southbound				Washington Blvd Westbound				Towne Center Dr Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	13	**7**	4	24	40	**206**	**13**	**259**	31	**10**	**39**	80	**36**	300	**19**	355	**718**
04:45 PM	12	2	2	16	43	181	12	236	**40**	10	32	**82**	21	326	18	365	699
05:00 PM	18	5	4	27	33	194	13	240	36	10	35	81	24	303	14	341	689
05:15 PM	**22**	2	**6**	**30**	**45**	179	9	233	30	7	27	64	24	**339**	10	**373**	700
Total Volume	65	16	16	97	161	760	47	968	137	37	133	307	105	1268	61	1434	2806
% App. Total	67	16.5	16.5		16.6	78.5	4.9		44.6	12.1	43.3		7.3	88.4	4.3		
PHF	.739	.571	.667	.808	.894	.922	.904	.934	.856	.925	.853	.936	.729	.935	.803	.961	.977



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Crossway_Washington_Buses
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- Buses

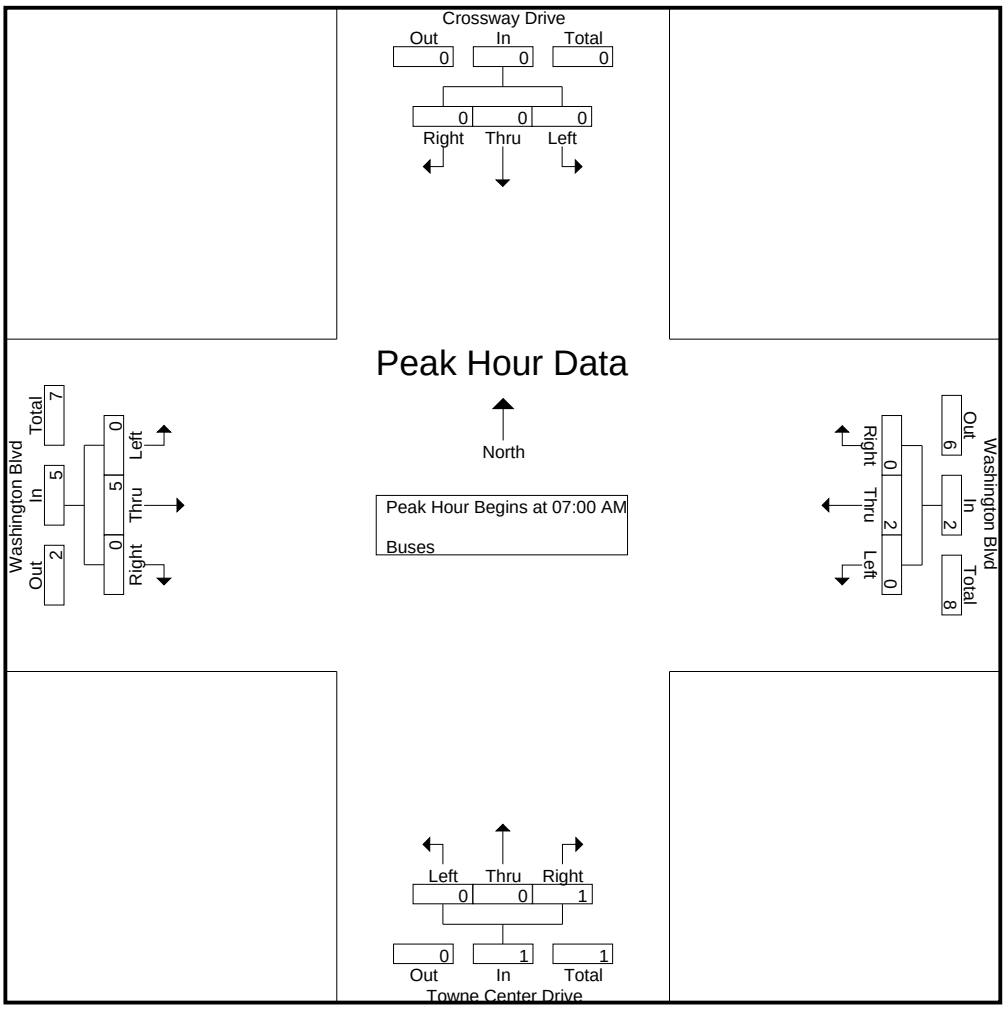
	Crossway Drive Southbound			Washington Blvd Westbound			Towne Center Drive Northbound			Washington Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
07:15 AM	0	0	0	0	1	0	0	0	0	0	2	0	3
07:30 AM	0	0	0	0	1	0	0	0	1	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
Total	0	0	0	0	2	0	0	0	1	0	5	0	8
08:15 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
08:30 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	2	0	0	0	0	0	3	0	5
04:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
Total	0	0	0	0	3	0	0	0	0	0	1	0	4
05:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
05:30 PM	2	0	0	0	0	0	0	0	0	0	1	0	3
05:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
Total	2	0	0	0	3	0	0	0	0	0	3	0	8
Grand Total	2	0	0	0	10	0	0	0	1	0	12	0	25
Apprch %	100	0	0	0	100	0	0	0	100	0	100	0	
Total %	8	0	0	0	40	0	0	0	4	0	48	0	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Crossway_Washington_Buses
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Crossway Drive Southbound				Washington Blvd Westbound				Towne Center Drive Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	**2**	0	**2**	**3**
07:30 AM	0	0	0	0	0	1	0	1	0	0	**1**	**1**	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total Volume	0	0	0	0	0	2	0	2	0	0	1	1	0	5	0	5	8
% App. Total	0	0	0		0	100	0		0	0	100		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.250	.250	.000	.625	.000	.625	.667

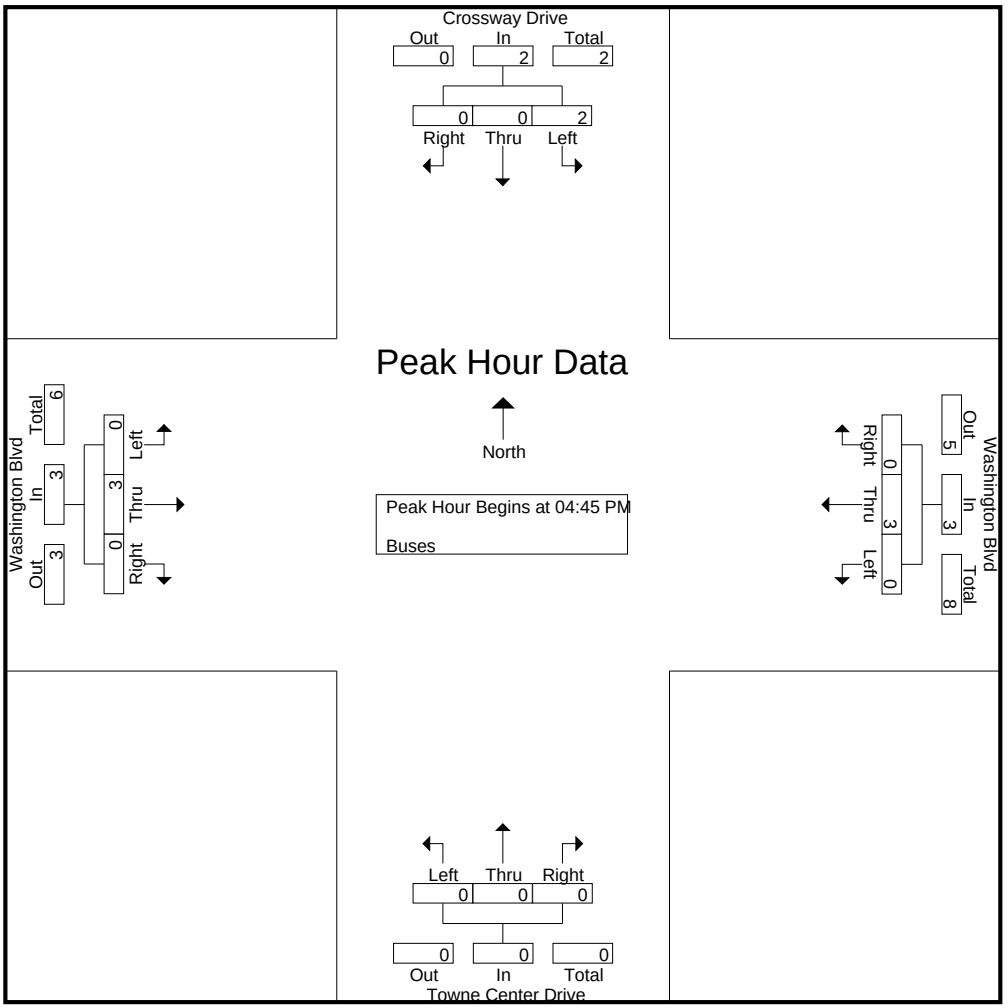


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Crossway_Washington_Buses
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Crossway Drive Southbound				Washington Blvd Westbound				Towne Center Drive Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**	2
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:30 PM	**2**	0	0	**2**	0	0	0	0	0	0	0	0	0	1	0	1	**3**
Total Volume	2	0	0	2	0	3	0	3	0	0	0	0	0	3	0	3	8
% App. Total	100	0	0		0	100	0		0	0	0		0	100	0		
PHF	.250	.000	.000	.250	.000	.750	.000	.750	.000	.000	.000	.000	.000	.750	.000	.750	.667



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Crossway_Washington_Motorcycles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- Motorcycles

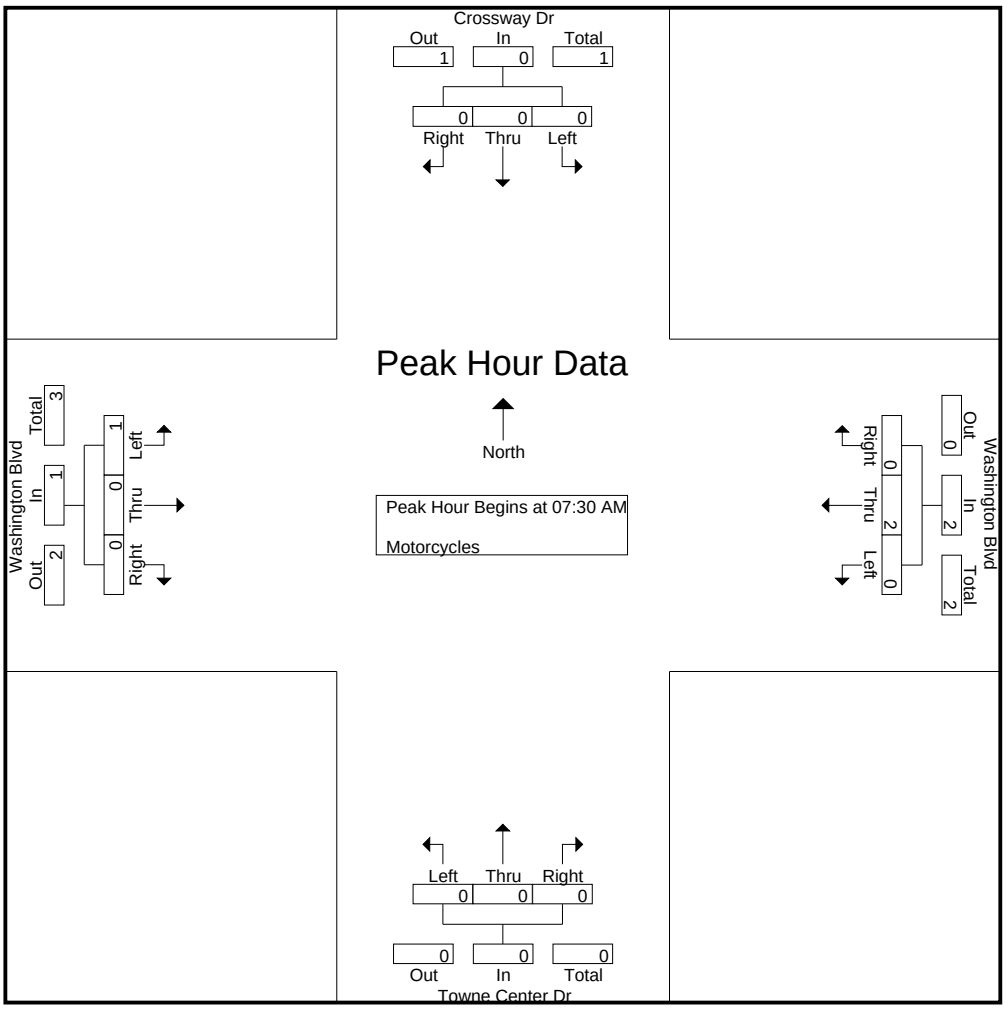
	Crossway Dr Southbound			Washington Blvd Westbound			Towne Center Dr Northbound			Washington Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	0	0	1
08:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	0	0	0	0	2	0	0	0	0	0	0	0	2
04:00 PM	0	0	0	0	0	0	0	0	0	1	1	0	2
04:15 PM	0	0	0	0	2	0	0	0	0	1	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	2	0	0	2
04:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
Total	0	0	0	0	3	0	0	0	0	4	2	0	9
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	2	0	0	2
05:45 PM	0	0	0	0	1	0	0	0	0	1	0	0	2
Total	0	0	0	0	1	0	0	0	0	6	0	0	7
Grand Total	0	0	0	0	6	0	0	0	0	11	2	0	19
Apprch %	0	0	0	0	100	0	0	0	0	84.6	15.4	0	
Total %	0	0	0	0	31.6	0	0	0	0	57.9	10.5	0	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Crossway_Washington_Motorcycles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Crossway Dr Southbound				Washington Blvd Westbound				Towne Center Dr Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	**1**	**1**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	1	0	0	1	3
% App. Total	0	0	0		0	100	0		0	0	0		100	0	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.250	.000	.000	.250	.750

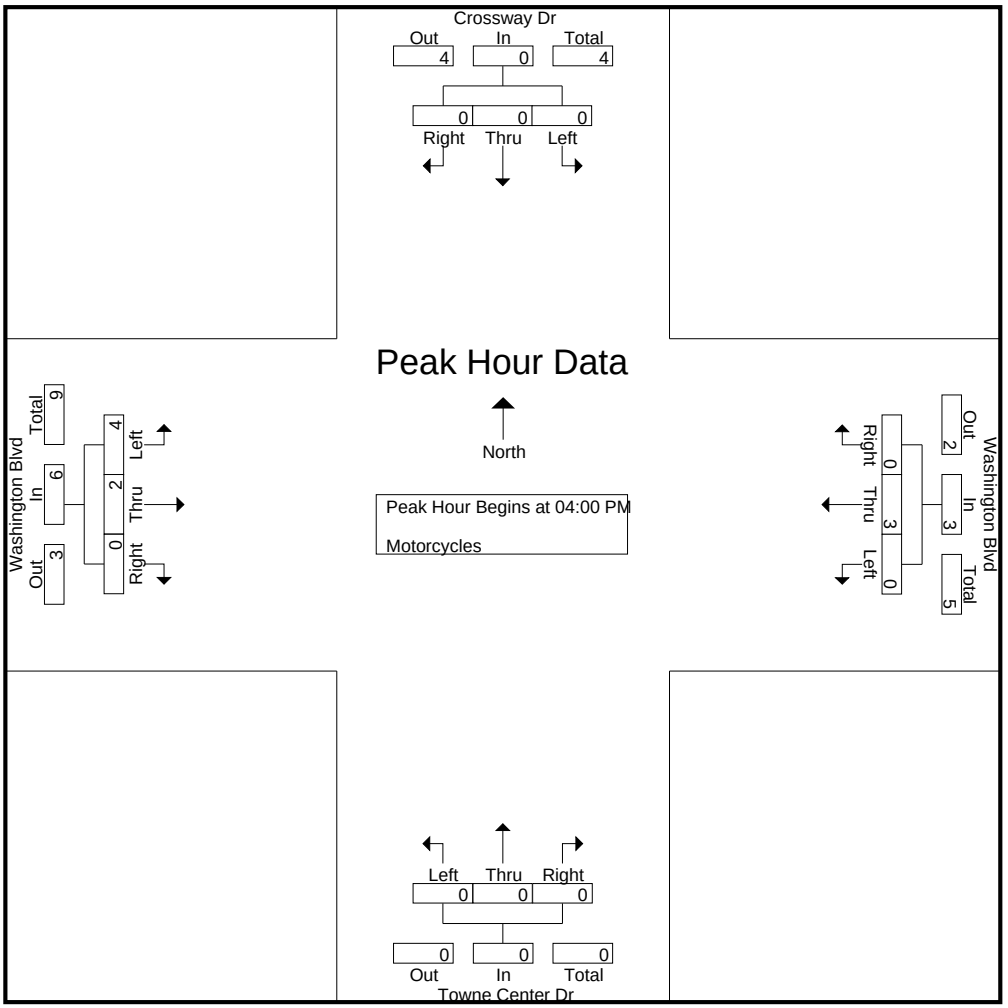


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Crossway_Washington_Motorcycles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Crossway Dr Southbound				Washington Blvd Westbound				Towne Center Dr Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**	0	**2**	2
04:15 PM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	1	0	0	1	**3**
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	0	2	2
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	4	2	0	6	9
% App. Total	0	0	0		0	100	0		0	0	0		66.7	33.3	0		
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.500	.500	.000	.750	.750



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Crossway_Washington_2-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- 2 Axle

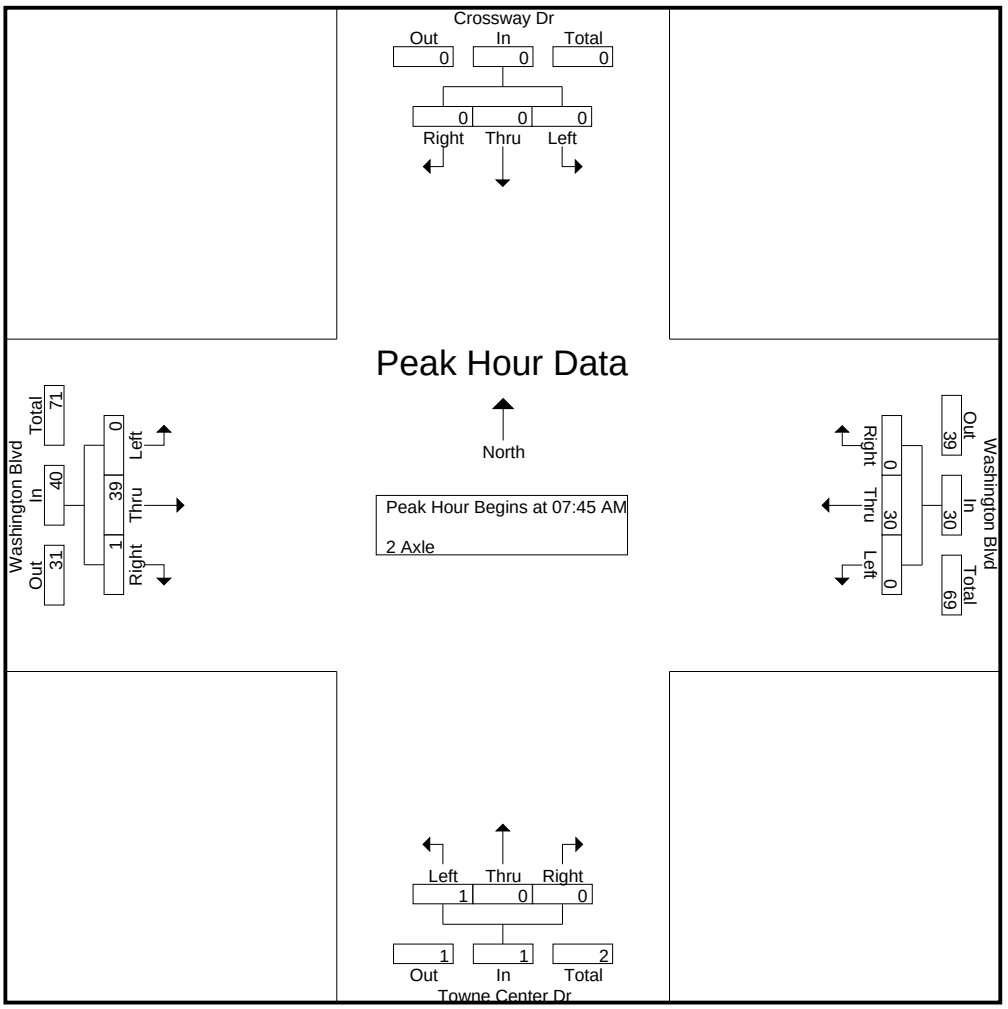
	Crossway Dr Southbound			Washington Blvd Westbound			Towne Center Dr Northbound			Washington Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	0	0	3	0	0	0	0	0	5	0	8
07:15 AM	1	0	0	0	4	0	0	0	1	0	11	1	18
07:30 AM	0	0	0	0	8	0	1	0	1	0	7	0	17
07:45 AM	0	0	0	0	10	0	1	0	0	0	5	0	16
Total	1	0	0	0	25	0	2	0	2	0	28	1	59
08:00 AM	0	0	0	0	4	0	0	0	0	0	8	0	12
08:15 AM	0	0	0	0	10	0	0	0	0	0	9	1	20
08:30 AM	0	0	0	0	6	0	0	0	0	0	17	0	23
08:45 AM	0	0	0	0	8	0	0	0	0	0	6	0	14
Total	0	0	0	0	28	0	0	0	0	0	40	1	69
04:00 PM	0	0	0	0	5	0	0	0	0	0	4	0	9
04:15 PM	0	0	0	0	7	0	0	0	0	0	5	0	12
04:30 PM	0	0	0	0	3	0	1	0	0	0	8	0	12
04:45 PM	0	0	0	0	4	0	0	0	0	0	8	0	12
Total	0	0	0	0	19	0	1	0	0	0	25	0	45
05:00 PM	0	0	0	0	3	0	0	0	0	0	9	0	12
05:15 PM	0	0	0	0	2	0	0	0	0	0	3	0	5
05:30 PM	0	0	0	0	0	1	0	1	0	0	6	0	8
05:45 PM	0	0	0	1	2	0	0	0	1	0	3	0	7
Total	0	0	0	1	7	1	0	1	1	0	21	0	32
Grand Total	1	0	0	1	79	1	3	1	3	0	114	2	205
Apprch %	100	0	0	1.2	97.5	1.2	42.9	14.3	42.9	0	98.3	1.7	
Total %	0.5	0	0	0.5	38.5	0.5	1.5	0.5	1.5	0	55.6	1	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Crossway_Washington_2-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Crossway Dr Southbound				Washington Blvd Westbound				Towne Center Dr Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	**10**	0	**10**	**1**	0	0	**1**	0	5	0	5	16
08:00 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	8	0	8	12
08:15 AM	0	0	0	0	0	10	0	10	0	0	0	0	0	9	**1**	10	20
08:30 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	**17**	0	**17**	**23**
Total Volume	0	0	0	0	0	30	0	30	1	0	0	1	0	39	1	40	71
% App. Total	0	0	0		0	100	0		100	0	0		0	97.5	2.5		
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.250	.000	.000	.250	.000	.574	.250	.588	.772

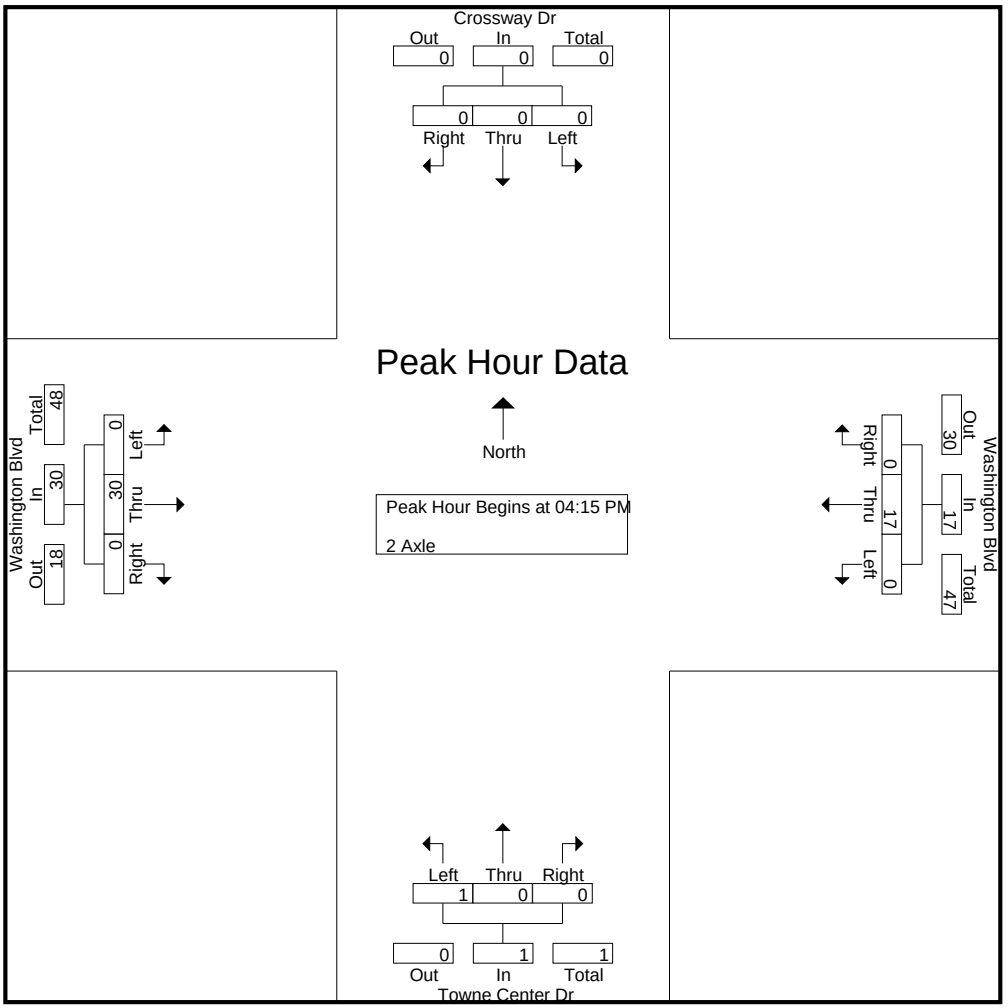


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Crossway_Washington_2-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Crossway Dr Southbound				Washington Blvd Westbound				Towne Center Dr Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	**7**	0	**7**	0	0	0	0	0	5	0	5	**12**
04:30 PM	0	0	0	0	0	3	0	3	**1**	0	0	**1**	0	8	0	8	12
04:45 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	8	0	8	12
05:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	**9**	0	**9**	12
Total Volume	0	0	0	0	0	17	0	17	1	0	0	1	0	30	0	30	48
% App. Total	0	0	0		0	100	0		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.607	.000	.607	.250	.000	.000	.250	.000	.833	.000	.833	1.00



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Crossway_Washington_3-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- 3 Axle

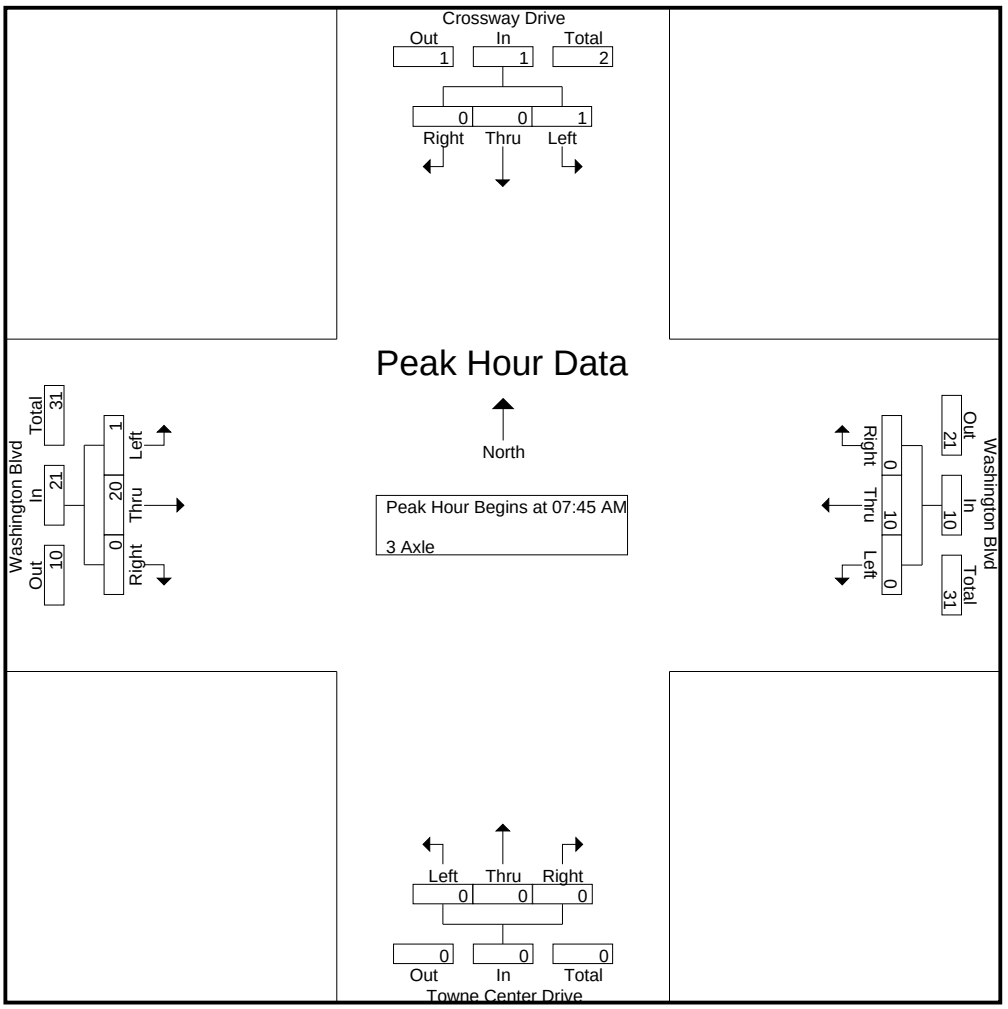
	Crossway Drive Southbound			Washington Blvd Westbound			Towne Center Drive Northbound			Washington Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	0	0	3	0	0	0	0	0	2	0	5
07:15 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
07:30 AM	0	0	0	0	2	0	0	0	0	0	6	0	8
07:45 AM	0	0	0	0	1	0	0	0	0	0	5	0	6
Total	0	0	0	0	7	0	0	0	0	0	14	0	21
08:00 AM	0	0	0	0	1	0	0	0	0	1	7	0	9
08:15 AM	1	0	0	0	3	0	0	0	0	0	3	0	7
08:30 AM	0	0	0	0	5	0	0	0	0	0	5	0	10
08:45 AM	0	0	0	0	2	0	0	0	1	0	2	0	5
Total	1	0	0	0	11	0	0	0	1	1	17	0	31
04:00 PM	0	0	0	1	5	0	0	0	0	0	5	0	11
04:15 PM	0	0	0	0	1	0	0	0	0	0	2	0	3
04:30 PM	0	0	0	0	5	0	0	0	0	0	2	0	7
04:45 PM	0	0	0	0	6	0	0	0	0	0	2	0	8
Total	0	0	0	1	17	0	0	0	0	0	11	0	29
05:00 PM	0	0	0	0	6	0	0	0	0	0	0	0	6
05:15 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
05:30 PM	0	0	0	0	2	0	0	0	0	0	2	0	4
05:45 PM	0	0	0	0	2	0	0	0	0	0	6	0	8
Total	0	0	0	0	13	0	0	0	0	0	8	0	21
Grand Total	1	0	0	1	48	0	0	0	1	1	50	0	102
Apprch %	100	0	0	2	98	0	0	0	100	2	98	0	
Total %	1	0	0	1	47.1	0	0	0	1	1	49	0	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Crossway_Washington_3-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Crossway Drive Southbound				Washington Blvd Westbound				Towne Center Drive Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	5	0	5	6
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	**1**	**7**	0	**8**	9
08:15 AM	**1**	0	0	**1**	0	3	0	3	0	0	0	0	0	3	0	3	7
08:30 AM	0	0	0	0	0	**5**	0	**5**	0	0	0	0	0	5	0	5	**10**
Total Volume	1	0	0	1	0	10	0	10	0	0	0	0	1	20	0	21	32
% App. Total	100	0	0		0	100	0		0	0	0		4.8	95.2	0		
PHF	.250	.000	.000	.250	.000	.500	.000	.500	.000	.000	.000	.000	.250	.714	.000	.656	.800

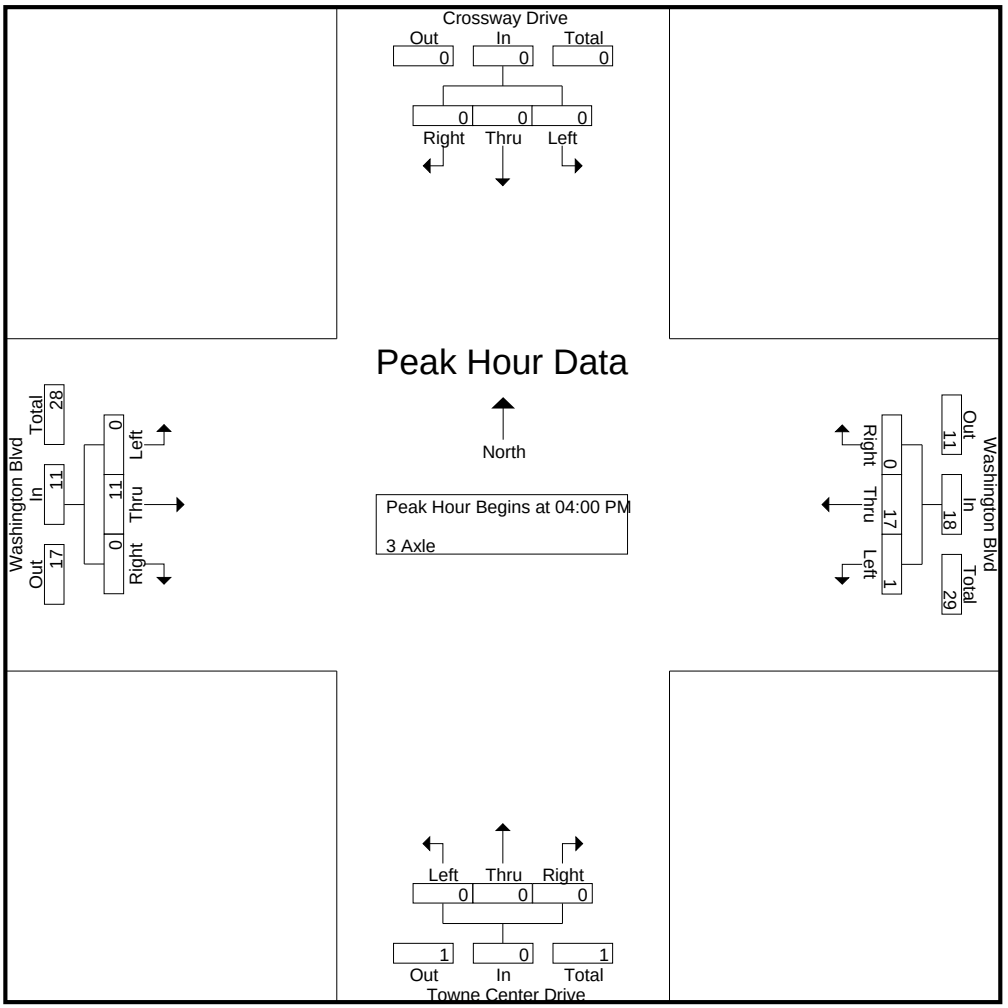


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Crossway_Washington_3-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Crossway Drive Southbound				Washington Blvd Westbound				Towne Center Drive Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	**1**	5	0	**6**	0	0	0	0	0	**5**	0	**5**	**11**
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
04:30 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	0	2	7
04:45 PM	0	0	0	0	0	**6**	0	6	0	0	0	0	0	2	0	2	8
Total Volume	0	0	0	0	1	17	0	18	0	0	0	0	0	11	0	11	29
% App. Total	0	0	0		5.6	94.4	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.250	.708	.000	.750	.000	.000	.000	.000	.000	.550	.000	.550	.659



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Crossway_Washington_4+Axles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- 4+ Axles

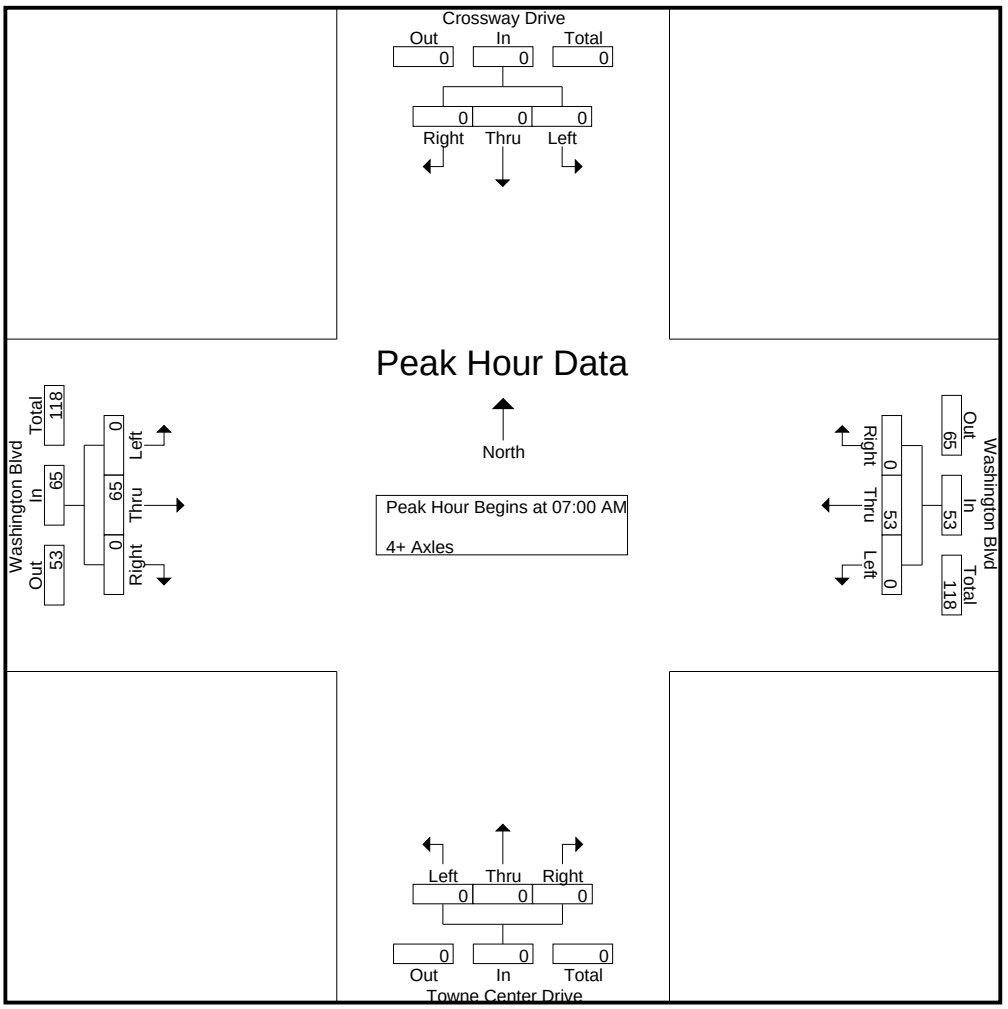
	Crossway Drive Southbound			Washington Blvd Westbound			Towne Center Drive Northbound			Washington Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	0	0	14	0	0	0	0	0	15	0	29
07:15 AM	0	0	0	0	13	0	0	0	0	0	20	0	33
07:30 AM	0	0	0	0	12	0	0	0	0	0	13	0	25
07:45 AM	0	0	0	0	14	0	0	0	0	0	17	0	31
Total	0	0	0	0	53	0	0	0	0	0	65	0	118
08:00 AM	0	0	0	0	12	0	0	0	1	0	9	0	22
08:15 AM	0	0	0	0	8	0	0	0	0	0	16	0	24
08:30 AM	0	0	0	0	11	0	0	0	1	0	15	1	28
08:45 AM	0	0	0	0	10	0	1	0	0	0	13	1	25
Total	0	0	0	0	41	0	1	0	2	0	53	2	99
04:00 PM	0	0	0	0	8	0	0	0	0	0	8	0	16
04:15 PM	0	0	0	0	7	0	0	0	0	0	10	0	17
04:30 PM	0	0	0	0	5	0	0	0	0	0	9	0	14
04:45 PM	0	0	0	0	10	0	0	0	0	0	8	0	18
Total	0	0	0	0	30	0	0	0	0	0	35	0	65
05:00 PM	0	0	0	0	9	0	0	0	0	0	6	0	15
05:15 PM	0	0	0	0	8	0	0	0	0	0	7	0	15
05:30 PM	0	0	0	0	6	0	0	0	0	0	4	0	10
05:45 PM	0	0	0	0	6	0	0	0	0	0	7	0	13
Total	0	0	0	0	29	0	0	0	0	0	24	0	53
Grand Total	0	0	0	0	153	0	1	0	2	0	177	2	335
Apprch %	0	0	0	0	100	0	33.3	0	66.7	0	98.9	1.1	
Total %	0	0	0	0	45.7	0	0.3	0	0.6	0	52.8	0.6	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Crossway_Washington_4+Axles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Crossway Drive Southbound				Washington Blvd Westbound				Towne Center Drive Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	**14**	0	**14**	0	0	0	0	0	15	0	15	29
07:15 AM	0	0	0	0	0	13	0	13	0	0	0	0	0	**20**	0	**20**	**33**
07:30 AM	0	0	0	0	0	12	0	12	0	0	0	0	0	13	0	13	25
07:45 AM	0	0	0	0	0	14	0	14	0	0	0	0	0	17	0	17	31
Total Volume	0	0	0	0	0	53	0	53	0	0	0	0	0	65	0	65	118
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.946	.000	.946	.000	.000	.000	.000	.000	.813	.000	.813	.894

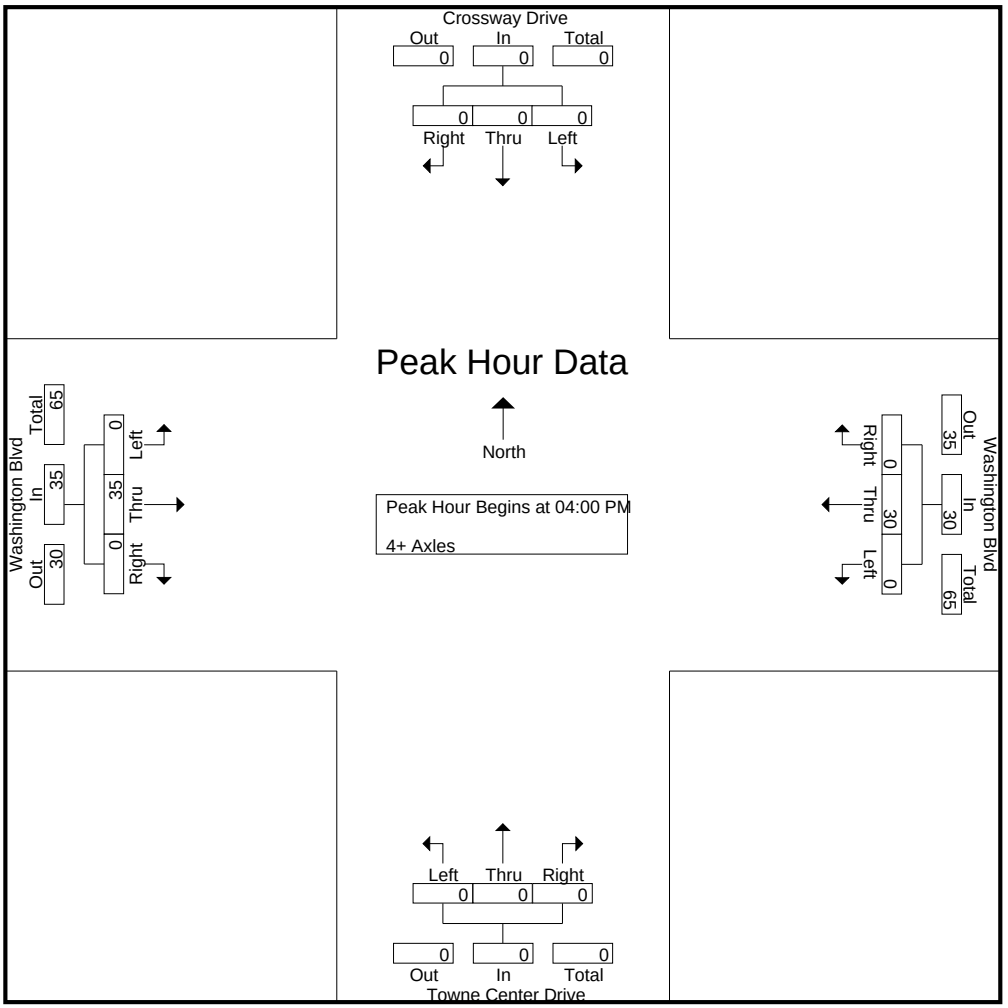


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Crossway_Washington_4+Axles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Crossway Drive Southbound				Washington Blvd Westbound				Towne Center Drive Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	8	0	8	0	0	0	0	0	8	0	8	16
04:15 PM	0	0	0	0	0	7	0	7	0	0	0	0	0	**10**	0	**10**	17
04:30 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	9	0	9	14
04:45 PM	0	0	0	0	0	**10**	0	**10**	0	0	0	0	0	8	0	8	**18**
Total Volume	0	0	0	0	0	30	0	30	0	0	0	0	0	35	0	35	65
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.000	.875	.000	.875	.903



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

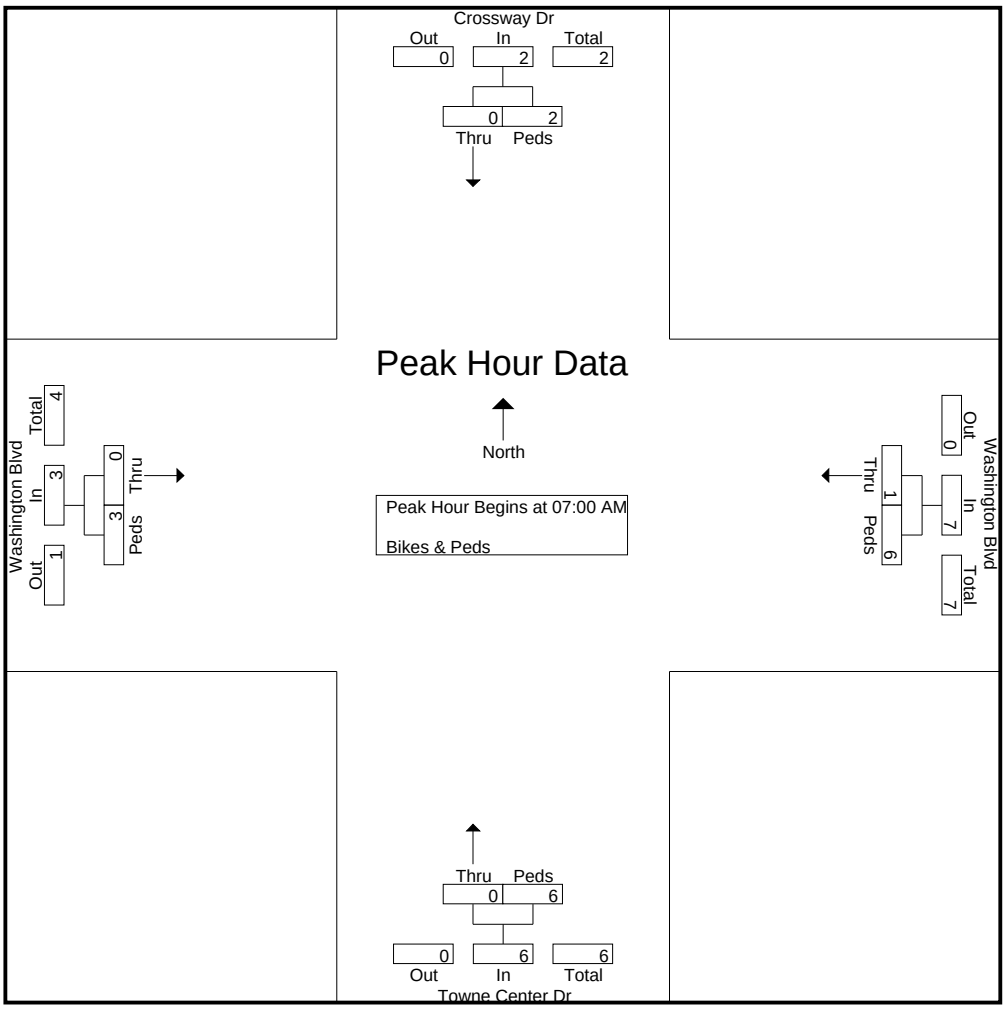
File Name : Crossway_Washington_BP
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- Bikes & Peds

	Crossway Dr Southbound		Washington Blvd Westbound		Towne Center Dr Northbound		Washington Blvd Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:00 AM	0	0	0	3	0	5	0	2	10
07:15 AM	0	2	1	2	0	1	0	1	7
07:30 AM	0	0	0	1	0	0	0	0	1
Total	0	2	1	6	0	6	0	3	18
08:00 AM	0	1	0	2	0	1	0	1	5
08:15 AM	1	0	0	1	0	0	0	0	2
08:30 AM	0	0	0	1	0	1	0	1	3
08:45 AM	0	0	0	2	0	1	0	0	3
Total	1	1	0	6	0	3	0	2	13
04:00 PM	0	0	0	9	0	0	0	0	9
04:15 PM	0	0	0	2	0	1	0	0	3
04:30 PM	1	0	0	1	0	0	0	1	3
04:45 PM	0	0	0	1	1	1	1	4	8
Total	1	0	0	13	1	2	1	5	23
05:00 PM	0	0	0	0	2	0	2	2	6
05:15 PM	0	0	0	2	0	0	0	1	3
05:30 PM	1	0	1	1	2	0	2	1	8
05:45 PM	0	0	0	0	0	2	1	6	9
Total	1	0	1	3	4	2	5	10	26
Grand Total	3	3	2	28	5	13	6	20	80
Apprch %	50	50	6.7	93.3	27.8	72.2	23.1	76.9	
Total %	3.8	3.8	2.5	35	6.2	16.2	7.5	25	

File Name : Crossway_Washington_BP
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Crossway Dr Southbound			Washington Blvd Westbound			Towne Center Dr Northbound			Washington Blvd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	0	0	0	0	**3**	**3**	0	**5**	**5**	0	**2**	**2**	**10**
07:15 AM	0	**2**	**2**	**1**	2	3	0	1	1	0	1	1	7
07:30 AM	0	0	0	0	1	1	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	2	1	6	7	0	6	6	0	3	3	18
% App. Total	0	100		14.3	85.7		0	100		0	100		
PHF	.000	.250	.250	.250	.500	.583	.000	.300	.300	.000	.375	.375	.450

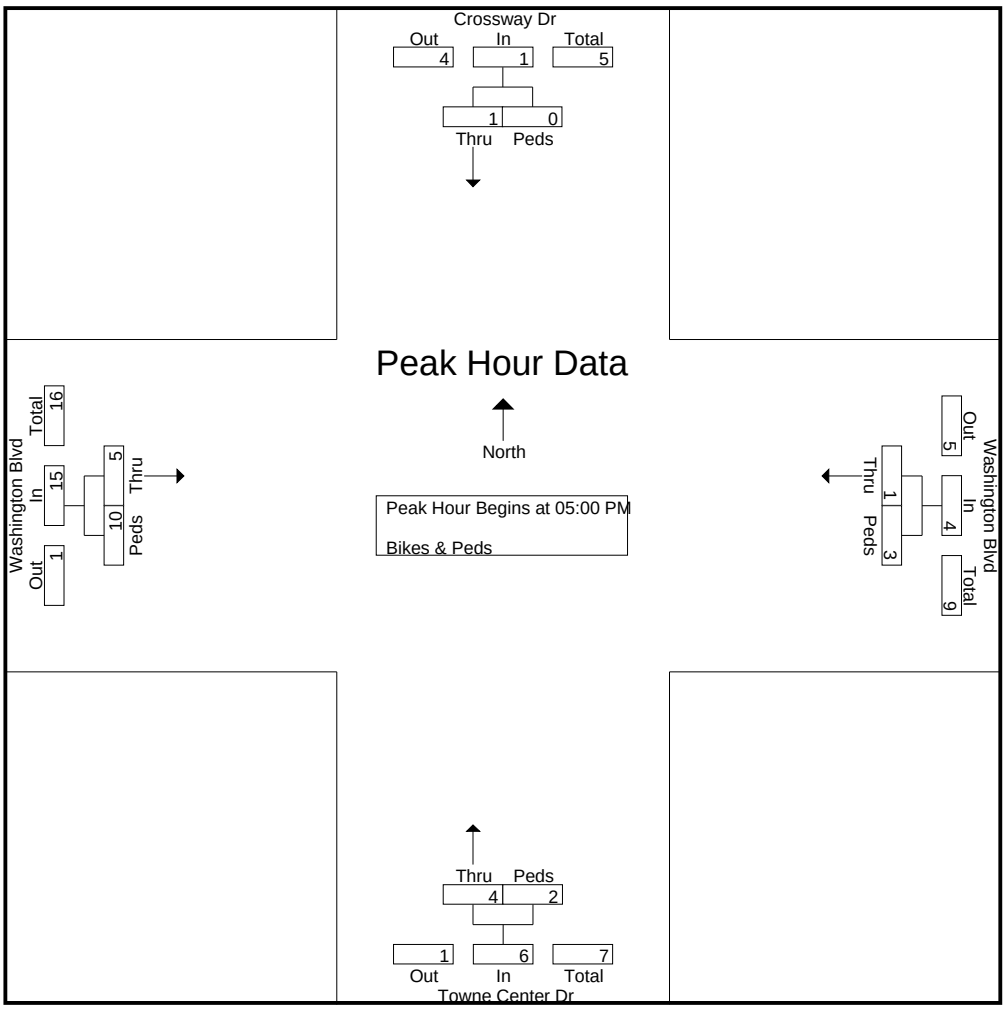


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Crossway_Washington_BP
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Crossway Dr Southbound			Washington Blvd Westbound			Towne Center Dr Northbound			Washington Blvd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	0	0	0	0	0	**2**	0	**2**	**2**	2	4	6
05:15 PM	0	0	0	0	**2**	**2**	0	0	0	0	1	1	3
05:30 PM	**1**	0	**1**	**1**	1	2	2	0	2	2	1	3	8
05:45 PM	0	0	0	0	0	0	0	**2**	2	1	**6**	**7**	**9**
Total Volume	1	0	1	1	3	4	4	2	6	5	10	15	26
% App. Total	100	0		25	75		66.7	33.3		33.3	66.7		
PHF	.250	.000	.250	.250	.375	.500	.500	.250	.750	.625	.417	.536	.722



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

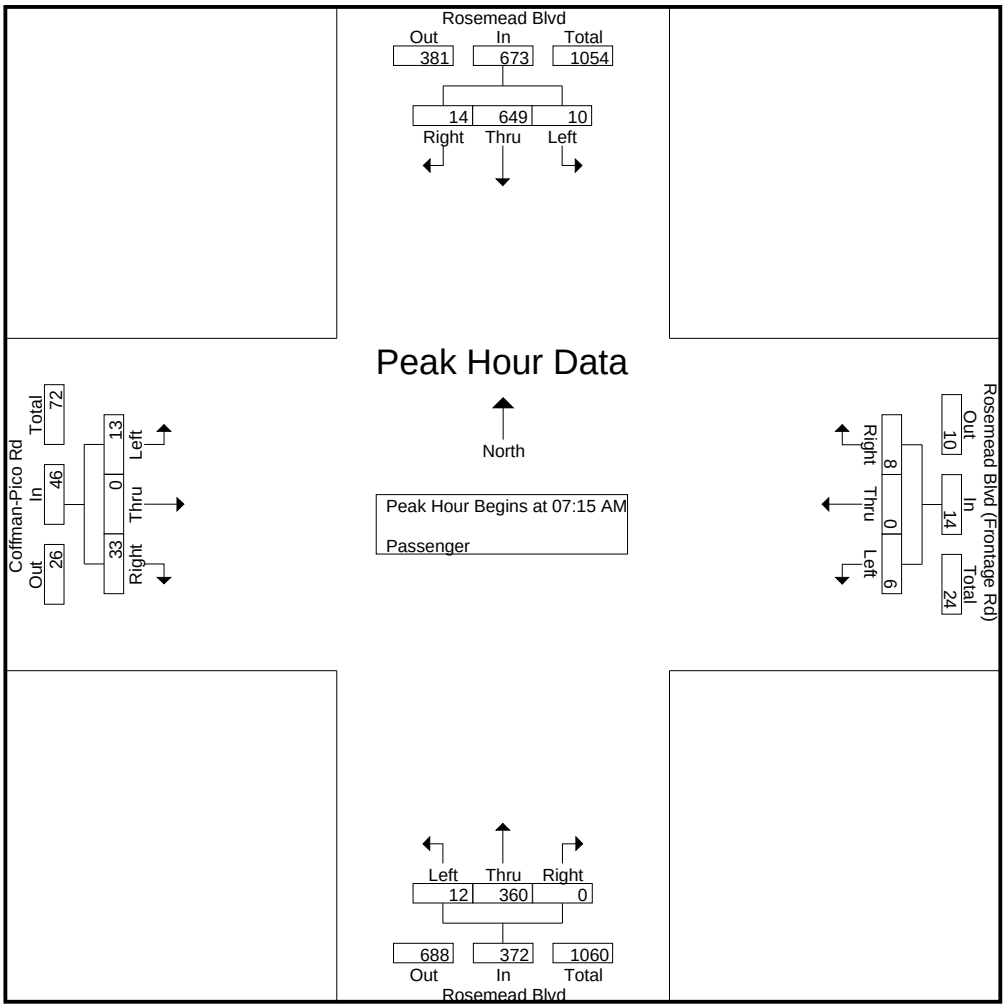
File Name : Rosemead_Coffman-Pico_Passenger
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- Passenger

	Rosemead Blvd Southbound			Rosemead Blvd (Frontage Rd) Westbound			Rosemead Blvd Northbound			Coffman-Pico Rd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	1	150	3	0	0	2	1	81	0	4	0	4	246
07:15 AM	1	162	2	1	0	2	5	89	0	4	0	7	273
07:30 AM	1	176	0	2	0	1	3	92	0	5	0	5	285
07:45 AM	4	153	5	2	0	2	2	107	0	1	0	9	285
Total	7	641	10	5	0	7	11	369	0	14	0	25	1089
08:00 AM	4	158	7	1	0	3	2	72	0	3	0	12	262
08:15 AM	2	126	5	1	0	5	5	97	0	6	0	13	260
08:30 AM	1	137	1	2	0	2	4	92	0	0	0	5	244
08:45 AM	3	126	4	1	0	2	5	91	2	2	0	8	244
Total	10	547	17	5	0	12	16	352	2	11	0	38	1010
04:00 PM	9	218	6	3	0	2	7	264	0	10	0	4	523
04:15 PM	9	175	3	2	0	2	7	243	2	8	0	9	460
04:30 PM	2	206	8	1	0	3	8	246	0	15	0	6	495
04:45 PM	4	225	7	3	0	4	7	229	2	12	1	3	497
Total	24	824	24	9	0	11	29	982	4	45	1	22	1975
05:00 PM	5	207	6	1	0	5	3	237	1	13	0	9	487
05:15 PM	7	217	4	2	0	2	5	276	4	10	2	5	534
05:30 PM	5	223	3	1	0	3	7	211	0	8	0	13	474
05:45 PM	10	238	0	1	0	2	9	223	2	12	1	8	506
Total	27	885	13	5	0	12	24	947	7	43	3	35	2001
Grand Total	68	2897	64	24	0	42	80	2650	13	113	4	120	6075
Apprch %	2.2	95.6	2.1	36.4	0	63.6	2.9	96.6	0.5	47.7	1.7	50.6	
Total %	1.1	47.7	1.1	0.4	0	0.7	1.3	43.6	0.2	1.9	0.1	2	

File Name : Rosemead_Coffman-Pico_Passenger
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Rosemead Blvd Southbound				Rosemead Blvd (Frontage Rd) Westbound				Rosemead Blvd Northbound				Coffman-Pico Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	1	162	2	165	1	0	2	3	**5**	89	0	94	4	0	7	11	273
07:30 AM	1	**176**	0	**177**	**2**	0	1	3	3	92	0	95	**5**	0	5	10	**285**
07:45 AM	**4**	153	5	162	2	0	2	**4**	2	**107**	0	**109**	1	0	9	10	285
08:00 AM	4	158	**7**	169	1	0	**3**	4	2	72	0	74	3	0	**12**	**15**	262
Total Volume	10	649	14	673	6	0	8	14	12	360	0	372	13	0	33	46	1105
% App. Total	1.5	96.4	2.1		42.9	0	57.1		3.2	96.8	0		28.3	0	71.7		
PHF	.625	.922	.500	.951	.750	.000	.667	.875	.600	.841	.000	.853	.650	.000	.688	.767	.969

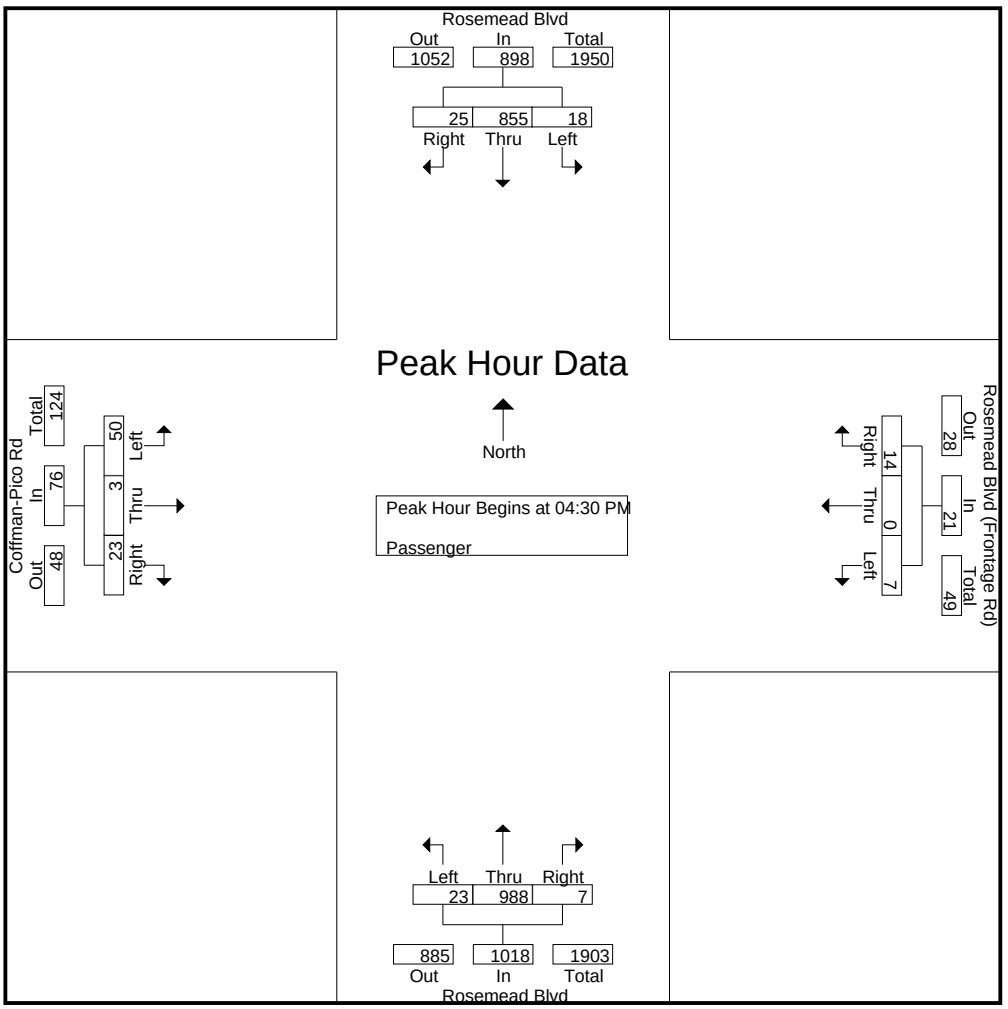


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Rosemead_Coffman-Pico_Passenger
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Rosemead Blvd Southbound				Rosemead Blvd (Frontage Rd) Westbound				Rosemead Blvd Northbound				Coffman-Pico Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	2	206	**8**	216	1	0	3	4	**8**	246	0	254	**15**	0	6	21	495
04:45 PM	4	**225**	7	**236**	**3**	0	4	**7**	7	229	2	238	12	1	3	16	497
05:00 PM	5	207	6	218	1	0	**5**	6	3	237	1	241	13	0	**9**	**22**	487
05:15 PM	**7**	217	4	228	2	0	2	4	5	**276**	**4**	**285**	10	**2**	5	17	**534**
Total Volume	18	855	25	898	7	0	14	21	23	988	7	1018	50	3	23	76	2013
% App. Total	2	95.2	2.8		33.3	0	66.7		2.3	97.1	0.7		65.8	3.9	30.3		
PHF	.643	.950	.781	.951	.583	.000	.700	.750	.719	.895	.438	.893	.833	.375	.639	.864	.942



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

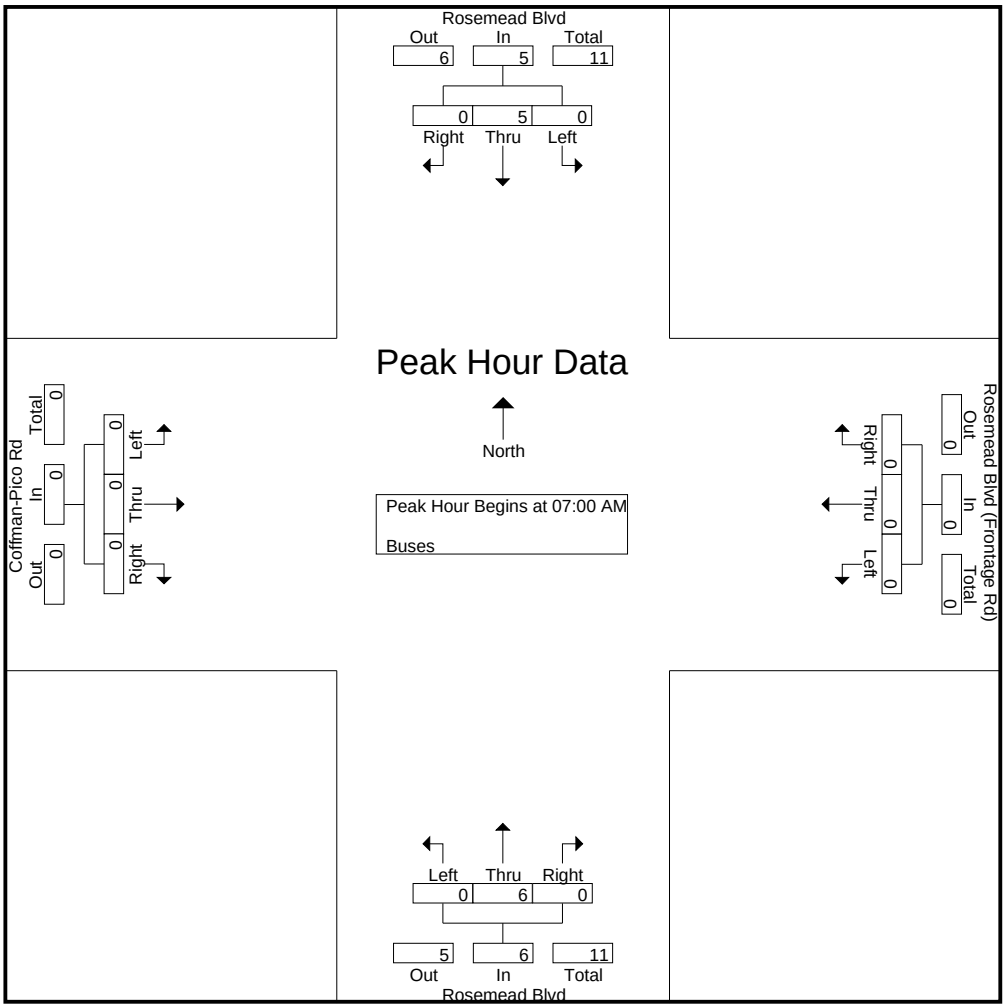
File Name : Rosemead_Coffman-Pico_Buses
Site Code : 00000000
Start Date : 3/9/2021

Groups Printed- Buses

	Rosemead Blvd Southbound			Rosemead Blvd (Frontage Rd) Westbound			Rosemead Blvd Northbound			Coffman-Pico Rd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	1	0	0	0	0	0	1	0	0	0	0	2
07:15 AM	0	3	0	0	0	0	0	2	0	0	0	0	5
07:30 AM	0	1	0	0	0	0	0	2	0	0	0	0	3
07:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
Total	0	5	0	0	0	0	0	6	0	0	0	0	11
08:00 AM	0	1	0	0	0	0	0	1	0	0	0	0	2
08:15 AM	0	2	0	0	0	0	0	1	0	0	0	0	3
08:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
Total	0	5	0	0	0	0	0	2	0	0	0	0	7
04:00 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
04:15 PM	0	1	0	0	0	0	0	2	0	0	0	0	3
04:30 PM	0	3	0	0	0	0	0	1	0	0	0	0	4
04:45 PM	0	5	0	0	0	0	0	2	0	0	0	0	7
Total	0	10	0	0	0	0	0	6	0	0	0	0	16
05:00 PM	0	3	0	0	0	0	0	2	0	0	0	0	5
05:15 PM	0	3	0	0	0	0	0	0	0	0	0	0	3
05:30 PM	0	4	0	0	0	0	0	0	0	0	0	0	4
05:45 PM	0	3	0	0	0	0	0	2	0	0	0	0	5
Total	0	13	0	0	0	0	0	4	0	0	0	0	17
Grand Total	0	33	0	0	0	0	0	18	0	0	0	0	51
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	64.7	0	0	0	0	0	35.3	0	0	0	0	

File Name : Rosemead_Coffman-Pico_Buses
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Rosemead Blvd Southbound				Rosemead Blvd (Frontage Rd) Westbound				Rosemead Blvd Northbound				Coffman-Pico Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
07:15 AM	0	**3**	0	**3**	0	0	0	0	0	**2**	0	**2**	0	0	0	0	**5**
07:30 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	5	0	5	0	0	0	0	0	6	0	6	0	0	0	0	11
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.417	.000	.417	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.550



CITY TRAFFIC COUNTERS

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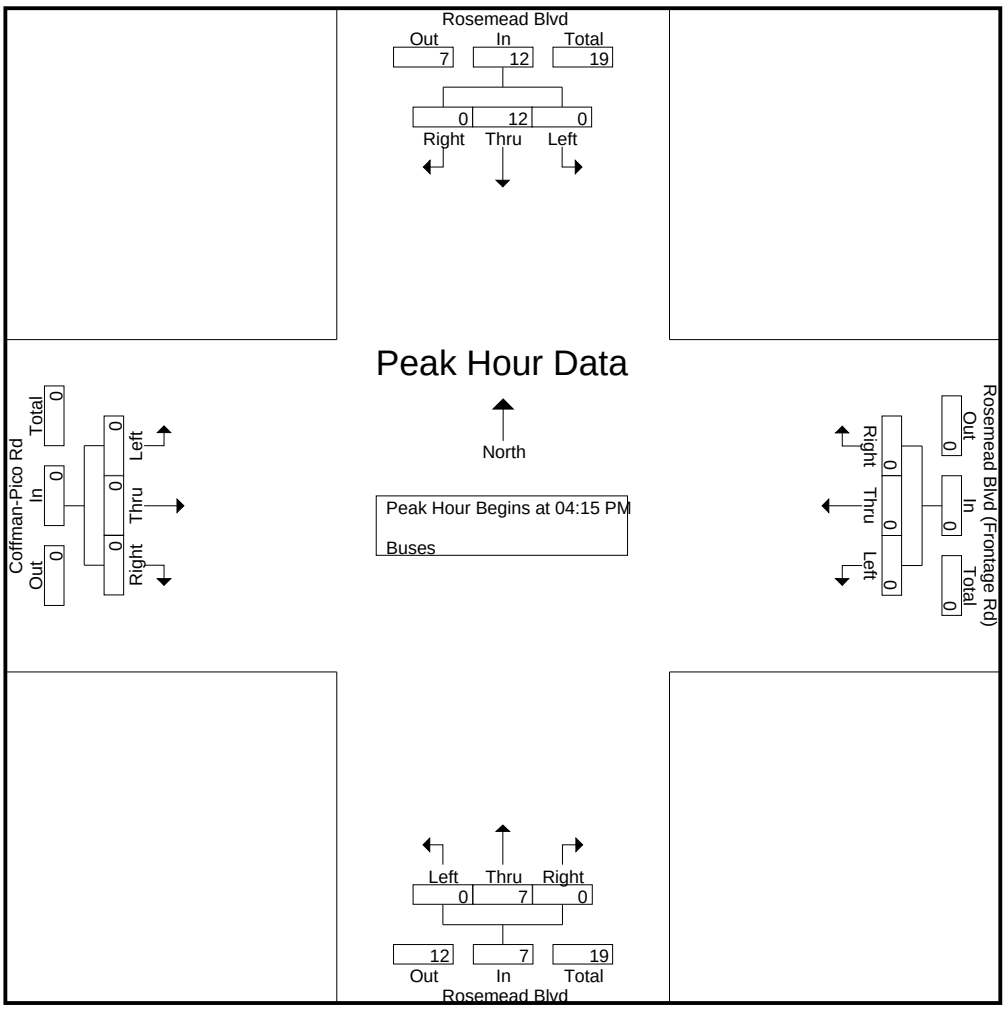
File Name : Rosemead_Coffman-Pico_Buses
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Rosemead Blvd Southbound				Rosemead Blvd (Frontage Rd) Westbound				Rosemead Blvd Northbound				Coffman-Pico Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	1	0	1	0	0	0	0	0	**2**	0	**2**	0	0	0	0	3
04:30 PM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
04:45 PM	0	**5**	0	**5**	0	0	0	0	0	2	0	2	0	0	0	0	**7**
05:00 PM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
Total Volume	0	12	0	12	0	0	0	0	0	7	0	7	0	0	0	0	19
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.600	.000	.600	.000	.000	.000	.000	.000	.875	.000	.875	.000	.000	.000	.000	.679



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

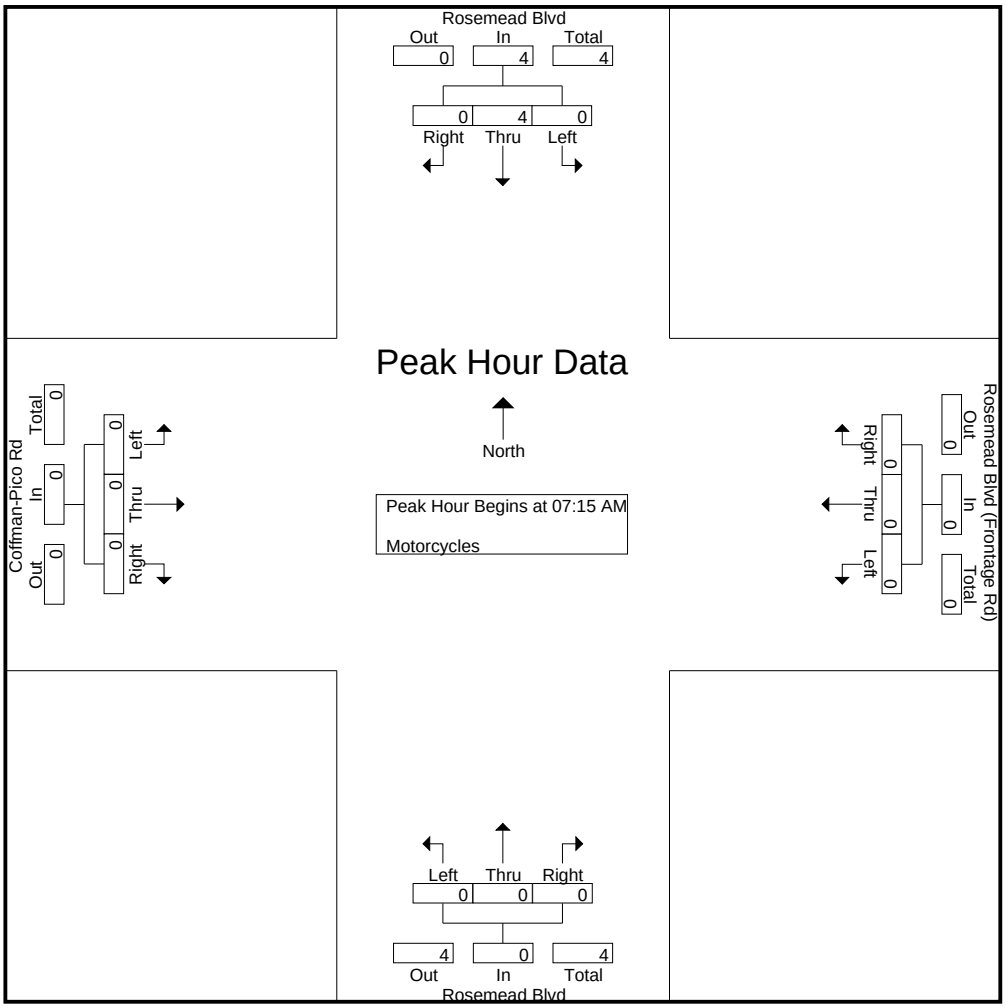
File Name : Rosemead_Coffman-Pico_Motorcycles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- Motorcycles

	Rosemead Blvd Southbound			Rosemead Blvd (Frontage Rd) Westbound			Rosemead Blvd Northbound			Coffman-Pico Rd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	0	0	0	0	0	0	0	0	0	2
08:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
Total	0	2	0	0	0	0	0	1	0	0	0	0	3
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
04:15 PM	0	0	0	0	0	0	0	1	0	0	0	1	2
Total	0	0	0	0	0	0	0	1	0	1	0	1	3
05:15 PM	0	0	0	0	0	0	0	1	0	0	0	1	2
05:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
05:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	0	0	0	3	0	0	0	1	5
Grand Total	0	5	0	0	0	0	0	5	0	1	0	2	13
Apprch %	0	100	0	0	0	0	0	100	0	33.3	0	66.7	
Total %	0	38.5	0	0	0	0	0	38.5	0	7.7	0	15.4	

File Name : Rosemead_Coffman-Pico_Motorcycles
Site Code : 00000000
Start Date : 3/9/2021

	Rosemead Blvd Southbound				Rosemead Blvd (Frontage Rd) Westbound				Rosemead Blvd Northbound				Coffman-Pico Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Total Volume	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500

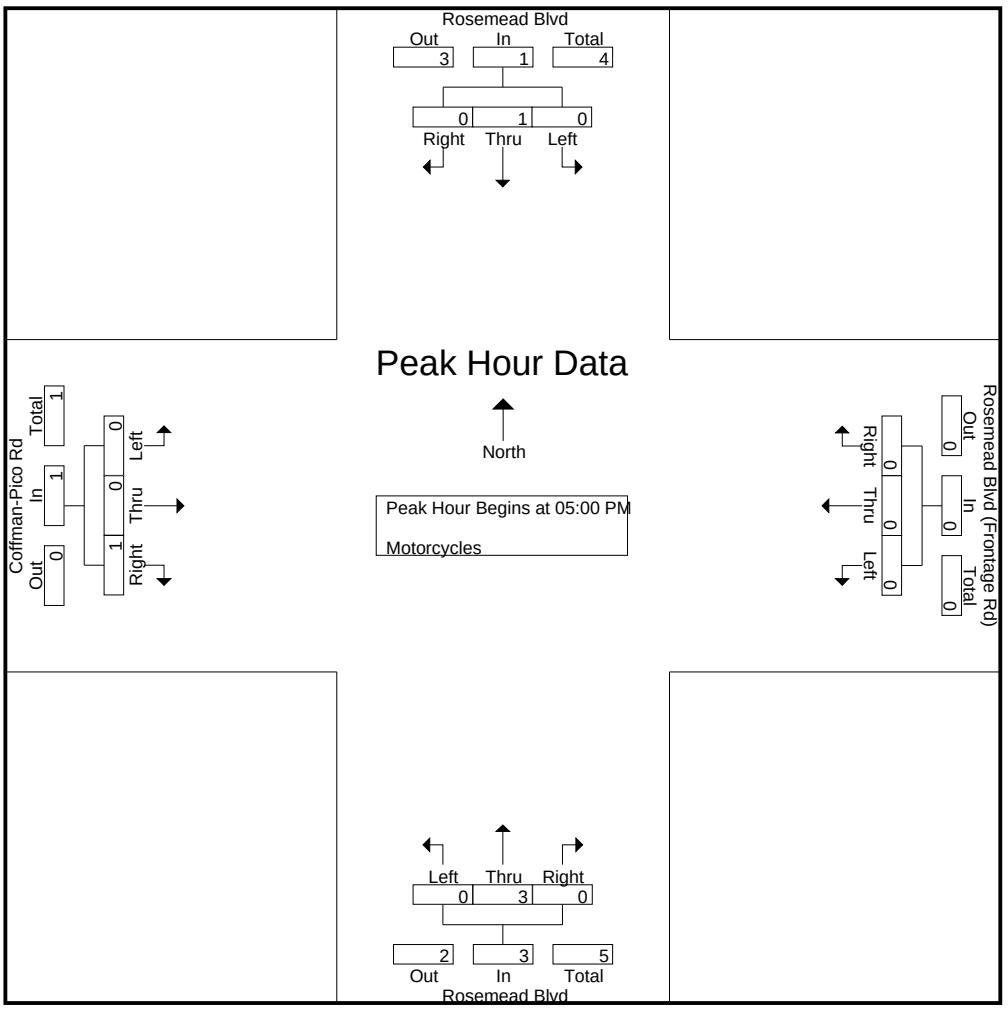


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Rosemead_Coffman-Pico_Motorcycles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Rosemead Blvd Southbound				Rosemead Blvd (Frontage Rd) Westbound				Rosemead Blvd Northbound				Coffman-Pico Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	**1**	**1**	**2**
05:30 PM	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0	2
05:45 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	1	0	0	0	0	0	3	0	3	0	0	1	1	5
% App. Total	0	100	0		0	0	0		0	100	0		0	0	100		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.250	.250	.625



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

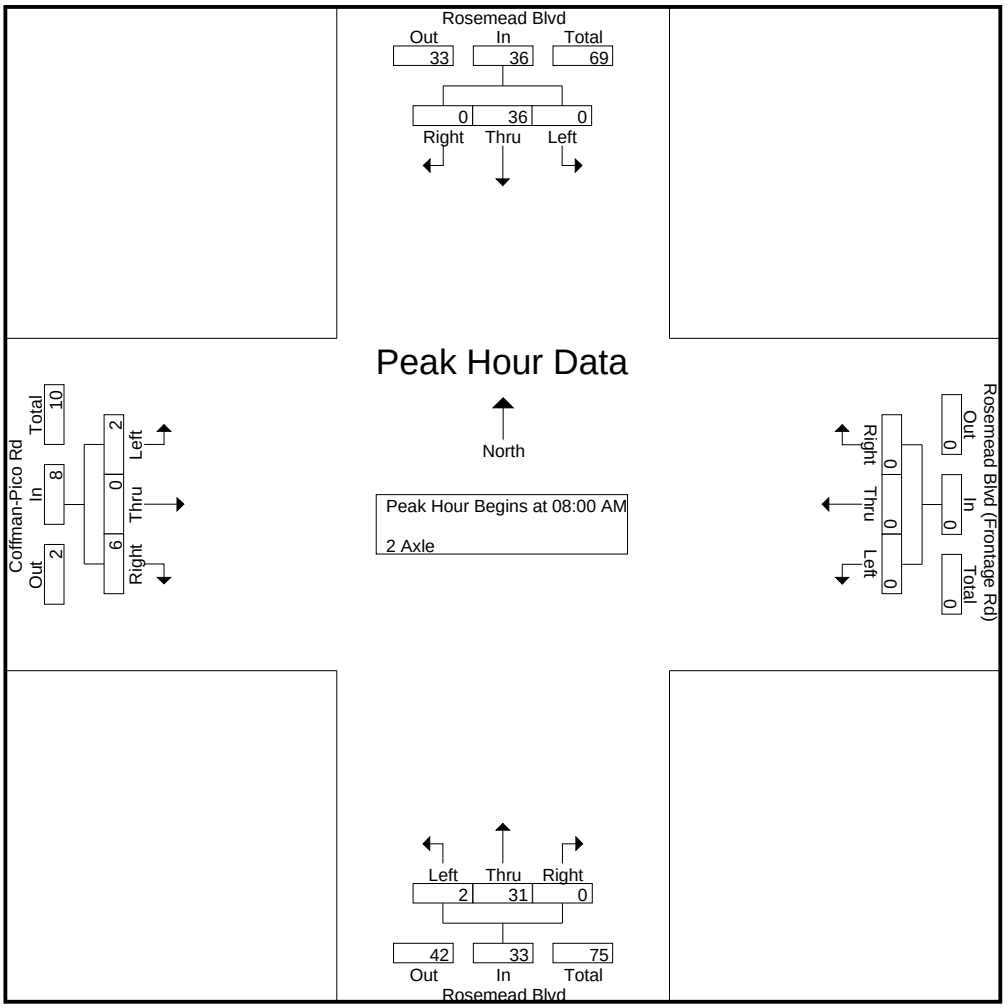
File Name : Rosemead_Coffman-Pico_2-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- 2 Axle

	Rosemead Blvd Southbound			Rosemead Blvd (Frontage Rd) Westbound			Rosemead Blvd Northbound			Coffman-Pico Rd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	6	0	0	0	0	0	6	0	0	0	0	12
07:15 AM	0	7	0	0	0	0	0	2	0	0	0	0	9
07:30 AM	0	13	1	0	0	0	1	6	0	0	0	0	21
07:45 AM	0	4	0	0	0	0	0	5	0	0	0	1	10
Total	0	30	1	0	0	0	1	19	0	0	0	1	52
08:00 AM	0	11	0	0	0	0	0	3	0	0	0	1	15
08:15 AM	0	12	0	0	0	0	1	8	0	0	0	1	22
08:30 AM	0	8	0	0	0	0	1	10	0	1	0	1	21
08:45 AM	0	5	0	0	0	0	0	10	0	1	0	3	19
Total	0	36	0	0	0	0	2	31	0	2	0	6	77
04:00 PM	0	5	0	0	0	0	0	3	0	0	0	0	8
04:15 PM	0	7	0	0	0	0	0	3	0	0	0	0	10
04:30 PM	0	5	0	0	0	0	0	5	0	0	0	0	10
04:45 PM	0	3	0	0	0	0	0	2	0	0	0	0	5
Total	0	20	0	0	0	0	0	13	0	0	0	0	33
05:00 PM	0	4	0	0	0	0	0	5	0	0	0	0	9
05:15 PM	0	7	0	0	0	0	0	6	0	0	0	0	13
05:30 PM	0	3	0	0	0	0	0	5	0	0	1	0	9
05:45 PM	0	2	0	0	0	0	0	3	0	0	0	0	5
Total	0	16	0	0	0	0	0	19	0	0	1	0	36
Grand Total	0	102	1	0	0	0	3	82	0	2	1	7	198
Apprch %	0	99	1	0	0	0	3.5	96.5	0	20	10	70	
Total %	0	51.5	0.5	0	0	0	1.5	41.4	0	1	0.5	3.5	

File Name : Rosemead_Coffman-Pico_2-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Rosemead Blvd Southbound				Rosemead Blvd (Frontage Rd) Westbound				Rosemead Blvd Northbound				Coffman-Pico Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	11	0	11	0	0	0	0	0	3	0	3	0	0	1	1	15
08:15 AM	0	**12**	0	**12**	0	0	0	0	**1**	8	0	9	0	0	1	1	**22**
08:30 AM	0	8	0	8	0	0	0	0	1	**10**	0	**11**	**1**	0	1	2	21
08:45 AM	0	5	0	5	0	0	0	0	0	10	0	10	1	0	**3**	**4**	19
Total Volume	0	36	0	36	0	0	0	0	2	31	0	33	2	0	6	8	77
% App. Total	0	100	0		0	0	0		6.1	93.9	0		25	0	75		
PHF	.000	.750	.000	.750	.000	.000	.000	.000	.500	.775	.000	.750	.500	.000	.500	.500	.875

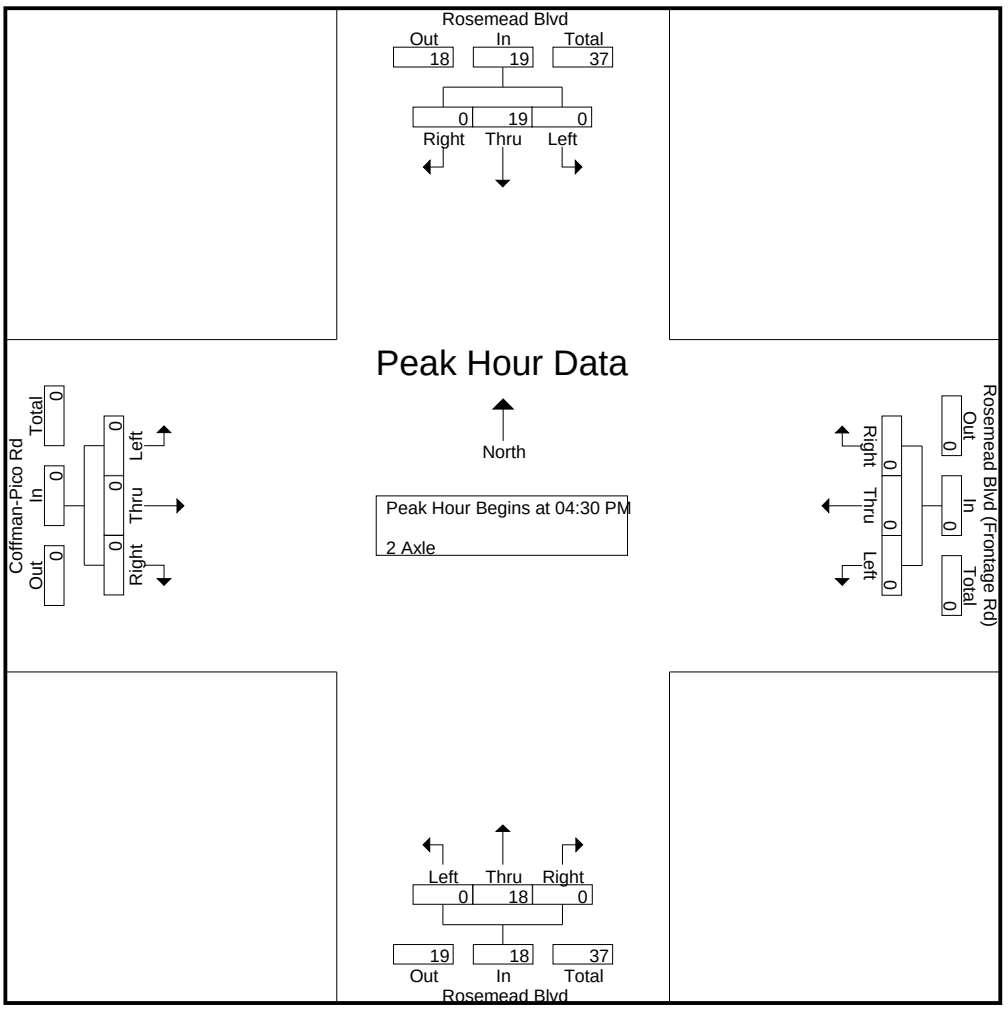


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Rosemead_Coffman-Pico_2-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Rosemead Blvd Southbound				Rosemead Blvd (Frontage Rd) Westbound				Rosemead Blvd Northbound				Coffman-Pico Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	5	0	5	0	0	0	0	0	5	0	5	0	0	0	0	10
04:45 PM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
05:00 PM	0	4	0	4	0	0	0	0	0	5	0	5	0	0	0	0	9
05:15 PM	0	**7**	0	**7**	0	0	0	0	0	**6**	0	**6**	0	0	0	0	**13**
Total Volume	0	19	0	19	0	0	0	0	0	18	0	18	0	0	0	0	37
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.679	.000	.679	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.712



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Rosemead_Coffman-Pico_3-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- 3 Axle

	Rosemead Blvd Southbound			Rosemead Blvd (Frontage Rd) Westbound			Rosemead Blvd Northbound			Coffman-Pico Rd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	3
07:15 AM	0	2	0	0	0	0	0	2	0	0	0	0	4
07:30 AM	0	3	0	0	0	0	0	1	0	0	0	0	4
07:45 AM	0	1	0	0	0	0	0	2	0	0	0	0	3
Total	0	9	0	0	0	0	0	5	0	0	0	0	14
08:00 AM	0	2	0	0	0	0	0	3	0	0	0	0	5
08:15 AM	0	2	0	0	0	0	0	3	0	0	0	0	5
08:30 AM	0	3	0	0	0	0	0	3	0	0	0	0	6
08:45 AM	0	3	0	0	0	0	0	2	0	0	0	0	5
Total	0	10	0	0	0	0	0	11	0	0	0	0	21
04:00 PM	0	4	0	0	0	0	0	2	0	0	0	0	6
04:15 PM	0	3	0	0	0	0	0	1	0	0	0	0	4
04:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
04:45 PM	0	2	0	0	0	0	0	3	0	0	0	0	5
Total	0	9	0	0	0	0	0	8	0	0	0	0	17
05:00 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
05:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
Total	0	4	0	0	0	0	0	1	0	0	0	0	5
Grand Total	0	32	0	0	0	0	0	25	0	0	0	0	57
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	56.1	0	0	0	0	0	43.9	0	0	0	0	

File Name : Rosemead_Coffman-Pico_3-Axle
Site Code : 00000000
Start Date : 3/9/2021
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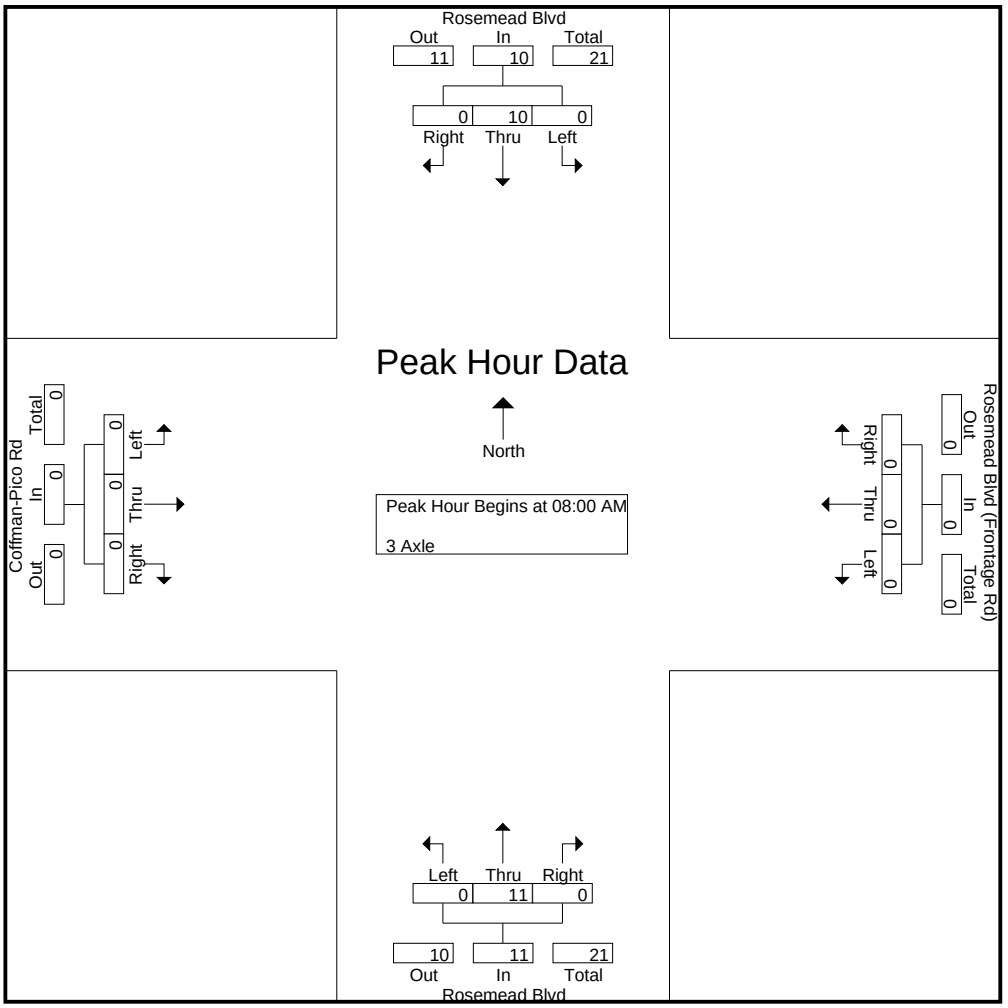
	Rosemead Blvd Southbound				Rosemead Blvd (Frontage Rd) Westbound				Rosemead Blvd Northbound				Coffman-Pico Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	2	0	2	0	0	0	0	0	**3**	0	**3**	0	0	0	0	5
08:15 AM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
08:30 AM	0	**3**	0	**3**	0	0	0	0	0	3	0	3	0	0	0	0	**6**
08:45 AM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
Total Volume	0	10	0	10	0	0	0	0	0	11	0	11	0	0	0	0	21
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.833	.000	.833	.000	.000	.000	.000	.000	.917	.000	.917	.000	.000	.000	.000	.875



CITY TRAFFIC COUNTERS

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File Name : Rosemead_Coffman-Pico_3-Axle
Site Code : 00000000
Start Date : 3/9/2021
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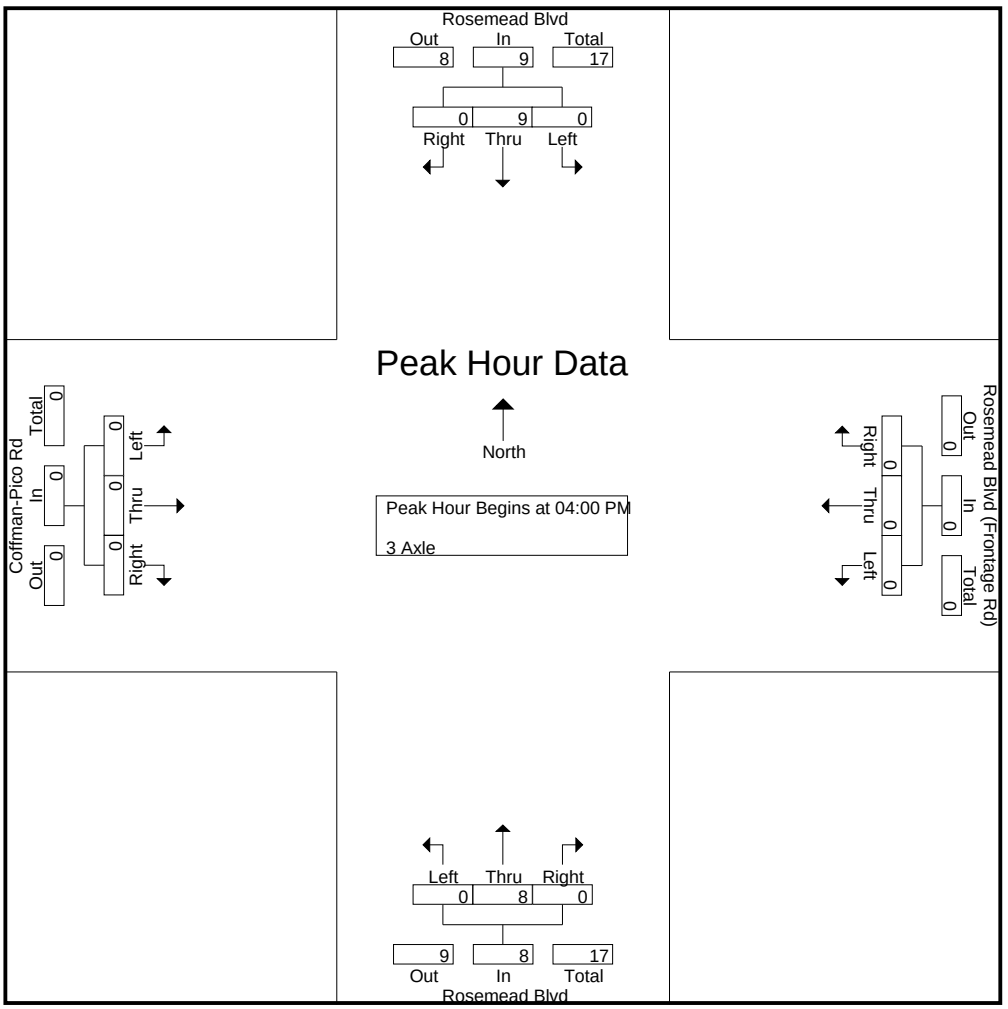
	Rosemead Blvd Southbound				Rosemead Blvd (Frontage Rd) Westbound				Rosemead Blvd Northbound				Coffman-Pico Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**4**	0	**4**	0	0	0	0	0	2	0	2	0	0	0	0	**6**
04:15 PM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
04:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:45 PM	0	2	0	2	0	0	0	0	0	**3**	0	**3**	0	0	0	0	5
Total Volume	0	9	0	9	0	0	0	0	0	8	0	8	0	0	0	0	17
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.563	.000	.563	.000	.000	.000	.000	.000	.667	.000	.667	.000	.000	.000	.000	.708



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

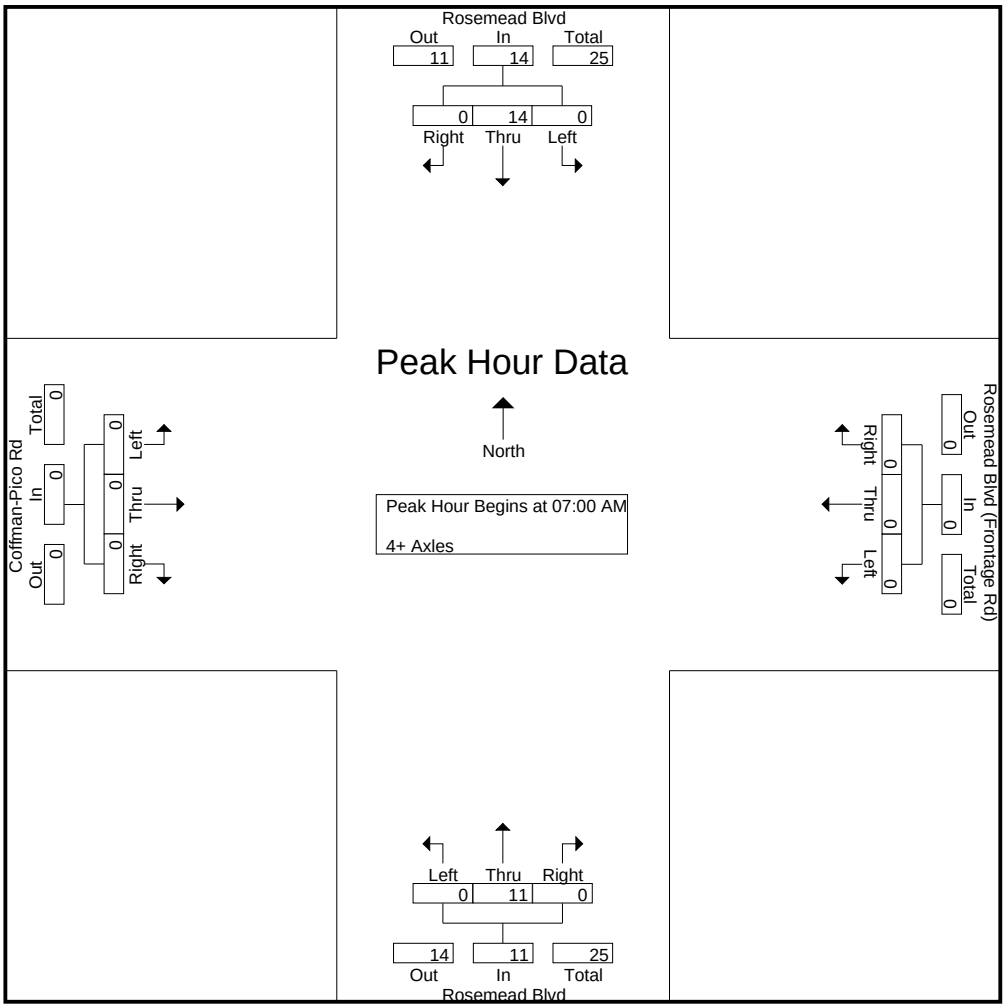
File Name : Rosemead_Coffman-Pico_4+Axles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- 4+ Axles

	Rosemead Blvd Southbound			Rosemead Blvd (Frontage Rd) Westbound			Rosemead Blvd Northbound			Coffman-Pico Rd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	3	0	0	0	0	0	2	0	0	0	0	5
07:15 AM	0	4	0	0	0	0	0	4	0	0	0	0	8
07:30 AM	0	2	0	0	0	0	0	2	0	0	0	0	4
07:45 AM	0	5	0	0	0	0	0	3	0	0	0	0	8
Total	0	14	0	0	0	0	0	11	0	0	0	0	25
08:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	1	0	0	0	0	0	3	0	0	0	0	4
08:30 AM	0	3	0	0	0	0	0	5	0	0	0	0	8
08:45 AM	0	1	0	0	0	0	0	3	0	0	0	0	4
Total	0	6	0	0	0	0	0	11	0	0	0	0	17
04:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	4
04:15 PM	0	3	0	0	0	0	0	2	0	0	0	0	5
04:30 PM	0	1	0	0	0	0	0	4	0	0	0	0	5
04:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	9	0	0	0	0	0	6	0	0	0	0	15
05:00 PM	0	0	0	0	0	0	0	4	0	0	0	0	4
05:15 PM	0	2	0	0	0	0	0	2	0	0	0	0	4
05:30 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
05:45 PM	0	4	0	0	0	0	0	2	0	0	0	0	6
Total	0	7	0	0	0	0	0	9	0	0	0	0	16
Grand Total	0	36	0	0	0	0	0	37	0	0	0	0	73
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	49.3	0	0	0	0	0	50.7	0	0	0	0	

File Name : Rosemead_Coffman-Pico_4+Axles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Rosemead Blvd Southbound				Rosemead Blvd (Frontage Rd) Westbound				Rosemead Blvd Northbound				Coffman-Pico Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
07:15 AM	0	4	0	4	0	0	0	0	0	**4**	0	**4**	0	0	0	0	**8**
07:30 AM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
07:45 AM	0	**5**	0	**5**	0	0	0	0	0	3	0	3	0	0	0	0	8
Total Volume	0	14	0	14	0	0	0	0	0	11	0	11	0	0	0	0	25
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.700	.000	.700	.000	.000	.000	.000	.000	.688	.000	.688	.000	.000	.000	.000	.781



CITY TRAFFIC COUNTERS

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File Name : Rosemead_Coffman-Pico_4+Axles
Site Code : 00000000
Start Date : 3/9/2021
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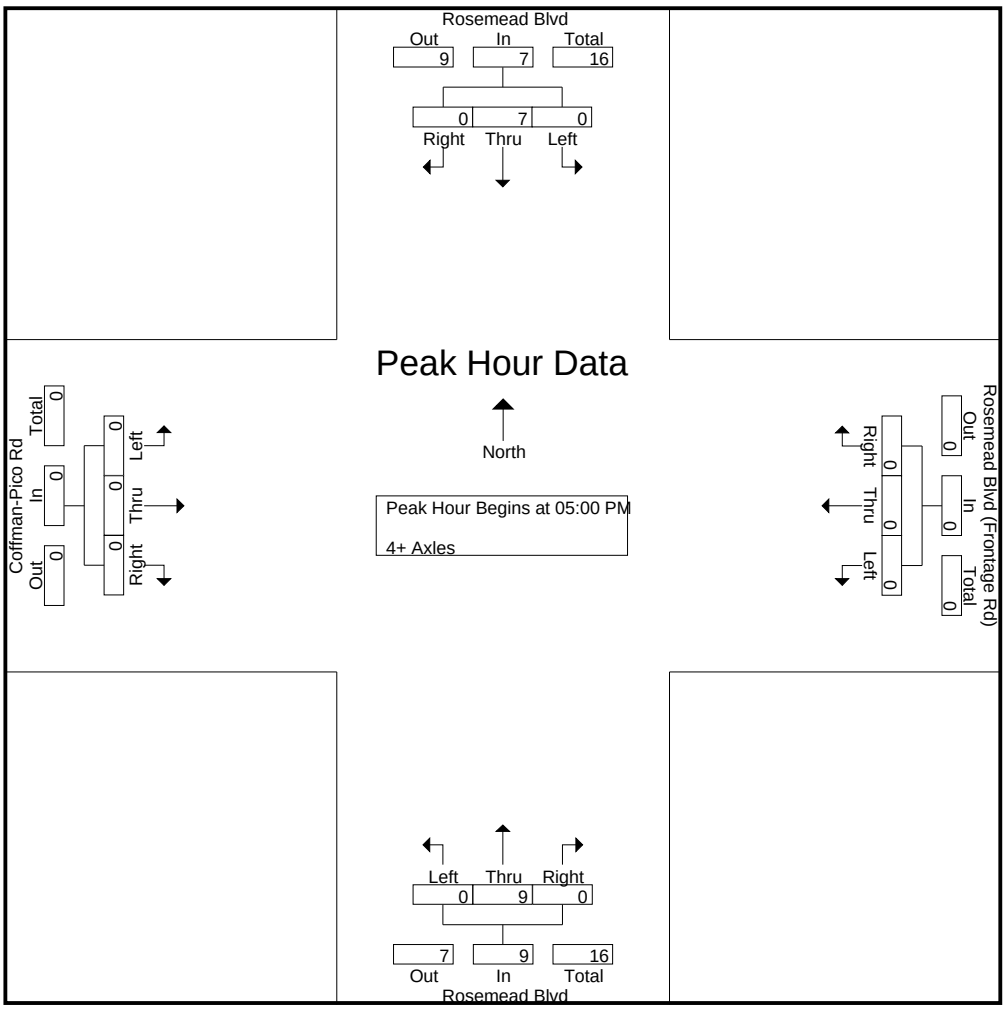
	Rosemead Blvd Southbound				Rosemead Blvd (Frontage Rd) Westbound				Rosemead Blvd Northbound				Coffman-Pico Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	**4**	0	**4**	0	0	0	0	4
05:15 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
05:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:45 PM	0	**4**	0	**4**	0	0	0	0	0	2	0	2	0	0	0	0	**6**
Total Volume	0	7	0	7	0	0	0	0	0	9	0	9	0	0	0	0	16
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.438	.000	.438	.000	.000	.000	.000	.000	.563	.000	.563	.000	.000	.000	.000	.667



CITY TRAFFIC COUNTERS

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File Name : Rosemead_Coffman-Pico_BP
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- Bikes & Peds

	Rosemead Blvd Southbound		Rosemead Blvd (Frontage Rd) Westbound			Rosemead Blvd Northbound		Coffman-Pico Rd Eastbound		
Start Time	Bikes	Peds	Bikes	Right	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:00 AM	0	2	0	0	1	0	0	1	1	5
07:15 AM	0	0	0	0	0	0	0	2	1	3
07:30 AM	0	1	1	0	0	0	0	0	1	3
07:45 AM	0	0	0	0	2	0	0	0	0	2
Total	0	3	1	0	3	0	0	3	3	13
08:15 AM	0	2	1	0	2	0	0	0	1	6
08:30 AM	0	0	0	0	0	0	0	0	1	1
08:45 AM	0	0	0	0	0	0	1	0	2	3
Total	0	2	1	0	2	0	1	0	4	10
04:00 PM	0	1	0	0	1	0	0	0	3	5
04:15 PM	0	7	0	0	1	0	0	0	2	10
04:30 PM	0	0	0	0	2	0	0	2	0	4
04:45 PM	0	0	0	0	0	0	0	1	1	2
Total	0	8	0	0	4	0	0	3	6	21
05:00 PM	0	0	1	0	3	0	0	0	0	4
05:15 PM	0	0	1	0	1	0	0	0	0	2
05:30 PM	0	0	0	0	2	0	0	0	0	2
Total	0	0	2	0	6	0	0	0	0	8
Grand Total	0	13	4	0	15	0	1	6	13	52
Apprch %	0	100	21.1	0	78.9	0	100	31.6	68.4	
Total %	0	25	7.7	0	28.8	0	1.9	11.5	25	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Rosemead_Coffman-Pico_BP
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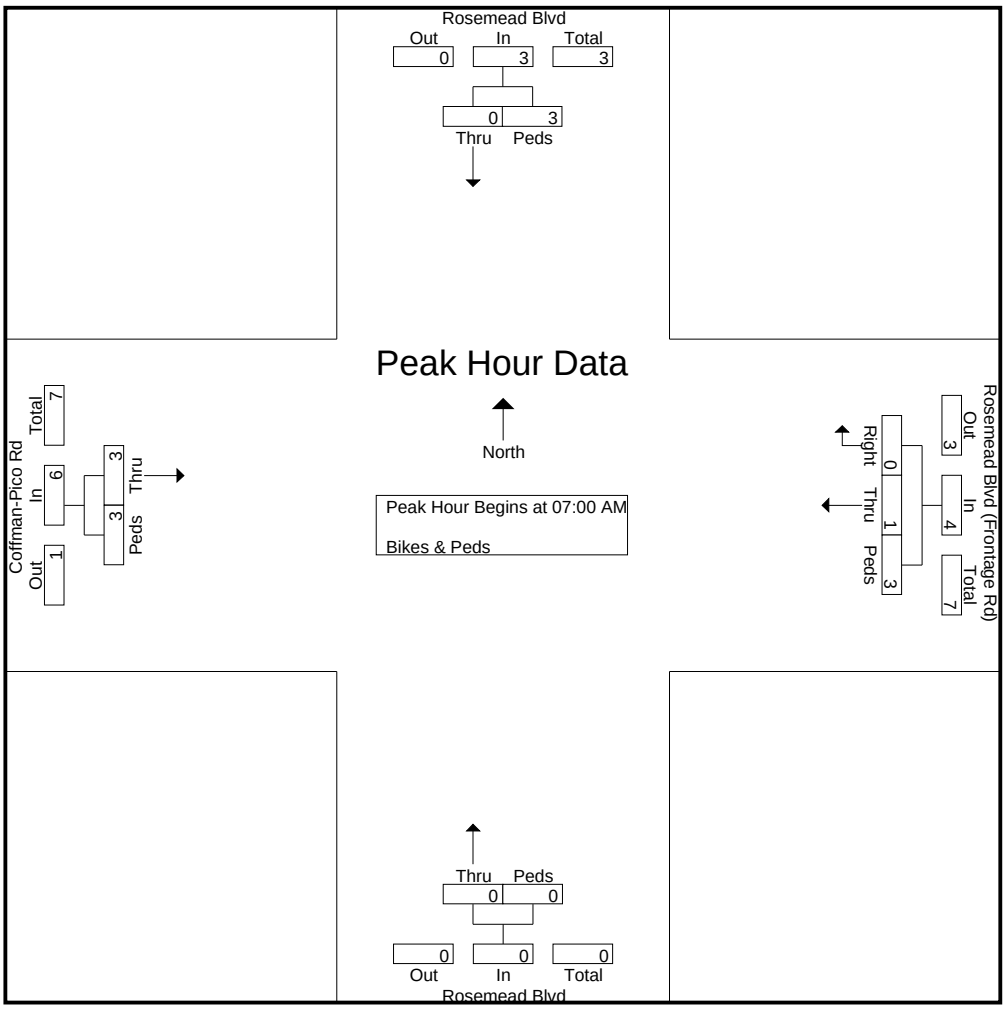
	Rosemead Blvd Southbound			Rosemead Blvd (Frontage Rd) Westbound				Rosemead Blvd Northbound			Coffman-Pico Rd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Right	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 07:00 AM														
07:00 AM	0	**2**	**2**	0	0	1	1	0	0	0	1	**1**	2	**5**
07:15 AM	0	0	0	0	0	0	0	0	0	0	**2**	1	**3**	3
07:30 AM	0	1	1	**1**	0	0	1	0	0	0	0	1	1	3
07:45 AM	0	0	0	0	0	**2**	**2**	0	0	0	0	0	0	2
Total Volume	0	3	3	1	0	3	4	0	0	0	3	3	6	13
% App. Total	0	100		25	0	75		0	0		50	50		
PHF	.000	.375	.375	.250	.000	.375	.500	.000	.000	.000	.375	.750	.500	.650



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Rosemead_Coffman-Pico_BP
Site Code : 00000000
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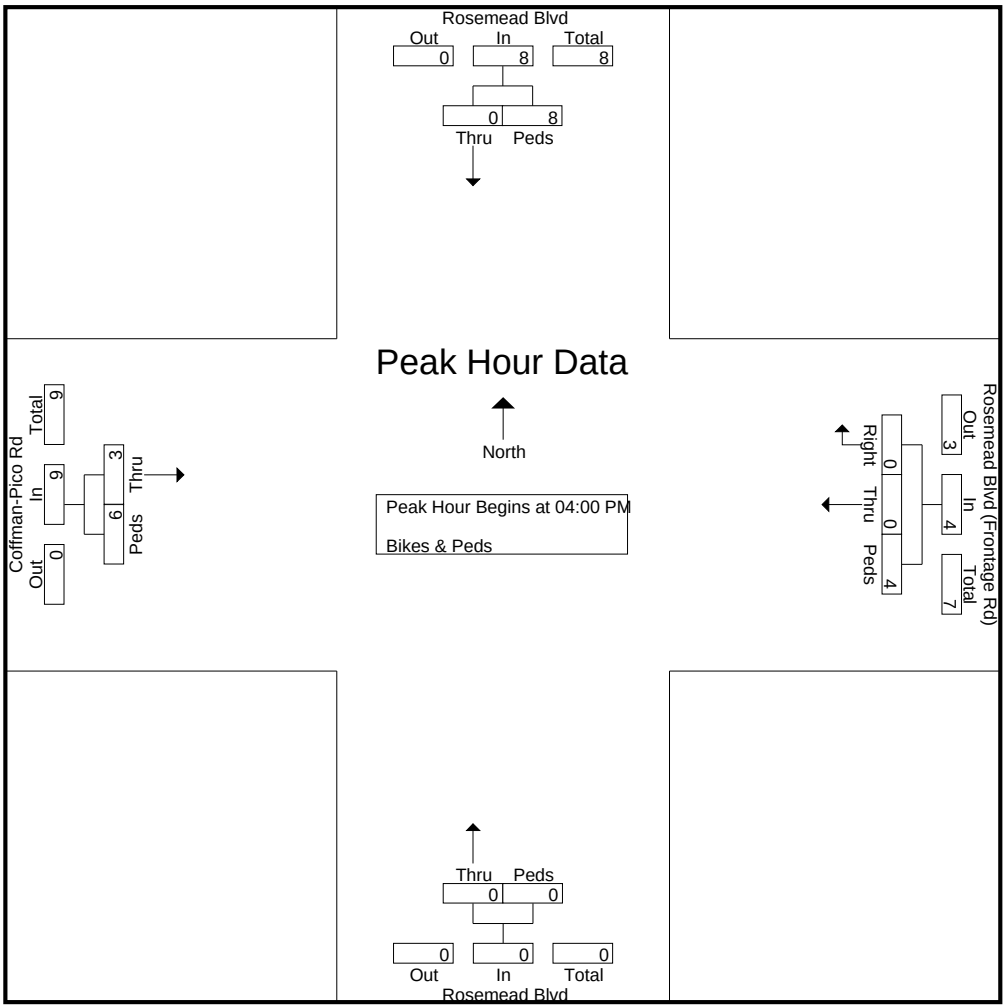
	Rosemead Blvd Southbound			Rosemead Blvd (Frontage Rd) Westbound				Rosemead Blvd Northbound			Coffman-Pico Rd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Right	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 04:00 PM														
04:00 PM	0	1	1	0	0	1	1	0	0	0	0	**3**	**3**	5
04:15 PM	0	**7**	**7**	0	0	1	1	0	0	0	0	2	2	**10**
04:30 PM	0	0	0	0	0	**2**	**2**	0	0	0	**2**	0	2	4
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	2	2
Total Volume	0	8	8	0	0	4	4	0	0	0	3	6	9	21
% App. Total	0	100		0	0	100		0	0		33.3	66.7		
PHF	.000	.286	.286	.000	.000	.500	.500	.000	.000	.000	.375	.500	.750	.525



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Rosemead_Washington_Passenger
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- Passenger

	Rosemead Blvd Southbound			Washington Blvd Westbound			Rosemead Blvd Northbound			Washington Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	29	107	17	30	182	15	22	48	9	13	106	8	586
07:15 AM	29	112	24	34	193	10	13	42	6	14	85	15	577
07:30 AM	36	132	28	47	247	18	12	69	5	15	125	13	747
07:45 AM	26	126	26	45	189	15	19	73	16	22	112	27	696
Total	120	477	95	156	811	58	66	232	36	64	428	63	2606
08:00 AM	34	112	17	38	161	8	21	45	14	14	136	21	621
08:15 AM	26	106	21	34	158	16	20	68	13	16	88	15	581
08:30 AM	34	98	20	31	159	20	15	45	9	25	87	22	565
08:45 AM	31	100	24	33	148	19	19	63	23	26	102	24	612
Total	125	416	82	136	626	63	75	221	59	81	413	82	2379
04:00 PM	23	141	26	43	141	23	19	166	41	45	192	29	889
04:15 PM	28	126	33	38	159	32	28	154	29	59	203	25	914
04:30 PM	31	145	26	41	154	28	39	160	41	50	242	38	995
04:45 PM	23	144	30	46	173	34	27	149	38	49	230	41	984
Total	105	556	115	168	627	117	113	629	149	203	867	133	3782
05:00 PM	33	149	34	44	156	48	20	128	41	63	230	49	995
05:15 PM	26	186	29	34	154	50	22	149	28	74	201	48	1001
05:30 PM	40	154	18	56	150	44	27	125	33	53	246	58	1004
05:45 PM	41	188	14	40	127	39	34	104	25	76	196	61	945
Total	140	677	95	174	587	181	103	506	127	266	873	216	3945
Grand Total	490	2126	387	634	2651	419	357	1588	371	614	2581	494	12712
Apprch %	16.3	70.8	12.9	17.1	71.6	11.3	15.4	68.6	16	16.6	70	13.4	
Total %	3.9	16.7	3	5	20.9	3.3	2.8	12.5	2.9	4.8	20.3	3.9	

CITY TRAFFIC COUNTERS

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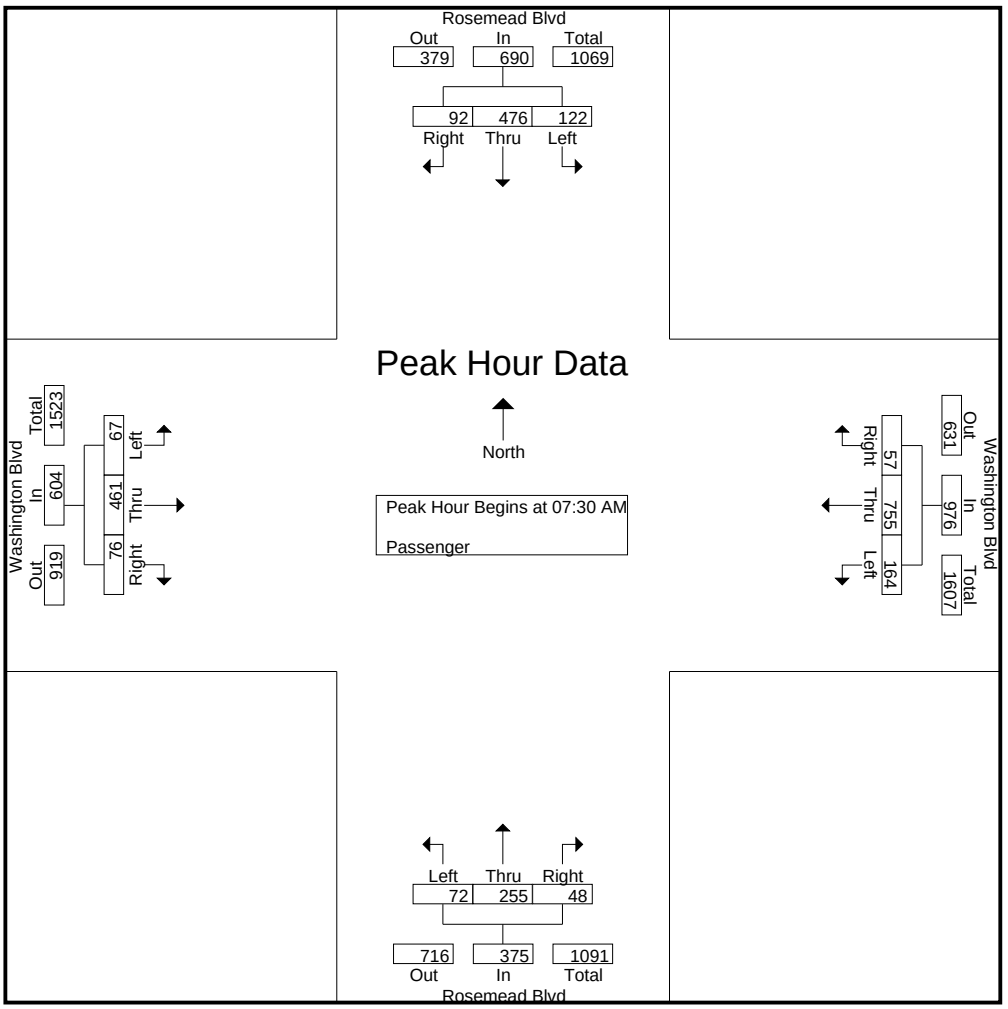
File Name : Rosemead_Washington_Passenger
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Rosemead Blvd Southbound				Washington Blvd Westbound				Rosemead Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**36**	**132**	**28**	**196**	**47**	**247**	**18**	**312**	12	69	5	86	15	125	13	153	**747**
07:45 AM	26	126	26	178	45	189	15	249	19	**73**	**16**	**108**	**22**	112	**27**	161	696
08:00 AM	34	112	17	163	38	161	8	207	**21**	45	14	80	14	**136**	21	**171**	621
08:15 AM	26	106	21	153	34	158	16	208	20	68	13	101	16	88	15	119	581
Total Volume	122	476	92	690	164	755	57	976	72	255	48	375	67	461	76	604	2645
% App. Total	17.7	69	13.3		16.8	77.4	5.8		19.2	68	12.8		11.1	76.3	12.6		
PHF	.847	.902	.821	.880	.872	.764	.792	.782	.857	.873	.750	.868	.761	.847	.704	.883	.885

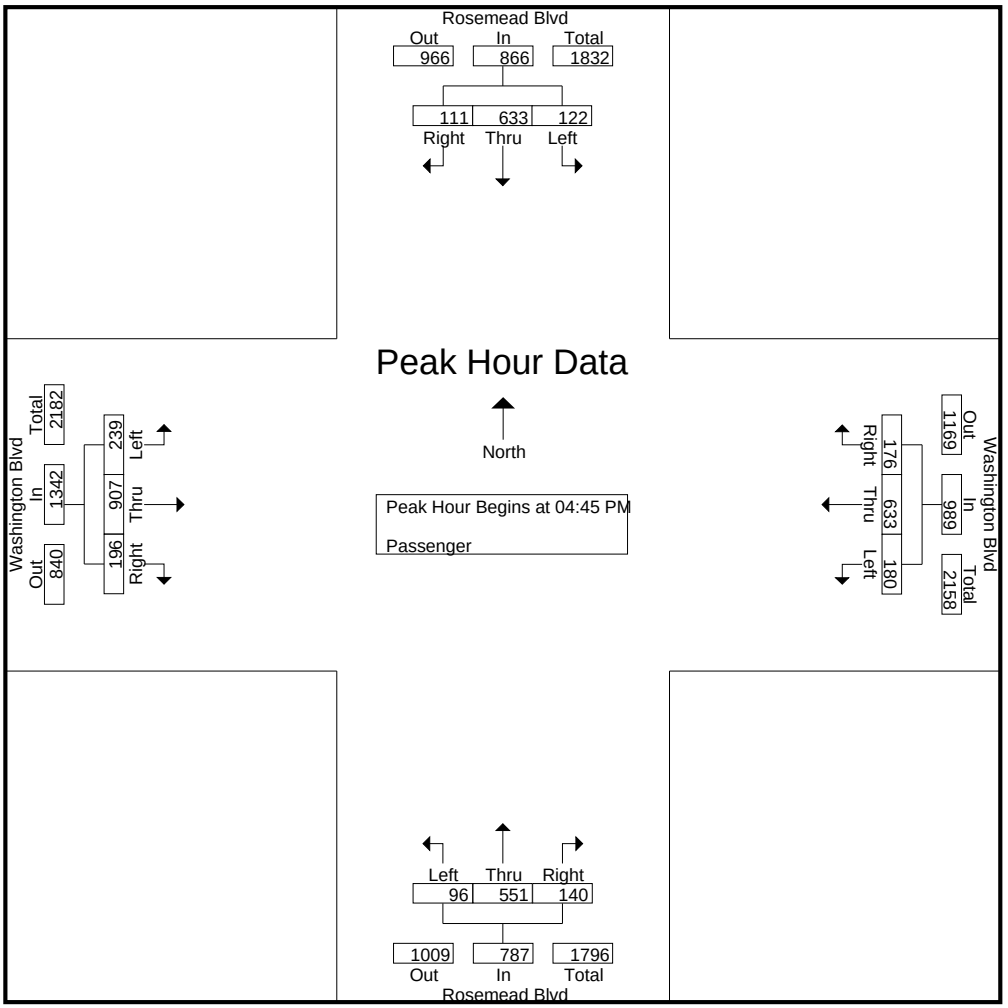


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Rosemead_Washington_Passenger
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Rosemead Blvd Southbound				Washington Blvd Westbound				Rosemead Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	23	144	30	197	46	**173**	34	**253**	**27**	**149**	38	**214**	49	230	41	320	984
05:00 PM	33	149	**34**	216	44	156	48	248	20	128	**41**	189	63	230	49	342	995
05:15 PM	26	**186**	29	**241**	34	154	**50**	238	22	149	28	199	**74**	201	48	323	1001
05:30 PM	**40**	154	18	212	**56**	150	44	250	27	125	33	185	53	**246**	**58**	**357**	**1004**
Total Volume	122	633	111	866	180	633	176	989	96	551	140	787	239	907	196	1342	3984
% App. Total	14.1	73.1	12.8		18.2	64	17.8		12.2	70	17.8		17.8	67.6	14.6		
PHF	.763	.851	.816	.898	.804	.915	.880	.977	.889	.924	.854	.919	.807	.922	.845	.940	.992



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Rosemead_Washington_Buses
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- Buses

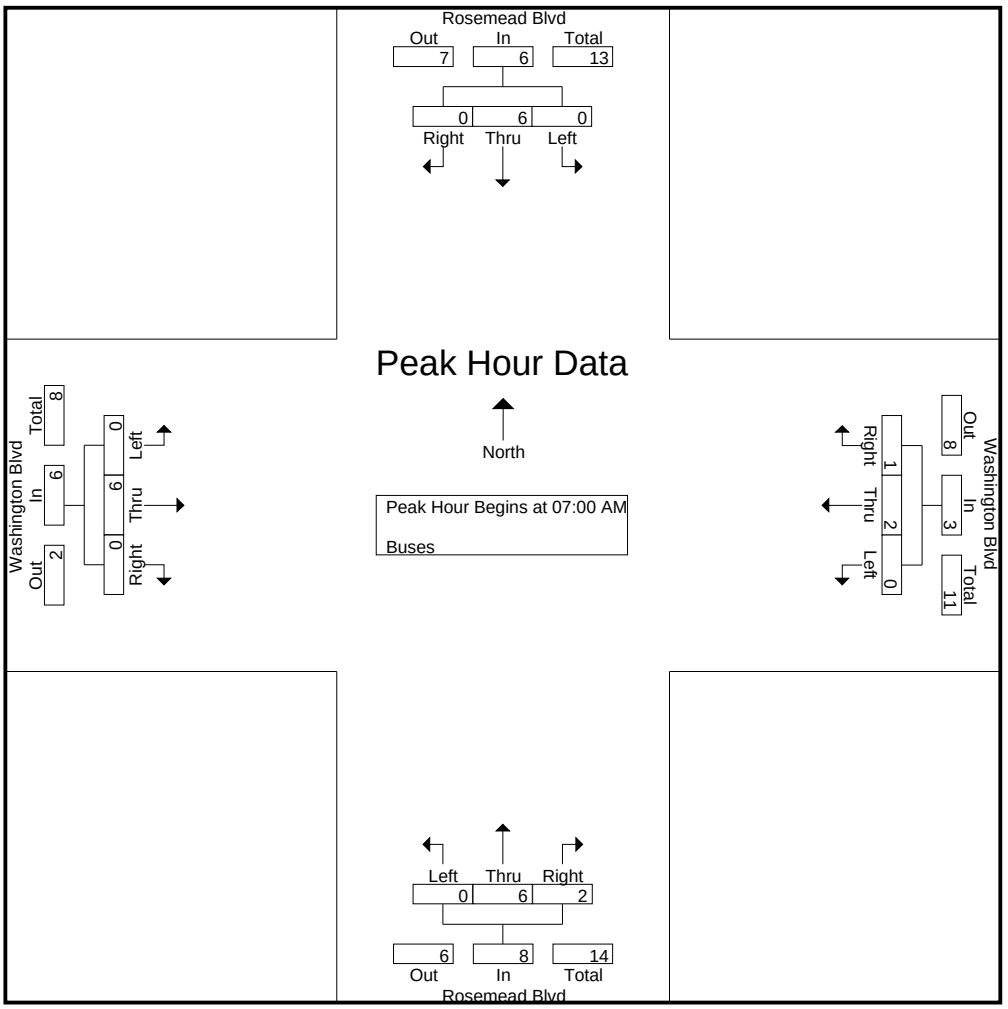
	Rosemead Blvd Southbound			Washington Blvd Westbound			Rosemead Blvd Northbound			Washington Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	1	0	0	0	0	0	1	0	0	1	0	3
07:15 AM	0	4	0	0	1	0	0	2	0	0	3	0	10
07:30 AM	0	1	0	0	1	1	0	2	2	0	0	0	7
07:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
Total	0	6	0	0	2	1	0	6	2	0	6	0	23
08:00 AM	0	1	0	0	0	0	0	1	0	0	0	0	2
08:15 AM	0	2	0	0	1	0	0	1	0	0	0	1	5
08:30 AM	0	2	0	0	1	0	0	0	0	0	1	0	4
08:45 AM	0	0	0	2	0	0	0	0	0	0	2	0	4
Total	0	5	0	2	2	0	0	2	0	0	3	1	15
04:00 PM	0	1	0	0	2	0	0	1	0	0	1	0	5
04:15 PM	0	1	0	0	0	0	0	2	0	0	0	0	3
04:30 PM	0	3	0	0	0	0	0	1	0	0	1	0	5
04:45 PM	0	5	0	0	1	0	0	2	0	0	1	0	9
Total	0	10	0	0	3	0	0	6	0	0	3	0	22
05:00 PM	0	3	0	0	1	0	0	2	0	0	2	0	8
05:15 PM	0	3	0	0	1	0	0	0	0	0	2	0	6
05:30 PM	0	4	0	0	0	0	0	0	0	0	0	0	4
05:45 PM	0	3	0	0	1	0	0	2	0	0	1	0	7
Total	0	13	0	0	3	0	0	4	0	0	5	0	25
Grand Total	0	34	0	2	10	1	0	18	2	0	17	1	85
Apprch %	0	100	0	15.4	76.9	7.7	0	90	10	0	94.4	5.6	
Total %	0	40	0	2.4	11.8	1.2	0	21.2	2.4	0	20	1.2	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Rosemead_Washington_Buses
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Rosemead Blvd Southbound				Washington Blvd Westbound				Rosemead Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	1	0	1	3
07:15 AM	0	**4**	0	**4**	0	**1**	0	1	0	**2**	0	2	0	**3**	0	**3**	**10**
07:30 AM	0	1	0	1	0	1	**1**	**2**	0	2	**2**	**4**	0	0	0	0	7
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2	3
Total Volume	0	6	0	6	0	2	1	3	0	6	2	8	0	6	0	6	23
% App. Total	0	100	0		0	66.7	33.3		0	75	25		0	100	0		
PHF	.000	.375	.000	.375	.000	.500	.250	.375	.000	.750	.250	.500	.000	.500	.000	.500	.575

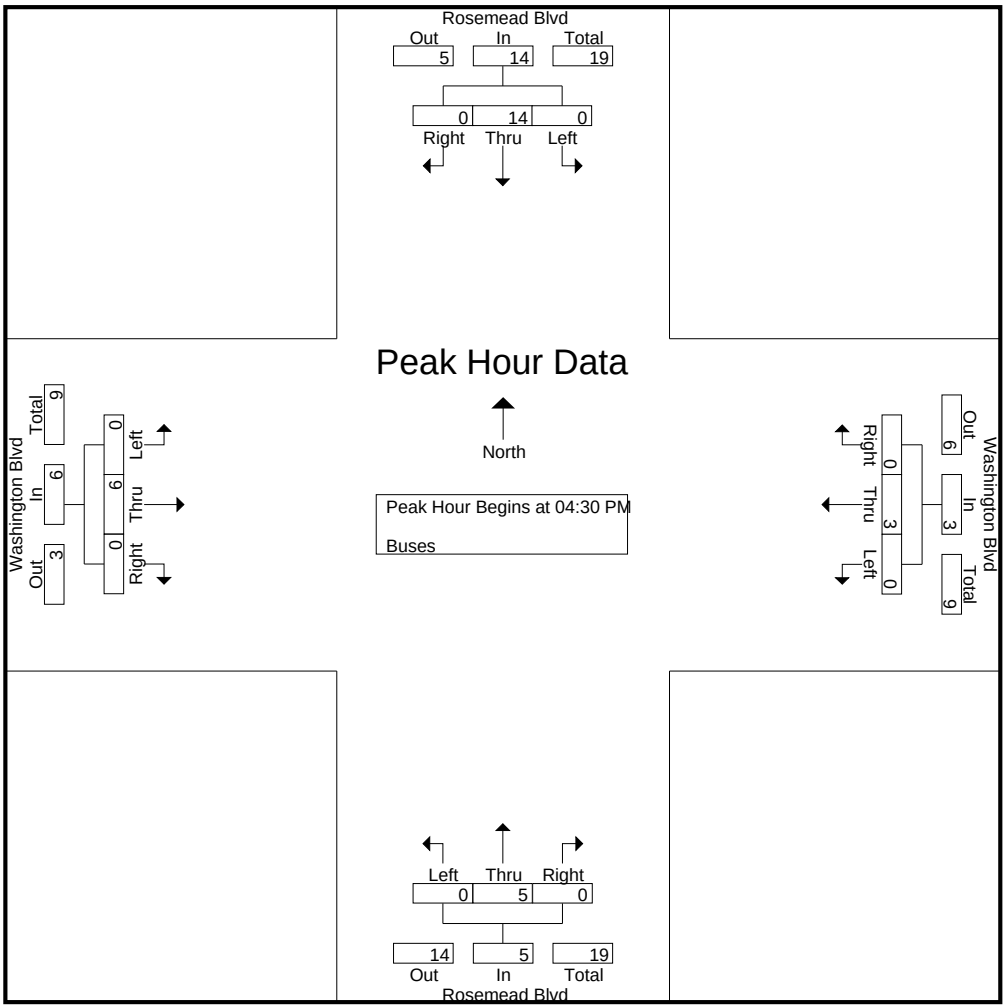


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Rosemead_Washington_Buses
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Rosemead Blvd Southbound				Washington Blvd Westbound				Rosemead Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	3	0	3	0	0	0	0	0	1	0	1	0	1	0	1	5
04:45 PM	0	**5**	0	**5**	0	**1**	0	**1**	0	**2**	0	**2**	0	1	0	1	**9**
05:00 PM	0	3	0	3	0	1	0	1	0	2	0	2	0	**2**	0	**2**	8
05:15 PM	0	3	0	3	0	1	0	1	0	0	0	0	0	2	0	2	6
Total Volume	0	14	0	14	0	3	0	3	0	5	0	5	0	6	0	6	28
% App. Total	0	100	0		0	100	0		0	100	0		0	100	0		
PHF	.000	.700	.000	.700	.000	.750	.000	.750	.000	.625	.000	.625	.000	.750	.000	.750	.778



CITY TRAFFIC COUNTERS

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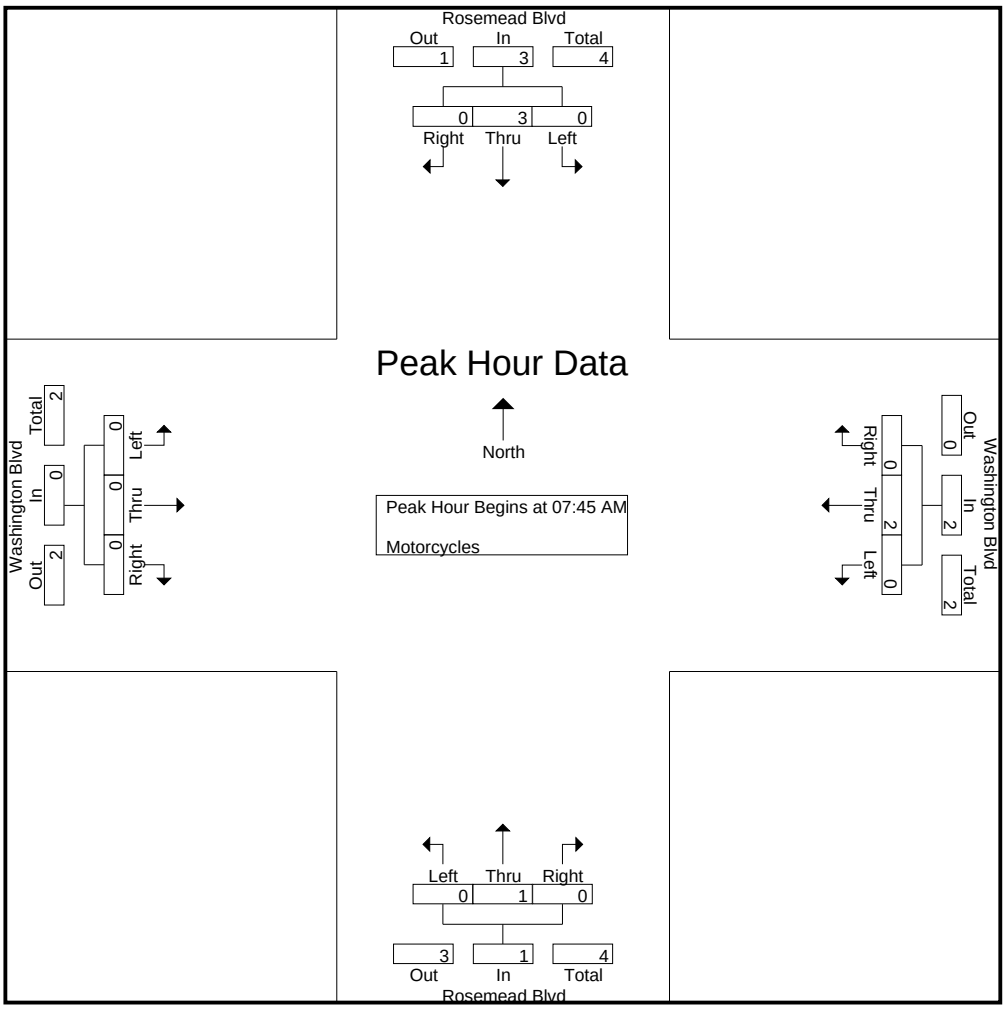
File Name : Rosemead_Washington_Motorcycles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- Motorcycles

	Rosemead Blvd Southbound			Washington Blvd Westbound			Rosemead Blvd Northbound			Washington Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	0	0	0	0	0	0	0	0	0	2
08:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	3
08:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
08:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	0	2	0	0	3	0	0	1	0	0	0	0	6
04:15 PM	0	0	0	0	2	0	0	0	0	1	1	0	4
04:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
04:45 PM	0	0	0	0	1	0	0	0	0	0	0	1	2
Total	0	0	0	0	3	0	0	0	0	1	2	1	7
05:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
05:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
Total	0	1	0	0	1	0	0	2	0	0	0	0	4
Grand Total	0	5	0	0	7	0	0	3	0	1	2	1	19
Apprch %	0	100	0	0	100	0	0	100	0	25	50	25	
Total %	0	26.3	0	0	36.8	0	0	15.8	0	5.3	10.5	5.3	

File Name : Rosemead_Washington_Motorcycles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Rosemead Blvd Southbound				Washington Blvd Westbound				Rosemead Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	**2**	0	**2**	0	**1**	0	**1**	0	0	0	0	0	0	0	0	**3**
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
Total Volume	0	3	0	3	0	2	0	2	0	1	0	1	0	0	0	0	6
% App. Total	0	100	0		0	100	0		0	100	0		0	0	0		
PHF	.000	.375	.000	.375	.000	.500	.000	.500	.000	.250	.000	.250	.000	.000	.000	.000	.500

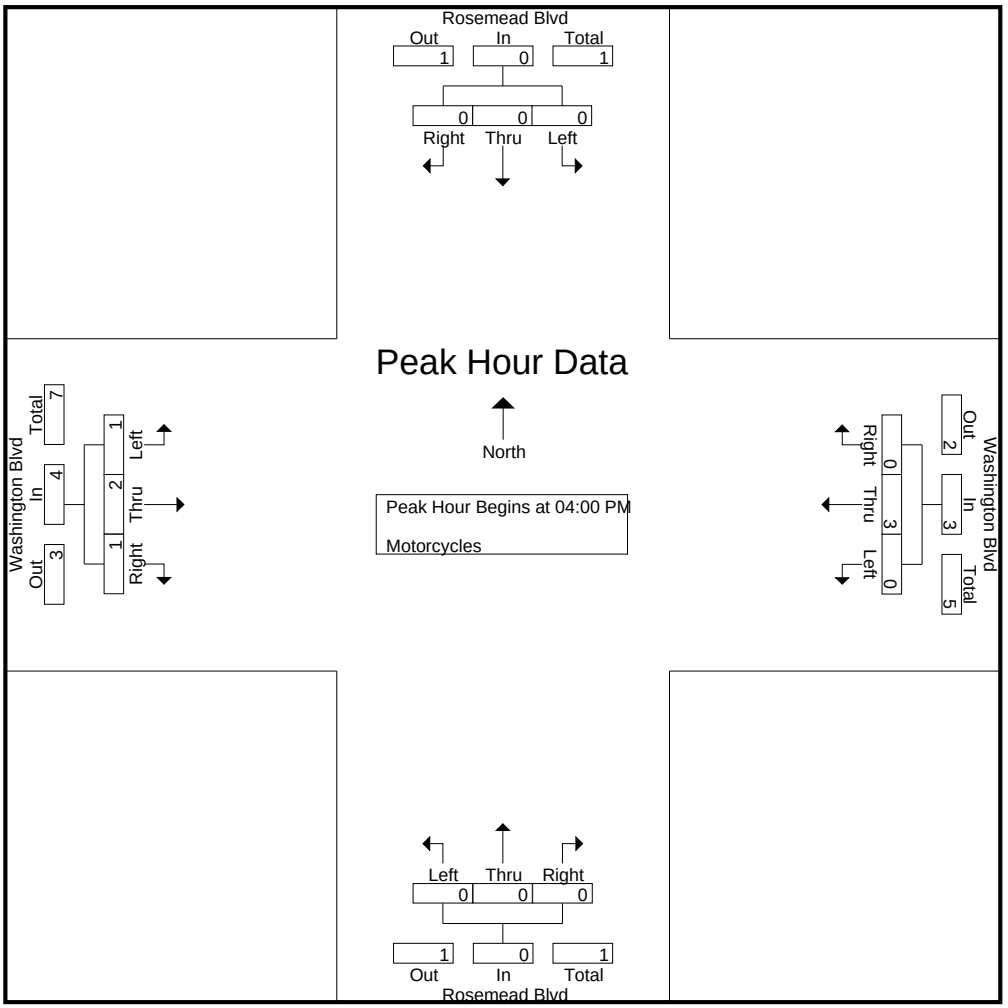


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Rosemead_Washington_Motorcycles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Rosemead Blvd Southbound				Washington Blvd Westbound				Rosemead Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	**1**	**1**	0	**2**	**4**
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	**1**	1	2
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	1	2	1	4	7
% App. Total	0	0	0		0	100	0		0	0	0		25	50	25		
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.250	.500	.250	.500	.438



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Rosemead_Washington_2-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- 2 Axle

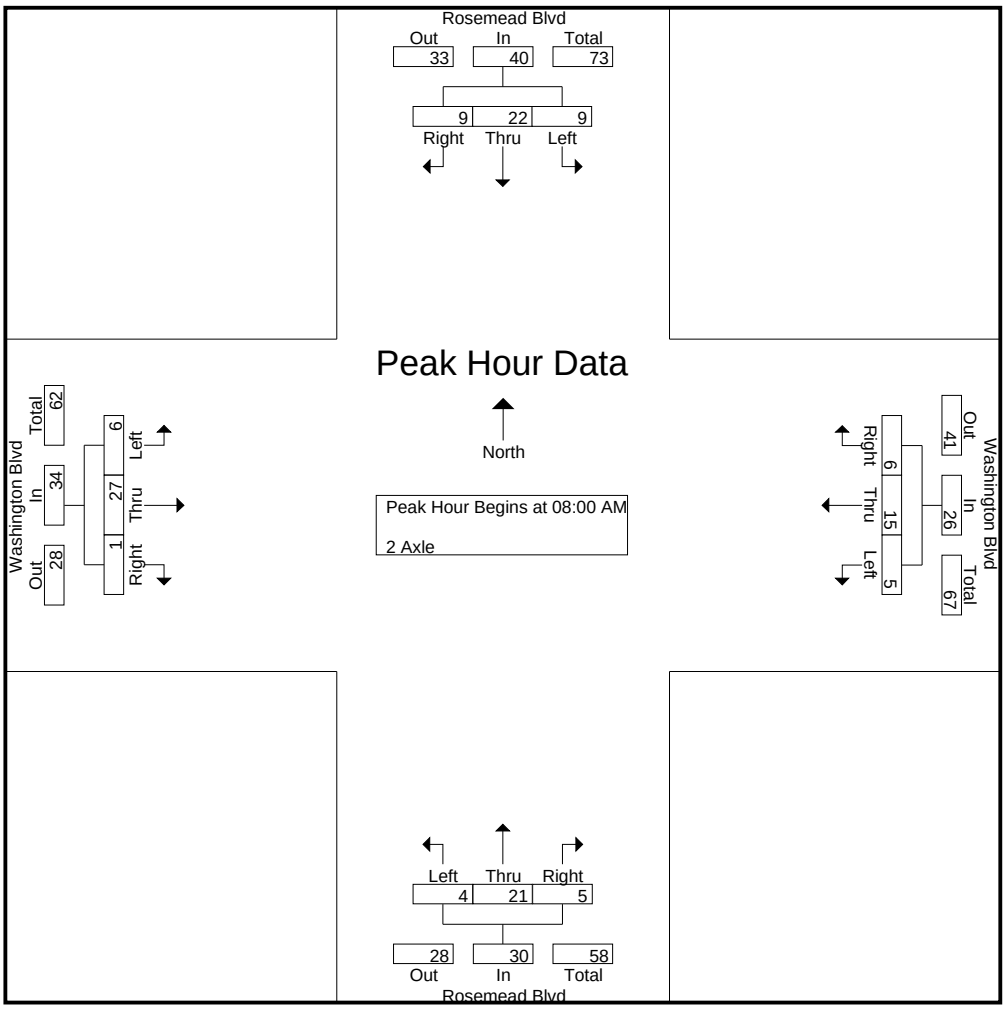
	Rosemead Blvd Southbound			Washington Blvd Westbound			Rosemead Blvd Northbound			Washington Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	4	1	1	2	2	0	4	1	0	4	0	19
07:15 AM	3	4	1	0	2	0	1	1	0	1	7	2	22
07:30 AM	3	10	3	0	5	0	0	6	0	1	7	1	36
07:45 AM	1	2	2	0	8	1	1	4	1	0	4	0	24
Total	7	20	7	1	17	3	2	15	2	2	22	3	101
08:00 AM	2	7	2	1	2	1	0	2	2	0	6	0	25
08:15 AM	4	5	3	0	6	2	1	6	1	0	8	1	37
08:30 AM	2	5	2	3	3	1	1	6	2	5	9	0	39
08:45 AM	1	5	2	1	4	2	2	7	0	1	4	0	29
Total	9	22	9	5	15	6	4	21	5	6	27	1	130
04:00 PM	1	3	0	0	5	0	0	3	0	0	5	1	18
04:15 PM	2	4	2	1	3	2	2	2	1	0	3	1	23
04:30 PM	2	2	0	0	4	2	0	2	2	1	5	0	20
04:45 PM	0	2	0	3	4	0	0	2	0	0	5	0	16
Total	5	11	2	4	16	4	2	9	3	1	18	2	77
05:00 PM	0	3	0	1	3	0	0	3	0	1	6	0	17
05:15 PM	1	4	2	2	0	0	0	4	0	1	2	0	16
05:30 PM	0	2	0	1	2	0	1	3	2	2	1	1	15
05:45 PM	1	3	0	1	2	0	0	3	1	0	4	1	16
Total	2	12	2	5	7	0	1	13	3	4	13	2	64
Grand Total	23	65	20	15	55	13	9	58	13	13	80	8	372
Apprch %	21.3	60.2	18.5	18.1	66.3	15.7	11.2	72.5	16.2	12.9	79.2	7.9	
Total %	6.2	17.5	5.4	4	14.8	3.5	2.4	15.6	3.5	3.5	21.5	2.2	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Rosemead_Washington_2-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Rosemead Blvd Southbound				Washington Blvd Westbound				Rosemead Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	2	**7**	2	11	1	2	1	4	0	2	**2**	4	0	6	0	6	25
08:15 AM	**4**	5	**3**	**12**	0	**6**	**2**	**8**	1	6	1	8	0	8	**1**	9	37
08:30 AM	2	5	2	9	**3**	3	1	7	1	6	2	**9**	**5**	**9**	0	**14**	**39**
08:45 AM	1	5	2	8	1	4	2	7	**2**	**7**	0	9	1	4	0	5	29
Total Volume	9	22	9	40	5	15	6	26	4	21	5	30	6	27	1	34	130
% App. Total	22.5	55	22.5		19.2	57.7	23.1		13.3	70	16.7		17.6	79.4	2.9		
PHF	.563	.786	.750	.833	.417	.625	.750	.813	.500	.750	.625	.833	.300	.750	.250	.607	.833

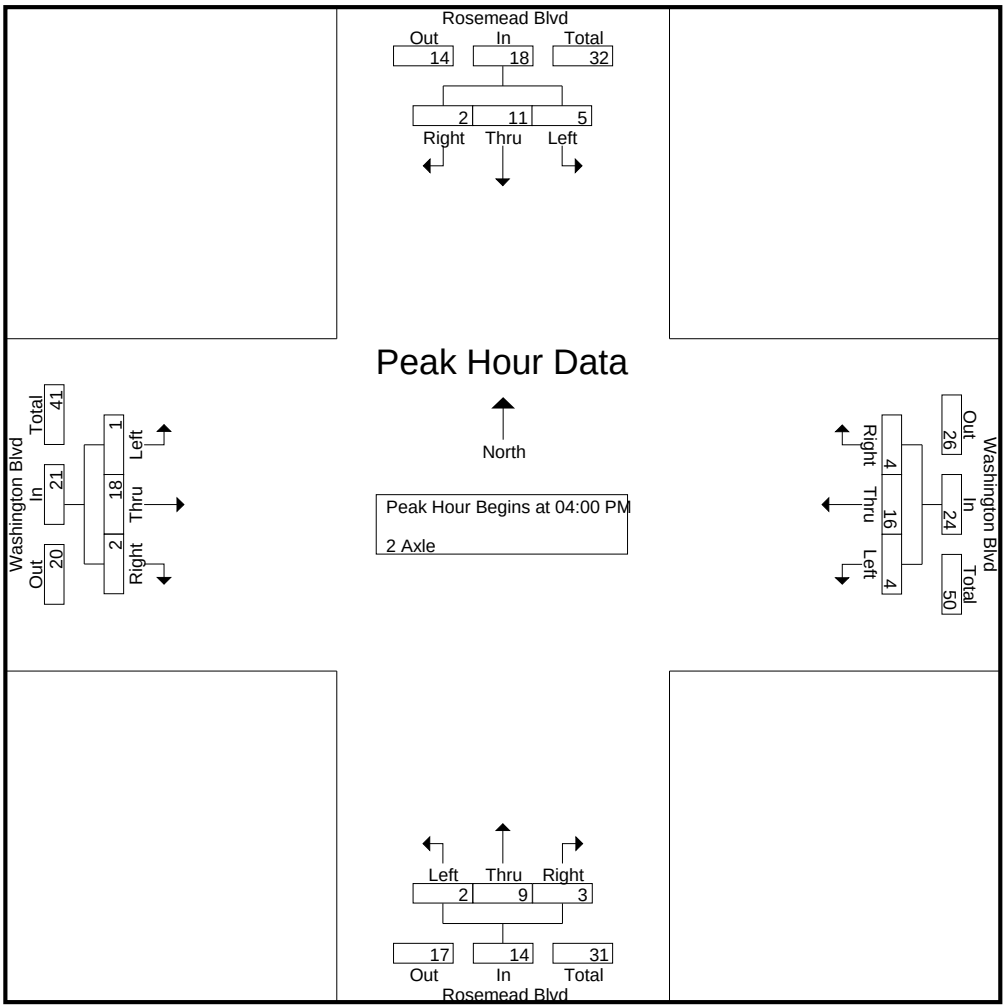


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Rosemead_Washington_2-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Rosemead Blvd Southbound				Washington Blvd Westbound				Rosemead Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	1	3	0	4	0	**5**	0	5	0	**3**	0	3	0	**5**	**1**	**6**	18
04:15 PM	**2**	**4**	**2**	**8**	1	3	**2**	6	**2**	2	1	**5**	0	3	1	4	**23**
04:30 PM	2	2	0	4	0	4	2	6	0	2	**2**	4	**1**	5	0	6	20
04:45 PM	0	2	0	2	**3**	4	0	**7**	0	2	0	2	0	5	0	5	16
Total Volume	5	11	2	18	4	16	4	24	2	9	3	14	1	18	2	21	77
% App. Total	27.8	61.1	11.1		16.7	66.7	16.7		14.3	64.3	21.4		4.8	85.7	9.5		
PHF	.625	.688	.250	.563	.333	.800	.500	.857	.250	.750	.375	.700	.250	.900	.500	.875	.837



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Rosemead_Washington_3-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- 3 Axle

	Rosemead Blvd Southbound			Washington Blvd Westbound			Rosemead Blvd Northbound			Washington Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	3	0	0	3	0	0	0	0	0	0	0	6
07:15 AM	0	2	0	0	2	0	0	2	0	0	1	0	7
07:30 AM	0	3	0	0	1	0	0	1	0	0	3	0	8
07:45 AM	0	1	0	0	1	0	0	2	0	0	6	0	10
Total	0	9	0	0	7	0	0	5	0	0	10	0	31
08:00 AM	1	1	0	0	1	0	0	1	0	2	4	0	10
08:15 AM	0	1	1	0	2	0	0	0	0	4	2	0	10
08:30 AM	0	1	2	1	3	0	0	1	1	1	4	0	14
08:45 AM	1	2	2	1	0	1	0	0	0	1	3	0	11
Total	2	5	5	2	6	1	0	2	1	8	13	0	45
04:00 PM	0	2	2	0	2	0	2	0	0	2	1	0	11
04:15 PM	0	3	0	0	2	0	0	0	0	1	1	0	7
04:30 PM	0	0	1	0	3	0	2	1	0	1	0	0	8
04:45 PM	0	2	0	0	5	0	0	2	0	0	1	0	10
Total	0	7	3	0	12	0	4	3	0	4	3	0	36
05:00 PM	0	0	1	0	4	0	1	0	0	0	0	0	6
05:15 PM	0	1	0	0	3	0	0	0	0	0	0	0	4
05:30 PM	0	1	0	0	2	0	0	0	0	0	1	0	4
05:45 PM	0	1	0	0	3	0	0	0	0	0	5	0	9
Total	0	3	1	0	12	0	1	0	0	0	6	0	23
Grand Total	2	24	9	2	37	1	5	10	1	12	32	0	135
Apprch %	5.7	68.6	25.7	5	92.5	2.5	31.2	62.5	6.2	27.3	72.7	0	
Total %	1.5	17.8	6.7	1.5	27.4	0.7	3.7	7.4	0.7	8.9	23.7	0	

CITY TRAFFIC COUNTERS

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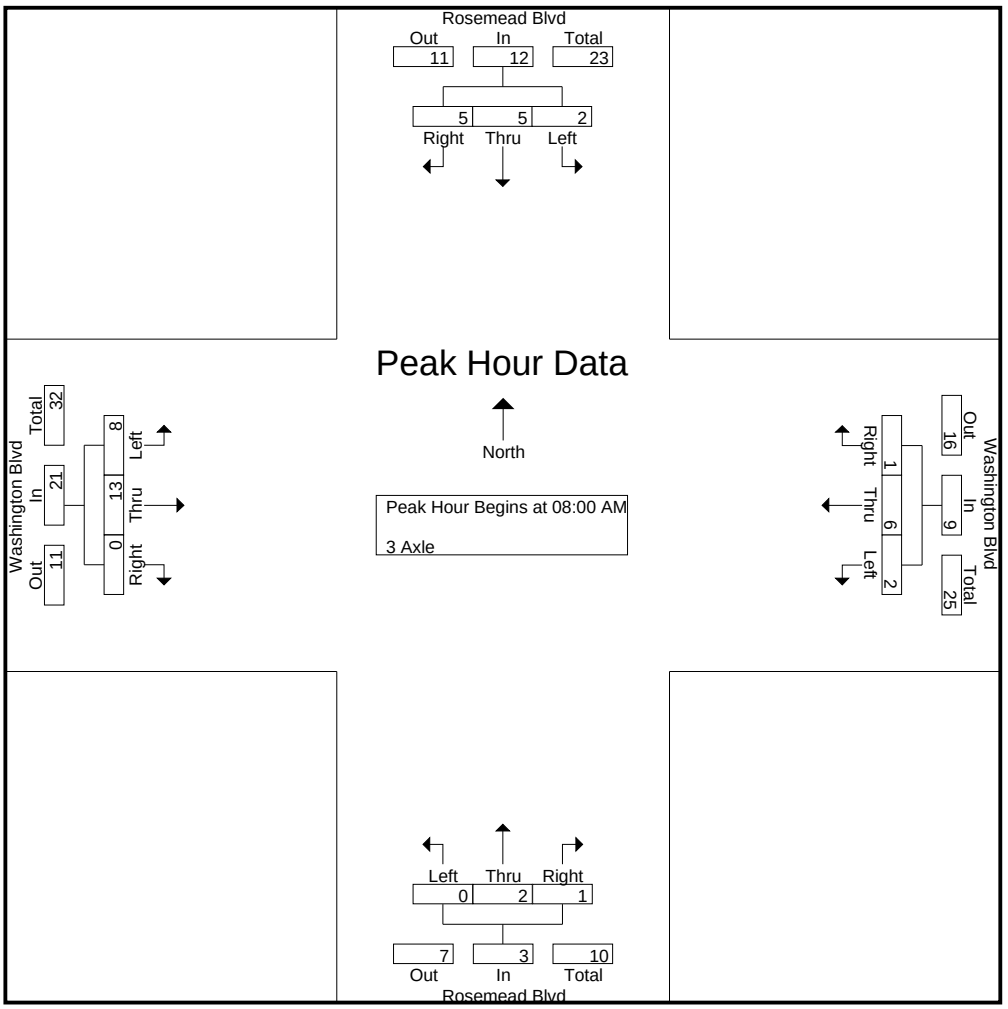
File Name : Rosemead_Washington_3-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Rosemead Blvd Southbound				Washington Blvd Westbound				Rosemead Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	**1**	1	0	2	0	1	0	1	0	**1**	0	1	2	**4**	0	**6**	10
08:15 AM	0	1	1	2	0	2	0	2	0	0	0	0	**4**	2	0	6	10
08:30 AM	0	1	**2**	3	**1**	**3**	0	**4**	0	1	**1**	**2**	1	4	0	5	**14**
08:45 AM	1	**2**	2	**5**	1	0	**1**	2	0	0	0	0	1	3	0	4	11
Total Volume	2	5	5	12	2	6	1	9	0	2	1	3	8	13	0	21	45
% App. Total	16.7	41.7	41.7		22.2	66.7	11.1		0	66.7	33.3		38.1	61.9	0		
PHF	.500	.625	.625	.600	.500	.500	.250	.563	.000	.500	.250	.375	.500	.813	.000	.875	.804

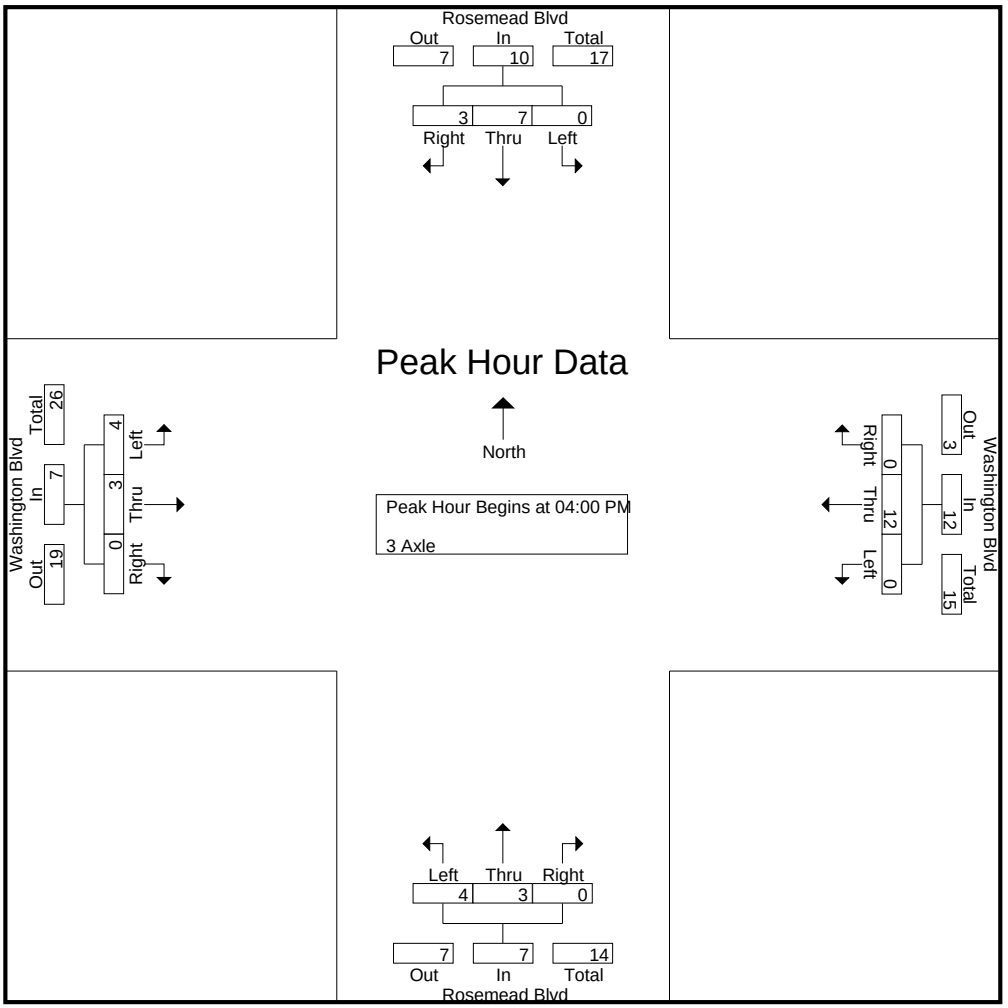


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : Rosemead_Washington_3-Axle
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Rosemead Blvd Southbound				Washington Blvd Westbound				Rosemead Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	2	**2**	**4**	0	2	0	2	**2**	0	0	2	**2**	**1**	0	**3**	**11**
04:15 PM	0	**3**	0	3	0	2	0	2	0	0	0	0	1	1	0	2	7
04:30 PM	0	0	1	1	0	3	0	3	2	1	0	**3**	1	0	0	1	8
04:45 PM	0	2	0	2	0	**5**	0	**5**	0	**2**	0	2	0	1	0	1	10
Total Volume	0	7	3	10	0	12	0	12	4	3	0	7	4	3	0	7	36
% App. Total	0	70	30		0	100	0		57.1	42.9	0		57.1	42.9	0		
PHF	.000	.583	.375	.625	.000	.600	.000	.600	.500	.375	.000	.583	.500	.750	.000	.583	.818



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

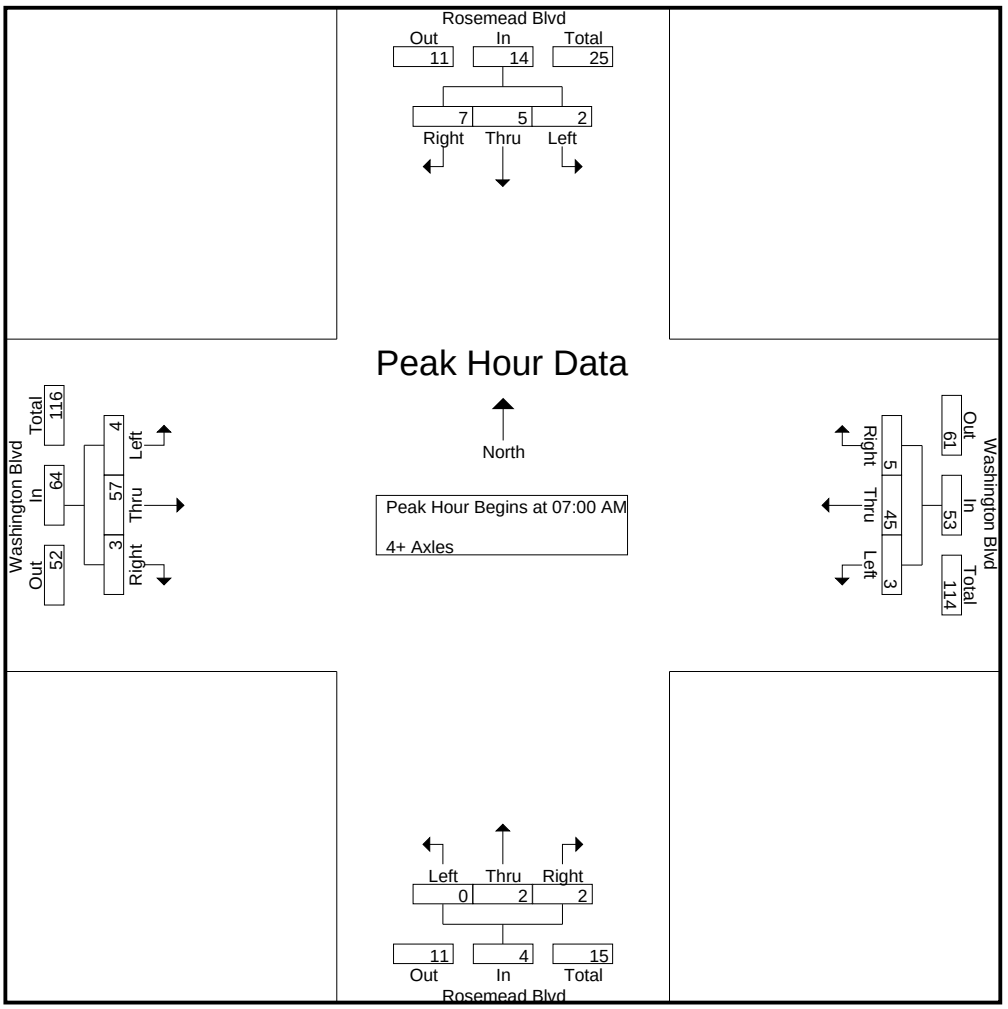
File Name : Rosemead_Washington_4+Axles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- 4+ Axles

	Rosemead Blvd Southbound			Washington Blvd Westbound			Rosemead Blvd Northbound			Washington Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	1	2	2	12	1	0	0	1	1	11	2	33
07:15 AM	2	1	1	1	11	3	0	0	0	1	17	0	37
07:30 AM	0	0	2	0	10	0	0	1	0	1	11	0	25
07:45 AM	0	3	2	0	12	1	0	1	1	1	18	1	40
Total	2	5	7	3	45	5	0	2	2	4	57	3	135
08:00 AM	0	0	1	1	10	0	0	0	0	0	7	1	20
08:15 AM	0	1	1	2	7	1	0	2	0	0	15	1	30
08:30 AM	0	2	2	2	7	2	0	3	1	0	17	0	36
08:45 AM	0	0	1	0	8	1	1	1	0	1	10	2	25
Total	0	3	5	5	32	4	1	6	1	1	49	4	111
04:00 PM	0	2	2	4	6	0	1	0	2	0	7	0	24
04:15 PM	0	1	2	2	7	0	0	1	0	1	8	0	22
04:30 PM	0	1	1	0	5	1	0	2	2	2	7	1	22
04:45 PM	0	1	0	1	9	0	0	0	0	0	8	0	19
Total	0	5	5	7	27	1	1	3	4	3	30	1	87
05:00 PM	0	0	1	1	8	1	0	2	0	1	5	0	19
05:15 PM	0	3	0	1	9	0	0	1	0	1	6	1	22
05:30 PM	0	0	1	1	4	0	1	3	0	1	2	0	13
05:45 PM	0	1	3	1	3	0	0	0	1	2	4	0	15
Total	0	4	5	4	24	1	1	6	1	5	17	1	69
Grand Total	2	17	22	19	128	11	3	17	8	13	153	9	402
Apprch %	4.9	41.5	53.7	12	81	7	10.7	60.7	28.6	7.4	87.4	5.1	
Total %	0.5	4.2	5.5	4.7	31.8	2.7	0.7	4.2	2	3.2	38.1	2.2	

File Name : Rosemead_Washington_4+Axles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Rosemead Blvd Southbound				Washington Blvd Westbound				Rosemead Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	**2**	3	**2**	**12**	1	**15**	0	0	**1**	1	**1**	11	**2**	14	33
07:15 AM	**2**	1	1	4	1	11	**3**	15	0	0	0	0	1	17	0	18	37
07:30 AM	0	0	2	2	0	10	0	10	0	**1**	0	1	1	11	0	12	25
07:45 AM	0	**3**	2	**5**	0	12	1	13	0	1	1	**2**	1	**18**	1	**20**	**40**
Total Volume	2	5	7	14	3	45	5	53	0	2	2	4	4	57	3	64	135
% App. Total	14.3	35.7	50		5.7	84.9	9.4		0	50	50		6.2	89.1	4.7		
PHF	.250	.417	.875	.700	.375	.938	.417	.883	.000	.500	.500	.500	1.00	.792	.375	.800	.844



CITY TRAFFIC COUNTERS

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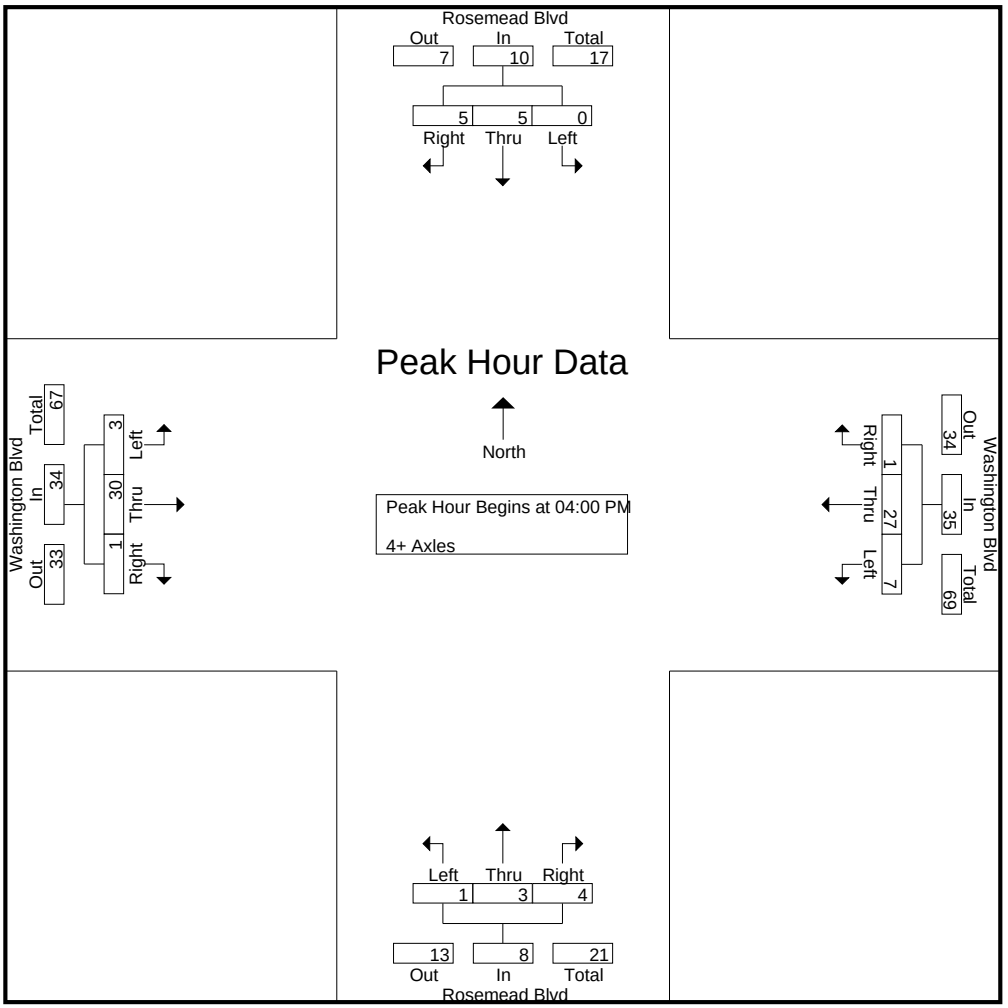
File Name : Rosemead_Washington_4+Axles
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Rosemead Blvd Southbound				Washington Blvd Westbound				Rosemead Blvd Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**2**	**2**	**4**	**4**	6	0	**10**	**1**	0	**2**	3	0	7	0	7	**24**
04:15 PM	0	1	2	3	2	7	0	9	0	1	0	1	1	**8**	0	9	22
04:30 PM	0	1	1	2	0	5	**1**	6	0	**2**	2	**4**	**2**	7	**1**	**10**	22
04:45 PM	0	1	0	1	1	**9**	0	10	0	0	0	0	0	8	0	8	19
Total Volume	0	5	5	10	7	27	1	35	1	3	4	8	3	30	1	34	87
% App. Total	0	50	50		20	77.1	2.9		12.5	37.5	50		8.8	88.2	2.9		
PHF	.000	.625	.625	.625	.438	.750	.250	.875	.250	.375	.500	.500	.375	.938	.250	.850	.906



CITY TRAFFIC COUNTERS

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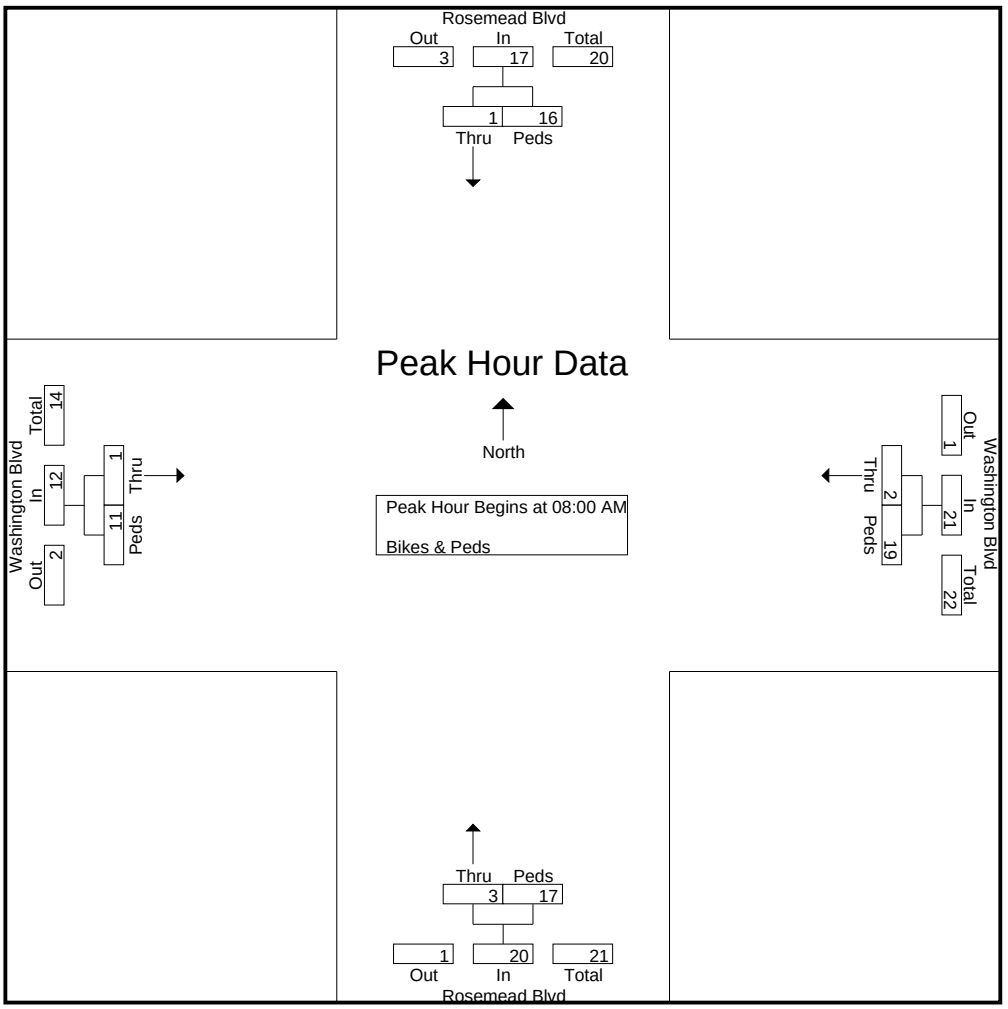
File Name : Rosemead_Washington_BP
Site Code : 00000000
Start Date : 3/9/2021
Page No : 1

Groups Printed- Bikes & Peds

	Rosemead Blvd Southbound		Washington Blvd Westbound		Rosemead Blvd Northbound		Washington Blvd Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:00 AM	0	2	0	2	0	1	1	3	9
07:15 AM	1	1	0	3	0	1	2	3	11
07:30 AM	1	2	1	5	1	3	0	3	16
07:45 AM	0	5	0	4	0	5	0	2	16
Total	2	10	1	14	1	10	3	11	52
08:00 AM	0	4	0	3	1	3	0	2	13
08:15 AM	1	5	1	6	1	4	1	4	23
08:30 AM	0	2	0	6	0	5	0	2	15
08:45 AM	0	5	1	4	1	5	0	3	19
Total	1	16	2	19	3	17	1	11	70
04:00 PM	0	5	0	10	1	6	0	4	26
04:15 PM	0	5	0	6	0	6	0	3	20
04:30 PM	1	3	1	10	0	4	2	0	21
04:45 PM	0	5	0	12	1	5	1	3	27
Total	1	18	1	38	2	21	3	10	94
05:00 PM	1	13	0	15	1	8	0	4	42
05:15 PM	1	11	2	9	0	6	1	3	33
05:30 PM	1	7	0	7	1	7	1	3	27
05:45 PM	0	5	0	11	0	6	0	2	24
Total	3	36	2	42	2	27	2	12	126
Grand Total	7	80	6	113	8	75	9	44	342
Apprch %	8	92	5	95	9.6	90.4	17	83	
Total %	2	23.4	1.8	33	2.3	21.9	2.6	12.9	

File Name : Rosemead_Washington_BP
Site Code : 00000000
Start Date : 3/9/2021
Page No : 2

	Rosemead Blvd Southbound			Washington Blvd Westbound			Rosemead Blvd Northbound			Washington Blvd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	4	4	0	3	3	**1**	3	4	0	2	2	13
08:15 AM	**1**	**5**	**6**	**1**	**6**	**7**	1	4	5	**1**	**4**	**5**	**23**
08:30 AM	0	2	2	0	6	6	0	**5**	5	0	2	2	15
08:45 AM	0	5	5	1	4	5	1	5	**6**	0	3	3	19
Total Volume	1	16	17	2	19	21	3	17	20	1	11	12	70
% App. Total	5.9	94.1		9.5	90.5		15	85		8.3	91.7		
PHF	.250	.800	.708	.500	.792	.750	.750	.850	.833	.250	.688	.600	.761



CITY TRAFFIC COUNTERS

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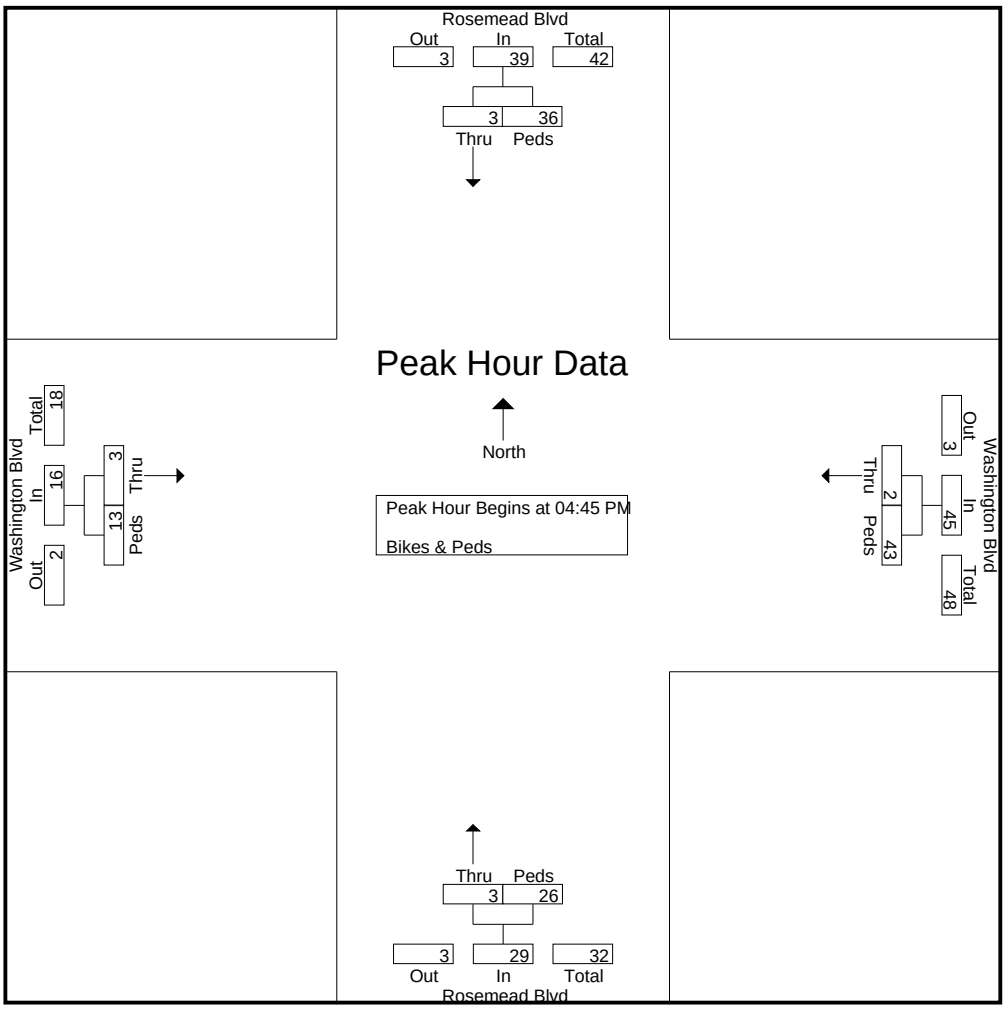
File Name : Rosemead_Washington_BP
Site Code : 00000000
Start Date : 3/9/2021
Page No : 3

	Rosemead Blvd Southbound			Washington Blvd Westbound			Rosemead Blvd Northbound			Washington Blvd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	0	5	5	0	12	12	**1**	5	6	**1**	3	**4**	27
05:00 PM	**1**	**13**	**14**	0	**15**	**15**	1	**8**	**9**	0	**4**	4	**42**
05:15 PM	1	11	12	**2**	9	11	0	6	6	1	3	4	33
05:30 PM	1	7	8	0	7	7	1	7	8	1	3	4	27
Total Volume	3	36	39	2	43	45	3	26	29	3	13	16	129
% App. Total	7.7	92.3		4.4	95.6		10.3	89.7		18.8	81.2		
PHF	.750	.692	.696	.250	.717	.750	.750	.813	.806	.750	.813	1.00	.768



City Traffic Counters
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Rosemead Blvd
Btwn Washington Blvd & Whittier Blvd

Start Time	09-Mar-21 Tue	Northeast Morning	Northeast Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southwest Morning	Southwest Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		31	219			26	181				
12:15		34	225			19	220				
12:30		20	212			18	202				
12:45		24	217	109	873	11	189	74	792	183	1665
01:00		16	208			9	206				
01:15		12	212			6	204				
01:30		16	200			11	197				
01:45		17	233	61	853	9	195	35	802	96	1655
02:00		14	242			15	224				
02:15		16	262			0	193				
02:30		13	254			10	221				
02:45		8	242	51	1000	15	224	40	862	91	1862
03:00		10	263			9	220				
03:15		5	221			10	213				
03:30		24	294			19	222				
03:45		17	288	56	1066	20	250	58	905	114	1971
04:00		16	285			16	260				
04:15		13	288			38	206				
04:30		23	305			45	246				
04:45		29	284	81	1162	48	248	147	960	228	2122
05:00		42	315			47	239				
05:15		46	348			65	240				
05:30		59	303			75	254				
05:45		79	323	226	1289	121	242	308	975	534	2264
06:00		76	318			97	209				
06:15		69	250			107	218				
06:30		76	256			149	214				
06:45		103	254	324	1078	124	165	477	806	801	1884
07:00		99	211			172	165				
07:15		120	198			178	169				
07:30		143	159			229	126				
07:45		134	189	496	757	179	107	758	567	1254	1324
08:00		111	166			186	117				
08:15		136	130			161	106				
08:30		144	112			169	90				
08:45		136	121	527	529	161	89	677	402	1204	931
09:00		164	112			129	86				
09:15		148	99			147	85				
09:30		123	99			141	63				
09:45		176	90	611	400	163	60	580	294	1191	694
10:00		152	89			149	54				
10:15		176	52			159	46				
10:30		174	59			171	29				
10:45		165	52	667	252	167	30	646	159	1313	411
11:00		181	73			152	30				
11:15		143	43			235	26				
11:30		190	41			231	26				
11:45		211	44	725	201	235	26	853	108	1578	309
Total		3934	9460			4653	7632			8587	17092
Percent		29.4%	70.6%			37.9%	62.1%			33.4%	66.6%
Grand Total		3934	9460			4653	7632			8587	17092
Percent		29.4%	70.6%			37.9%	62.1%			33.4%	66.6%
ADT		ADT 25,679		AADT 25,679							

City Traffic Counters
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Washington Blvd
Btwn Rosemead Blvd & Paramount Blvd

Start	09-Mar-21	East		Hour Totals		West		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		94	377			70	242				
12:15		70	326			45	224				
12:30		61	375			44	229				
12:45		51	365	276	1443	52	252	211	947	487	2390
01:00		59	383			25	274				
01:15		61	375			50	259				
01:30		67	397			29	248				
01:45		56	380	243	1535	45	266	149	1047	392	2582
02:00		63	411			61	224				
02:15		60	441			66	237				
02:30		25	466			57	238				
02:45		45	499	193	1817	45	275	229	974	422	2791
03:00		44	476			50	237				
03:15		51	397			74	258				
03:30		63	458			94	247				
03:45		60	494	218	1825	119	278	337	1020	555	2845
04:00		102	462			84	232				
04:15		99	509			102	278				
04:30		112	510			151	265				
04:45		113	571	426	2052	183	264	520	1039	946	3091
05:00		113	489			158	247				
05:15		130	520			231	241				
05:30		183	576			287	280				
05:45		150	482	576	2067	355	242	1031	1010	1607	3077
06:00		188	444			269	284				
06:15		188	449			340	242				
06:30		226	428			286	294				
06:45		214	447	816	1768	365	289	1260	1109	2076	2877
07:00		242	383			312	259				
07:15		262	348			380	190				
07:30		275	300			352	172				
07:45		318	269	1097	1300	355	173	1399	794	2496	2094
08:00		275	274			268	166				
08:15		261	267			278	142				
08:30		277	238			258	152				
08:45		277	183	1090	962	251	147	1055	607	2145	1569
09:00		280	172			199	179				
09:15		247	171			203	131				
09:30		253	147			194	111				
09:45		257	146	1037	636	209	122	805	543	1842	1179
10:00		327	167			202	152				
10:15		243	155			230	91				
10:30		328	122			212	107				
10:45		359	119	1257	563	222	85	866	435	2123	998
11:00		310	125			199	76				
11:15		330	105			244	69				
11:30		342	96			225	63				
11:45		395	100	1377	426	232	78	900	286	2277	712
Total		8606	16394			8762	9811			17368	26205
Percent		34.4%	65.6%			47.2%	52.8%			39.9%	60.1%
Grand Total		8606	16394			8762	9811			17368	26205
Percent		34.4%	65.6%			47.2%	52.8%			39.9%	60.1%
ADT		ADT 43,573		AADT 43,573							

CITY TRAFFIC COUNTERS

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File Name : ProjectDriveway_Washington
Site Code : 00000000
Start Date : 9/1/2021
Page No : 1

Groups Printed- Vehicles

	Project Driveway Southbound			Washington Blvd Westbound			Shopping Center Driveway Northbound			Washington Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	8	0	319	1	0	0	2	8	155	0	493
07:15 AM	0	0	11	0	312	3	0	0	4	16	201	1	548
07:30 AM	0	0	10	0	322	2	0	0	3	3	251	1	592
07:45 AM	0	0	9	0	306	1	0	0	0	18	261	1	596
Total	0	0	38	0	1259	7	0	0	9	45	868	3	2229
08:00 AM	0	1	9	0	376	5	0	0	5	14	203	1	614
08:15 AM	0	0	8	0	306	5	0	0	4	20	217	1	561
08:30 AM	0	0	10	0	278	6	0	0	8	20	169	1	492
08:45 AM	0	0	9	0	282	3	0	0	8	17	175	2	496
Total	0	1	36	0	1242	19	0	0	25	71	764	5	2163
04:00 PM	0	1	15	0	256	8	0	0	26	26	401	6	739
04:15 PM	0	0	11	0	234	6	0	1	18	29	328	5	632
04:30 PM	0	0	15	0	312	2	0	0	21	31	374	3	758
04:45 PM	0	0	15	0	257	2	0	1	29	19	365	6	694
Total	0	1	56	0	1059	18	0	2	94	105	1468	20	2823
05:00 PM	0	0	21	0	274	3	0	0	23	24	450	9	804
05:15 PM	0	0	16	0	255	5	0	0	26	34	409	15	760
05:30 PM	0	0	11	0	253	1	0	0	17	16	417	8	723
05:45 PM	0	0	14	0	223	1	0	0	14	30	372	7	661
Total	0	0	62	0	1005	10	0	0	80	104	1648	39	2948
Grand Total	0	2	192	0	4565	54	0	2	208	325	4748	67	10163
Apprch %	0	1	99	0	98.8	1.2	0	1	99	6.3	92.4	1.3	
Total %	0	0	1.9	0	44.9	0.5	0	0	2	3.2	46.7	0.7	

CITY TRAFFIC COUNTERS

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File Name : ProjectDriveway_Washington
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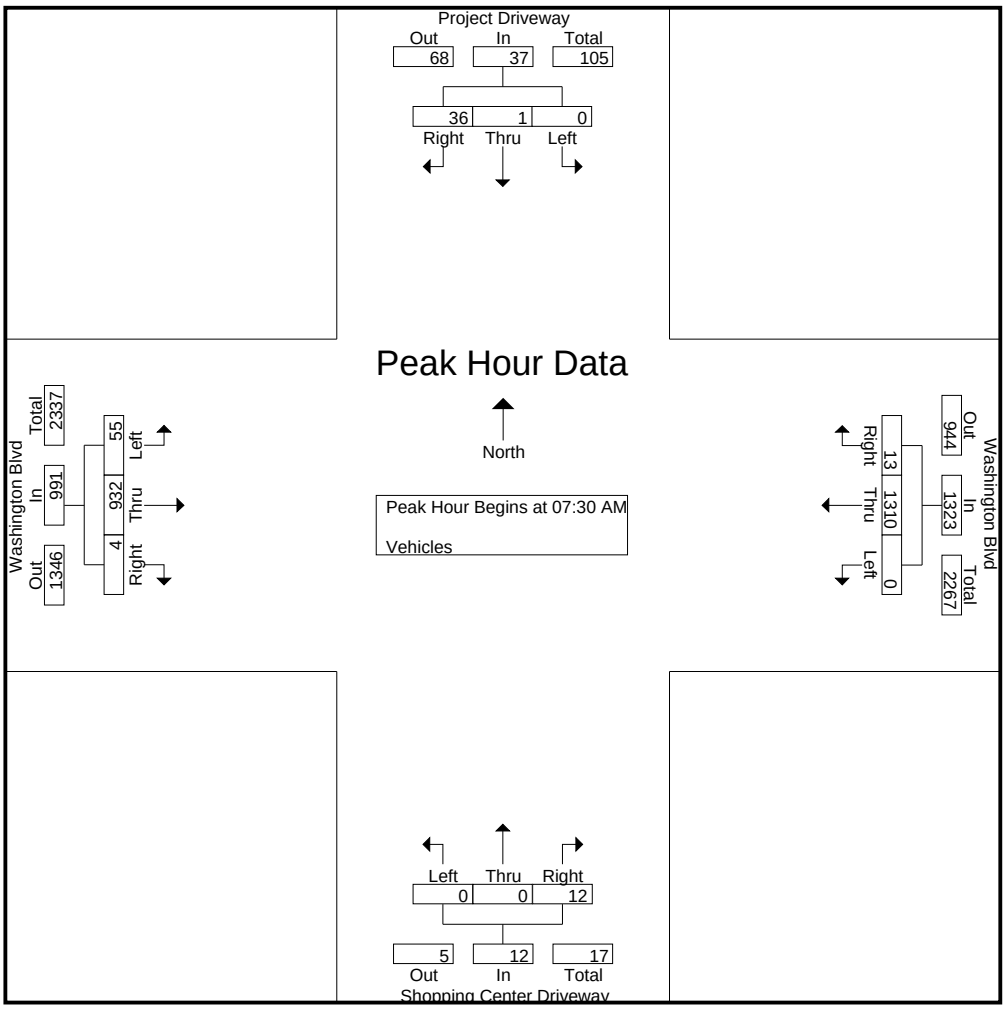
	Project Driveway Southbound				Washington Blvd Westbound				Shopping Center Driveway Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	**10**	**10**	0	322	2	324	0	0	3	3	3	251	**1**	255	592
07:45 AM	0	0	9	9	0	306	1	307	0	0	0	0	18	**261**	1	**280**	596
08:00 AM	0	**1**	9	10	0	**376**	**5**	**381**	0	0	**5**	**5**	14	203	1	218	**614**
08:15 AM	0	0	8	8	0	306	5	311	0	0	4	4	**20**	217	1	238	561
Total Volume	0	1	36	37	0	1310	13	1323	0	0	12	12	55	932	4	991	2363
% App. Total	0	2.7	97.3		0	99	1		0	0	100		5.5	94	0.4		
PHF	.000	.250	.900	.925	.000	.871	.650	.868	.000	.000	.600	.600	.688	.893	1.00	.885	.962



CITY TRAFFIC COUNTERS

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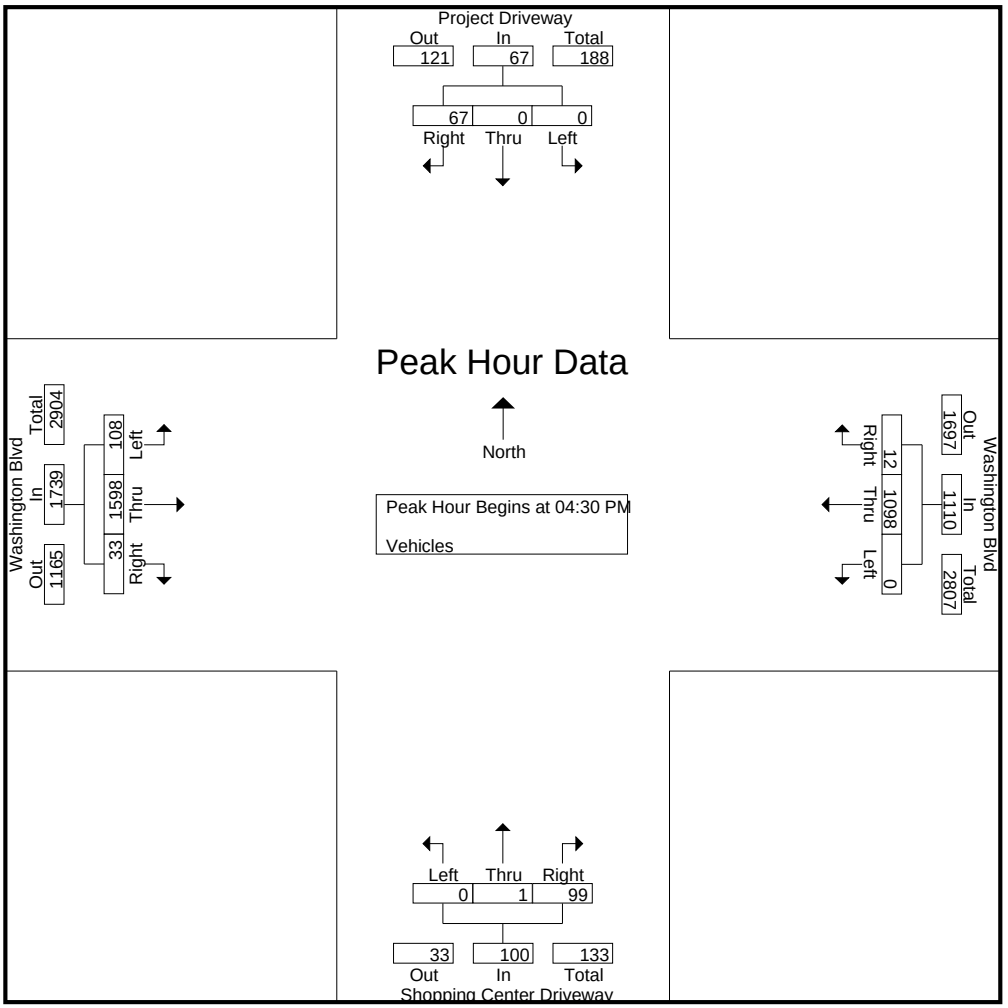
File Name : ProjectDriveway_Washington
Site Code : 00000000
Start Date : 9/1/2021
Page No : 3

	Project Driveway Southbound				Washington Blvd Westbound				Shopping Center Driveway Northbound				Washington Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	15	15	0	**312**	2	**314**	0	0	21	21	31	374	3	408	758
04:45 PM	0	0	15	15	0	257	2	259	0	**1**	**29**	**30**	19	365	6	390	694
05:00 PM	0	0	**21**	**21**	0	274	3	277	0	0	23	23	24	**450**	9	**483**	**804**
05:15 PM	0	0	16	16	0	255	**5**	260	0	0	26	26	**34**	409	**15**	458	760
Total Volume	0	0	67	67	0	1098	12	1110	0	1	99	100	108	1598	33	1739	3016
% App. Total	0	0	100		0	98.9	1.1		0	1	99		6.2	91.9	1.9		
PHF	.000	.000	.798	.798	.000	.880	.600	.884	.000	.250	.853	.833	.794	.888	.550	.900	.938



CITY TRAFFIC COUNTERS

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Groups Printed- Bikes & Peds

	Project Driveway Southbound		Washington Blvd Westbound		Shopping Center Driveway Northbound		Washington Blvd Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:00 AM	1	0	0	0	0	1	0	1	3
07:15 AM	2	1	0	0	0	0	0	0	3
07:30 AM	0	1	0	0	1	1	0	0	3
07:45 AM	2	1	0	0	1	2	0	0	6
Total	5	3	0	0	2	4	0	1	15
08:00 AM	1	2	0	0	1	2	0	1	7
08:15 AM	0	1	0	0	0	0	0	0	1
08:30 AM	0	1	0	0	0	1	0	0	2
08:45 AM	1	4	0	1	1	1	0	0	8
Total	2	8	0	1	2	4	0	1	18
04:00 PM	2	2	0	0	0	9	1	0	14
04:15 PM	3	4	0	1	0	12	0	0	20
04:30 PM	1	3	0	0	0	6	0	0	10
04:45 PM	3	0	0	0	0	24	0	0	27
Total	9	9	0	1	0	51	1	0	71
05:00 PM	0	2	0	0	0	12	0	0	14
05:15 PM	1	3	0	1	0	16	0	0	21
05:30 PM	0	1	0	0	0	12	0	1	14
05:45 PM	0	1	0	0	0	12	0	0	13
Total	1	7	0	1	0	52	0	1	62
Grand Total	17	27	0	3	4	111	1	3	166
Apprch %	38.6	61.4	0	100	3.5	96.5	25	75	
Total %	10.2	16.3	0	1.8	2.4	66.9	0.6	1.8	

File Name : ProjectDriveway_Washington_BP
Site Code : 00000000
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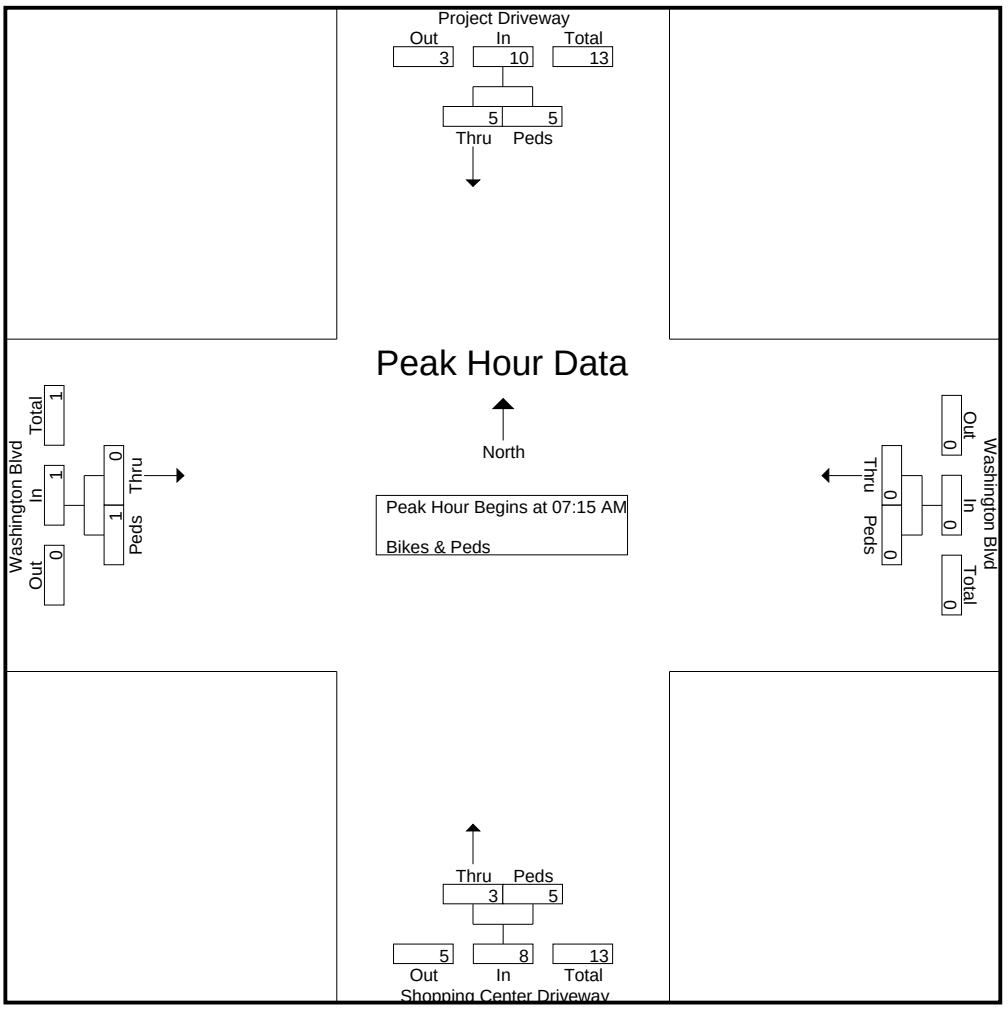
	Project Driveway Southbound			Washington Blvd Westbound			Shopping Center Driveway Northbound			Washington Blvd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	**2**	1	**3**	0	0	0	0	0	0	0	0	0	3
07:30 AM	0	1	1	0	0	0	**1**	1	2	0	0	0	3
07:45 AM	2	1	3	0	0	0	1	**2**	**3**	0	0	0	6
08:00 AM	1	**2**	3	0	0	0	1	2	3	0	**1**	**1**	**7**
Total Volume	5	5	10	0	0	0	3	5	8	0	1	1	19
% App. Total	50	50		0	0		37.5	62.5		0	100		
PHF	.625	.625	.833	.000	.000	.000	.750	.625	.667	.000	.250	.250	.679



CITY TRAFFIC COUNTERS

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File Name : ProjectDriveway_Washington_BP
Site Code : 00000000
Start Date : 9/1/2021
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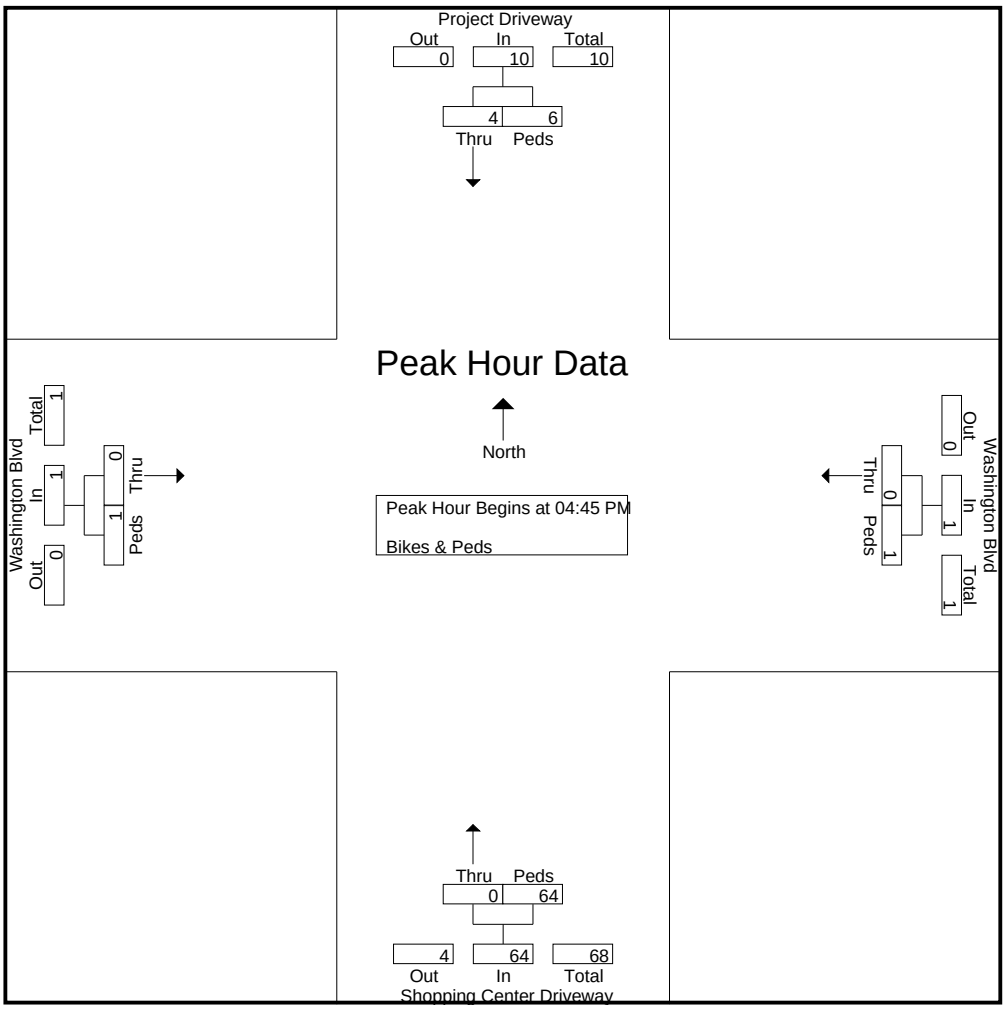
	Project Driveway Southbound			Washington Blvd Westbound			Shopping Center Driveway Northbound			Washington Blvd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	**3**	0	3	0	0	0	0	**24**	**24**	0	0	0	**27**
05:00 PM	0	2	2	0	0	0	0	12	12	0	0	0	14
05:15 PM	1	**3**	**4**	0	**1**	**1**	0	16	16	0	0	0	21
05:30 PM	0	1	1	0	0	0	0	12	12	0	**1**	**1**	14
Total Volume	4	6	10	0	1	1	0	64	64	0	1	1	76
% App. Total	40	60		0	100		0	100		0	100		
PHF	.333	.500	.625	.000	.250	.250	.000	.667	.667	.000	.250	.250	.704



CITY TRAFFIC COUNTERS

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File Name : Rosemead_TheMarketplaceDriveway
Site Code : 00000000
Start Date : 9/1/2021
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Groups Printed- Vehicles

	Rosemead Blvd Southbound			Westbound			Rosemead Blvd Northbound			The Marketplace Driveway Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	169	4	0	0	0	2	111	0	10	0	9	305
07:15 AM	0	203	14	0	0	0	0	128	0	11	0	10	366
07:30 AM	0	260	13	0	0	0	2	216	0	9	0	9	509
07:45 AM	0	282	12	0	0	0	4	232	0	10	0	5	545
Total	0	914	43	0	0	0	8	687	0	40	0	33	1725
08:00 AM	0	234	12	0	0	0	5	212	0	12	0	6	481
08:15 AM	0	196	16	0	0	0	7	137	0	15	0	13	384
08:30 AM	0	176	16	0	0	0	5	164	0	6	0	10	377
08:45 AM	0	163	16	0	0	0	0	154	0	14	0	14	361
Total	0	769	60	0	0	0	17	667	0	47	0	43	1603
04:00 PM	0	280	16	0	0	0	5	256	0	28	0	9	594
04:15 PM	0	251	17	0	0	0	6	251	0	19	0	20	564
04:30 PM	0	289	16	0	0	0	8	249	0	17	0	19	598
04:45 PM	0	285	23	0	0	0	16	260	0	31	0	13	628
Total	0	1105	72	0	0	0	35	1016	0	95	0	61	2384
05:00 PM	0	299	21	0	0	0	9	264	0	24	0	17	634
05:15 PM	0	264	18	0	0	0	11	269	0	19	0	24	605
05:30 PM	0	276	28	0	0	0	3	263	0	24	0	22	616
05:45 PM	0	256	24	0	0	0	8	261	0	25	0	21	595
Total	0	1095	91	0	0	0	31	1057	0	92	0	84	2450
Grand Total	0	3883	266	0	0	0	91	3427	0	274	0	221	8162
Apprch %	0	93.6	6.4	0	0	0	2.6	97.4	0	55.4	0	44.6	
Total %	0	47.6	3.3	0	0	0	1.1	42	0	3.4	0	2.7	

CITY TRAFFIC COUNTERS

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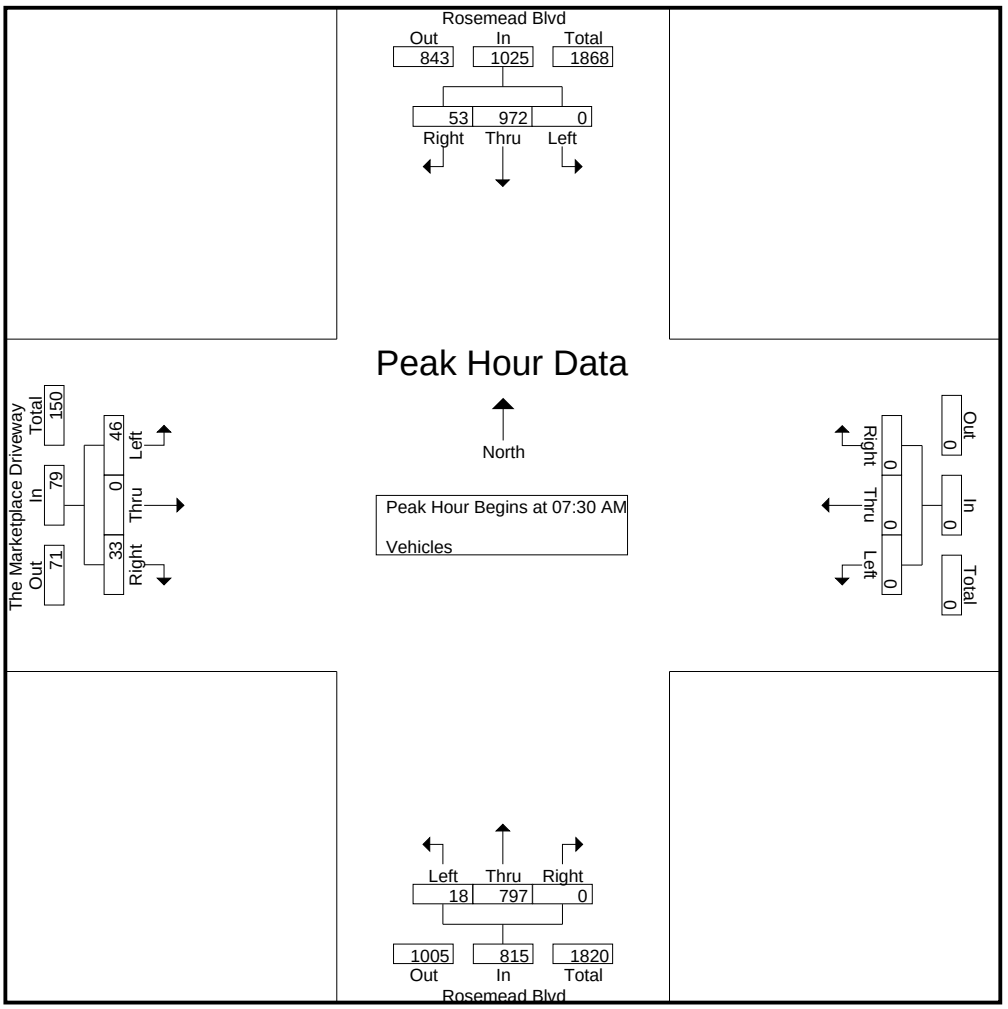
File Name : Rosemead_TheMarketplaceDriveway
Site Code : 00000000
Start Date : 9/1/2021
Page No : 2

	Rosemead Blvd Southbound				Westbound				Rosemead Blvd Northbound				The Marketplace Driveway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	260	13	273	0	0	0	0	2	216	0	218	9	0	9	18	509
07:45 AM	0	**282**	12	**294**	0	0	0	0	4	**232**	0	**236**	10	0	5	15	**545**
08:00 AM	0	234	12	246	0	0	0	0	5	212	0	217	12	0	6	18	481
08:15 AM	0	196	**16**	212	0	0	0	0	**7**	137	0	144	**15**	0	**13**	**28**	384
Total Volume	0	972	53	1025	0	0	0	0	18	797	0	815	46	0	33	79	1919
% App. Total	0	94.8	5.2		0	0	0		2.2	97.8	0		58.2	0	41.8		
PHF	.000	.862	.828	.872	.000	.000	.000	.000	.643	.859	.000	.863	.767	.000	.635	.705	.880



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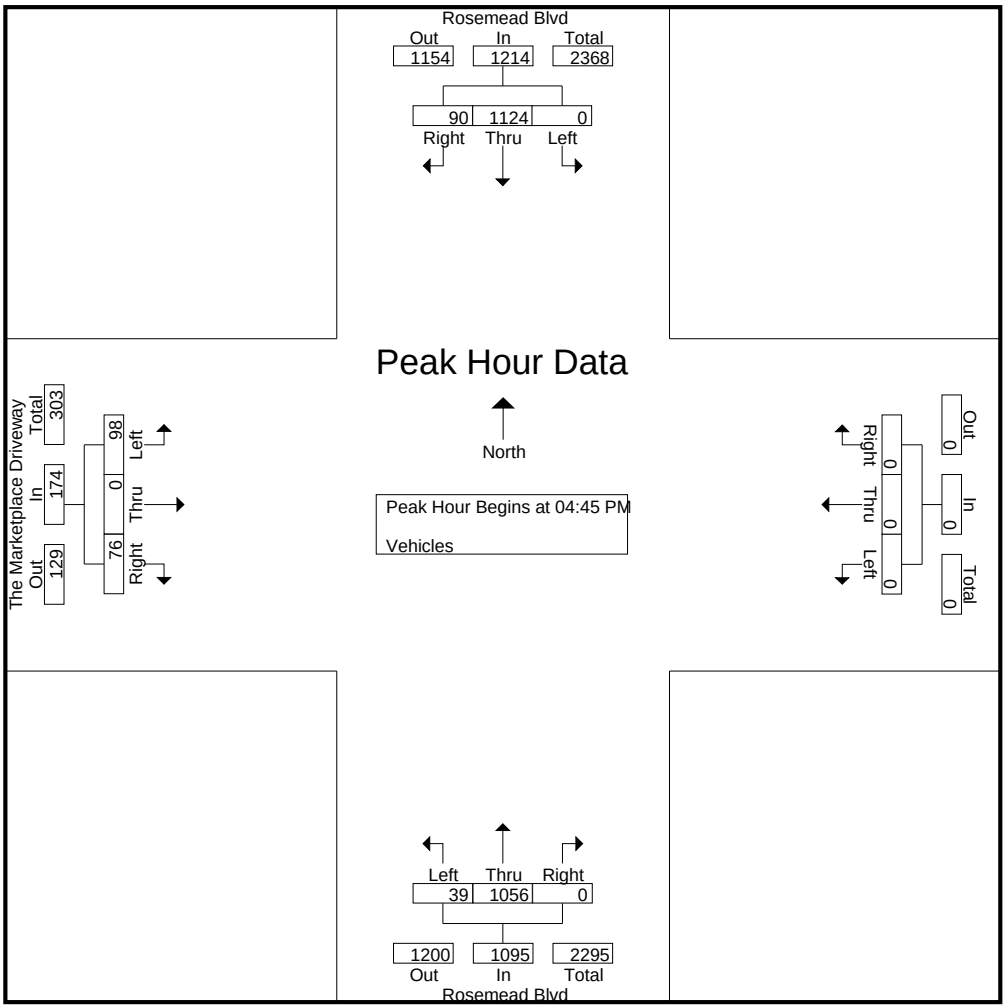
	Rosemead Blvd Southbound				Westbound				Rosemead Blvd Northbound				The Marketplace Driveway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	285	23	308	0	0	0	0	**16**	260	0	276	**31**	0	13	44	628
05:00 PM	0	**299**	21	**320**	0	0	0	0	9	264	0	273	24	0	17	41	**634**
05:15 PM	0	264	18	282	0	0	0	0	11	**269**	0	**280**	19	0	**24**	43	605
05:30 PM	0	276	**28**	304	0	0	0	0	3	263	0	266	24	0	22	**46**	616
Total Volume	0	1124	90	1214	0	0	0	0	39	1056	0	1095	98	0	76	174	2483
% App. Total	0	92.6	7.4		0	0	0		3.6	96.4	0		56.3	0	43.7		
PHF	.000	.940	.804	.948	.000	.000	.000	.000	.609	.981	.000	.978	.790	.000	.792	.946	.979



CITY TRAFFIC COUNTERS

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Groups Printed- Bikes & Peds

	Rosemead Blvd Southbound		Westbound		Rosemead Blvd Northbound		The Marketplace Driveway Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:15 AM	0	1	0	0	0	0	0	2	3
07:30 AM	0	0	0	1	0	0	3	2	6
07:45 AM	1	1	0	0	0	0	2	1	5
Total	1	2	0	1	0	0	5	5	14
08:00 AM	0	1	0	0	0	0	0	2	3
08:15 AM	0	2	0	0	0	0	1	3	6
08:30 AM	0	2	0	0	0	0	0	2	4
08:45 AM	0	1	0	2	0	0	0	2	5
Total	0	6	0	2	0	0	1	9	18
04:00 PM	1	2	0	0	0	0	0	1	4
04:15 PM	1	3	0	0	0	0	0	5	9
04:30 PM	0	3	0	0	0	0	0	2	5
04:45 PM	0	2	2	0	0	0	3	3	10
Total	2	10	2	0	0	0	3	11	28
05:00 PM	0	2	2	0	0	0	0	1	5
05:15 PM	0	3	0	3	0	0	0	3	9
05:30 PM	0	2	0	0	0	0	0	2	4
05:45 PM	0	2	0	1	0	0	0	0	3
Total	0	9	2	4	0	0	0	6	21
Grand Total	3	27	4	7	0	0	9	31	81
Apprch %	10	90	36.4	63.6	0	0	22.5	77.5	
Total %	3.7	33.3	4.9	8.6	0	0	11.1	38.3	

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File Name : Rosemead_TheMarketplaceDriveway_BP
Site Code : 00000000
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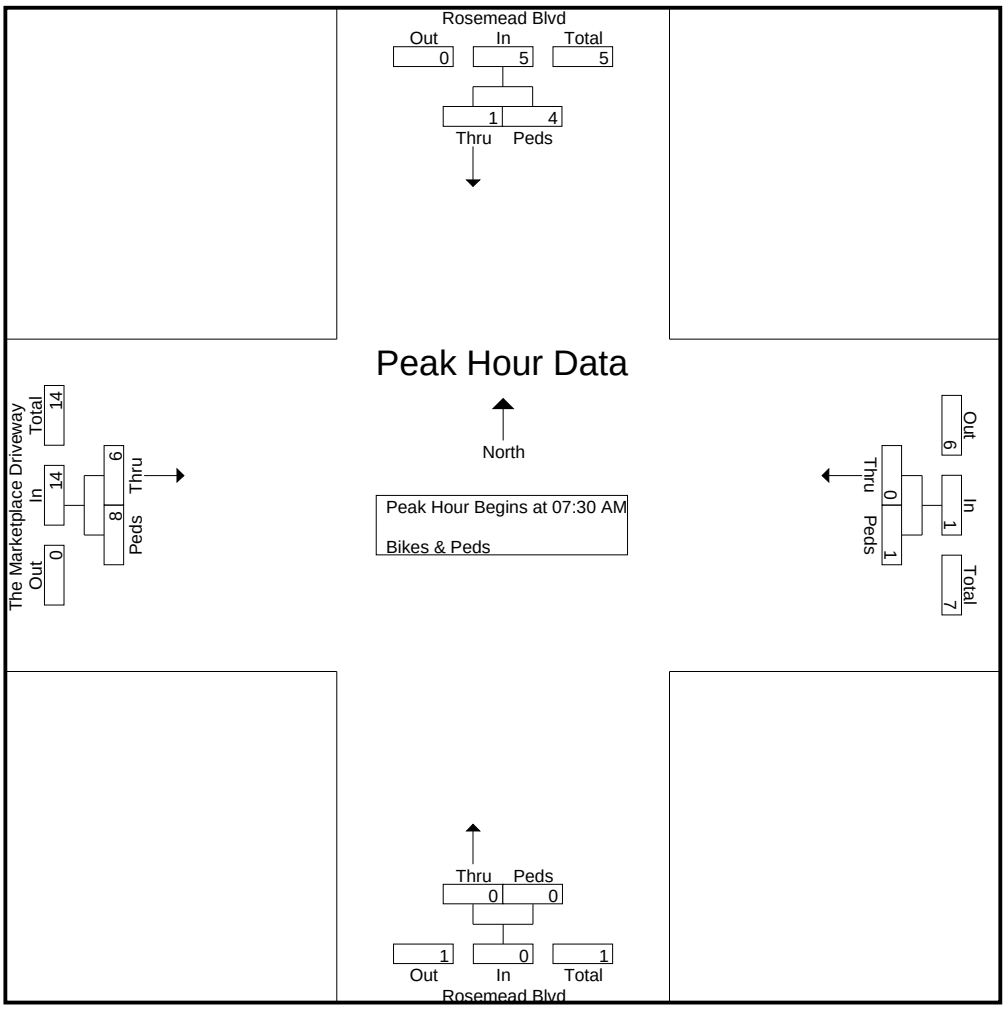
	Rosemead Blvd Southbound			Westbound			Rosemead Blvd Northbound			The Marketplace Driveway Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	0	0	0	0	**1**	**1**	0	0	0	**3**	2	**5**	**6**
07:45 AM	**1**	1	**2**	0	0	0	0	0	0	2	1	3	5
08:00 AM	0	1	1	0	0	0	0	0	0	0	2	2	3
08:15 AM	0	**2**	2	0	0	0	0	0	0	1	**3**	4	6
Total Volume	1	4	5	0	1	1	0	0	0	6	8	14	20
% App. Total	20	80		0	100		0	0		42.9	57.1		
PHF	.250	.500	.625	.000	.250	.250	.000	.000	.000	.500	.667	.700	.833



CITY TRAFFIC COUNTERS

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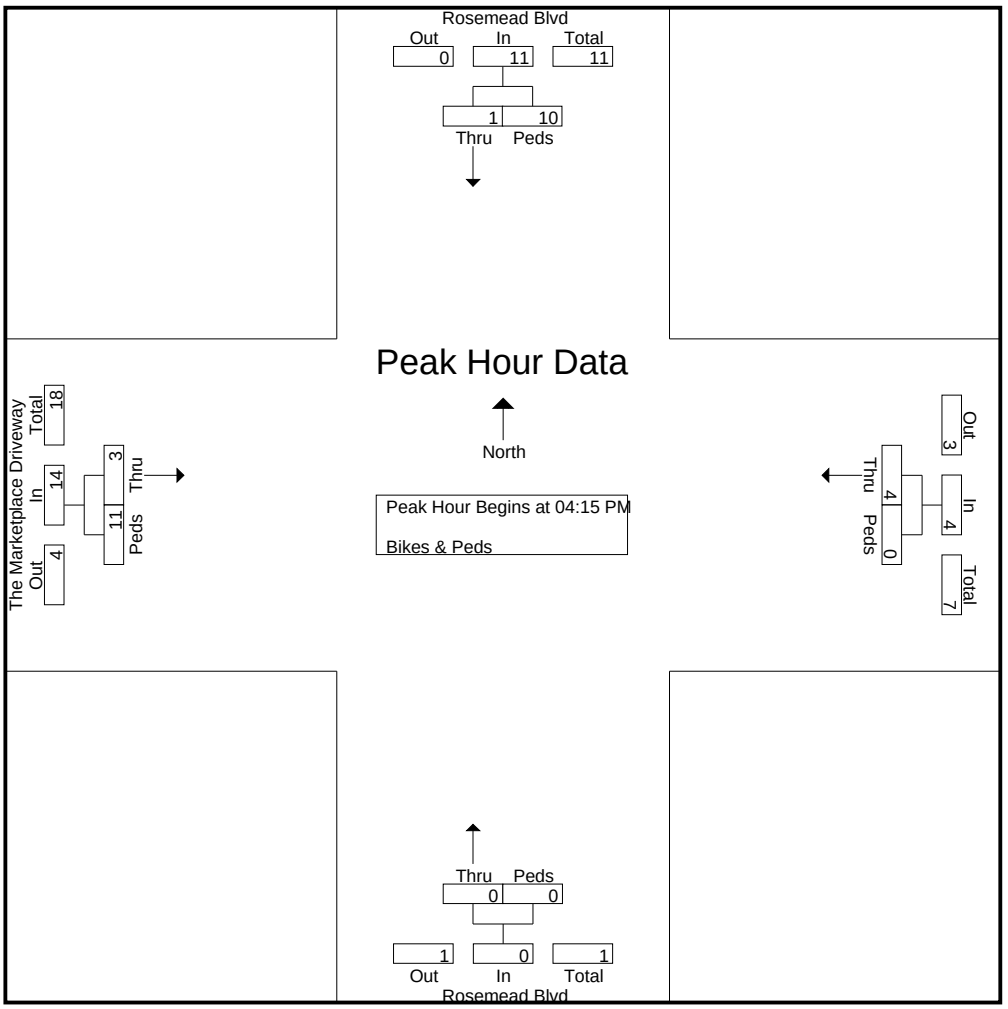
File Name : Rosemead_TheMarketplaceDriveway_BP
Site Code : 00000000
Start Date : 9/1/2021
Page No : 3

	Rosemead Blvd Southbound			Westbound			Rosemead Blvd Northbound			The Marketplace Driveway Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	**1**	**3**	**4**	0	0	0	0	0	0	0	**5**	5	9
04:30 PM	0	3	3	0	0	0	0	0	0	0	2	2	5
04:45 PM	0	2	2	**2**	0	**2**	0	0	0	**3**	3	**6**	**10**
05:00 PM	0	2	2	2	0	2	0	0	0	0	1	1	5
Total Volume	1	10	11	4	0	4	0	0	0	3	11	14	29
% App. Total	9.1	90.9		100	0		0	0		21.4	78.6		
PHF	.250	.833	.688	.500	.000	.500	.000	.000	.000	.250	.550	.583	.725



APPENDIX E

CAPCOA TDM STRATEGIES

VMT MITIGATION WORKSHEET

California Air Pollution Control Officers Association

Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity

Designed for Local Governments, Communities, and Project Developers

California Air Pollution Control Officers Association

Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity

Designed for Local Governments, Communities, and Project Developers

Final Draft

December 2021

Figure 3-1. Navigation Trees for Quantitative GHG Reduction Measures

Transportation

LAND USE

- T-1. Increase Residential Density
- T-2. Increase Job Density
- T-3. Provide Transit-Oriented Development
- T-4. Integrate Affordable and Below Market Rate Housing
- T-17. Improve Street Connectivity

TRIP REDUCTION PROGRAMS

- T-5. Implement Commute Trip Reduction Program (Voluntary)
- T-6. Implement Commute Trip Reduction Program (Mandatory Implementation and Monitoring)
- T-7. Implement Commute Trip Reduction Marketing
- T-8. Provide Ridesharing Program
- T-9. Implement Subsidized or Discounted Transit Program
- T-10. Provide End-of-Trip Bicycle Facilities
- T-11. Provide Employer-Sponsored Vanpool
- T-12. Price Workplace Parking
- T-13. Implement Employee Parking Cash-Out
- T-23. Provide Community-Based Travel Planning

PARKING OR ROAD PRICING/MANAGEMENT

- T-14. Provide Electric Vehicle Charging Infrastructure
- T-15. Limit Residential Parking Supply
- T-16. Unbundle Residential Parking Costs from Property Cost
- T-24. Implement Market Price Public Parking (On-Street)

NEIGHBORHOOD DESIGN

- T-18. Provide Pedestrian Network Improvement
- T-19-A. Construct or Improve Bike Facility
- T-19-B. Construct or Improve Bike Boulevard
- T-20. Expand Bikeway Network
- T-21-A. Implement Conventional Carshare Program
- T-21-B. Implement Electric Carshare Program
- T-22-A. Implement Pedal (Non-Electric) Bikeshare Program
- T-22-B. Implement Electric Bikeshare Program
- T-22-C. Implement Scootershare Program

TRANSIT

- T-25. Extend Transit Network Coverage or Hours
- T-26. Increase Transit Service Frequency
- T-27. Implement Transit-Supportive Roadway Treatments
- T-28. Provide Bus Rapid Transit
- T-29. Reduce Transit Fares

CLEAN VEHICLES AND FUELS

- T-30. Use Cleaner-Fuel Vehicles

Measure: T-1		**Increase Residential Density**	
Utilized: ☑		***Reduction Due to Increased Density***	***9.79%***

		Baseline Assumed in Model	
		Min	0.8%
		Max	30.0%
		Number of Housing Units or Jobs per Acre [1]	6.161290323
		Unit	Number of Housing Units Per Acre
	A	Percent Increase in Housing Units or Jobs per Acre (not to exceed 500%)	N/A
	B	Elasticity of VMT with respect to density	N/A
		VMT Reduction = A x B	N/A
		VMT Reduction Utilized	***N/A***

		With Project Implementation	
		Min	0.8%
		Max	30.0%
		Number of Housing Units or Jobs per Acre [2]	8.903225806
		Unit	Number of Housing Units Per Acre
	A	Percent Increase in Housing Units or Jobs per Acre (not to exceed 500%)[3]	45%
	B	Elasticity of VMT with respect to density	0.22
		VMT Reduction = A x B	9.79%
		VMT Reduction Utilized	***9.79%***

[1] Based on number of housing units without the project and acreage of TAZ 21804400.

[2] Derived from number of housing units with the project and acreage of TAZ 21804400.

[3] Percentage increase in housing units per acre calculated based on housing units per acre in TAZ 21804400 without and with the project.

Measure: T-4		**Integrate Affordable and Below Market Rate Housing**	
Utilized: ☑		***Reduction Due to Affordable and Below Market Rate Housing***	***1.43%***

		Baseline Assumed in Model	
		Min	0.00%
		Max	28.6%
	A	Percentage of Units in Project that are Deed-Restricted BMR Housing	0%
		VMT Reduction = 28.6% x A	0.00%
		VMT Reduction Utilized	***0.00%***

		With Project Implementation	
		Min	0.00%
		Max	28.6%
	A	Percentage of Units in Project that are Deed-Restricted BMR Housing	5%
		VMT Reduction = 28.6% x A	1.43%
		VMT Reduction Utilized	***1.43%***

Measure: T-15		**Limit Residential Parking Supply**	
Utilized: ☑		***Reduction Due to Limiting Parking Supply***	***3.84%***

		Baseline Assumed in Model	
		Min	0.0%
		Max	13.7%
		Residential Parking Demand	0
		Project Residential Parking Supply	0
		VMT Reduction	0.00%
		VMT Reduction Utilized	***0.00%***

		With Project Implementation	
		Min	0.0%
		Max	13.7%
		Residential Parking Demand	542
		Project Residential Parking Supply	390
		VMT Reduction	3.84%
		VMT Reduction Utilized	***3.84%***

APPENDIX F

ICU AND LEVELS OF SERVICE EXPLANATION
ICU DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS

INTERSECTION CAPACITY UTILIZATION (ICU) DESCRIPTION

Level of Service is a term used to describe prevailing conditions and their effect on traffic. Broadly interpreted, the Levels of Service concept denotes any one of a number of differing combinations of operating conditions which may occur as a roadway is accommodating various traffic volumes. Level of Service is a qualitative measure of the effect of such factors as travel speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience.

Six Levels of Service, A through F, have been defined in the 1965 *Highway Capacity Manual*, published by the Transportation Research Board. Level of Service A describes a condition of free flow, with low traffic volumes and relatively high speeds, while Level of Service F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases.

The Intersection Capacity Utilization (ICU) method of intersection capacity analysis has been used in our studies. It directly relates traffic demand and available capacity for key intersection movements, regardless of present signal timing, The capacity per hour of green time for each approach is calculated based on the methods of the *Highway Capacity Manual*. The proportion of total signal time needed by each key movement is determined and compared to the total time available (100 percent of the hour). The result of summing the requirements of the conflicting key movements plus an allowance for clearance times is expressed as a decimal fraction. Conflicting key traffic movements are those opposing movements whose combined green time requirements are greatest.

The resulting ICU represents the proportion of the total hour required to accommodate intersection demand volumes if the key conflicting traffic movements are operating at capacity. Other movements may be operating near capacity, or may be operating at significantly better levels. The ICU may be translated to a Level of Service as tabulated below.

The Levels of Service (abbreviated from the *Highway Capacity Manual*) are listed here with their corresponding ICU and Load Factor equivalents. Load Factor is that proportion of the signal cycles during the peak hour which are fully loaded; i.e. when all of the vehicles waiting at the beginning of green are not able to clear on that green phase.

Intersection Capacity Utilization Characteristics

Level of Service	Load Factor	Equivalent ICU
A	0.0	0.00 - 0.60
B	0.0 - 0.1	0.61 - 0.70
C	0.1 - 0.3	0.71 - 0.80
D	0.3 - 0.7	0.81 - 0.90
E	0.7 - 1.0	0.91 - 1.00
F	Not Applicable	Not Applicable

SERVICE LEVEL A
There are no loaded cycles and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.

SERVICE LEVEL B
This 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.

SERVICE LEVEL C
At this level stable operation continues. Loading is still intermittent but more frequent than at Level B. 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.

SERVICE LEVEL 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 hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.

SERVICE LEVEL E
This represents near capacity and capacity operation. At capacity (ICU = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level all drivers wait through more than one red signal, and frequently through several.

SERVICE LEVEL F
Jammed conditions. Traffic backed up from a downstream location on one of the street restricts or prevents movement of traffic through the intersection under consideration.

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INTERSECTION CAPACITY UTILIZATION

Paramount Boulevard @ Washington Boulevard

N-S St: Paramount Boulevard
E-W St: Washington Boulevard
Project: The Mercury Project/1-21-4418-1
File: ICU1

Peak hr: AM
Annual Growth: 1.00%

Date: 7/4/2022
Existing Year: 2021
Projection Year: 2024

	2021 EXISTING TRAFFIC			2021 EXISTING WITH PROJECT				2021 EXISTING W/ PROJECT + MITIGATION				2024 FUTURE PRE-PROJECT					2024 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	214	2880	0.074 *	0	214	2880	0.074 *	0	214	2880	0.074 *	6	0	220	2880	0.076 *	0	220	2880	0.076 *
NB Thru	319	3200	0.100	0	319	3200	0.100	0	319	3200	0.100	10	11	340	3200	0.106	0	340	3200	0.106
NB Right	108	1600	0.068	4	112	1600	0.070	0	112	1600	0.070	3	0	111	1600	0.069	4	115	1600	0.072
SB Left	86	2880	0.030	4	90	2880	0.031	0	90	2880	0.031	3	5	94	2880	0.033	4	98	2880	0.034
SB Thru	497	3200	0.223 *	0	497	3200	0.223 *	0	497	3200	0.223 *	15	10	522	3200	0.235 *	0	522	3200	0.235 *
SB Right	218	0	0.000	0	218	0	0.000	0	218	0	0.000	7	5	230	0	0.000	0	230	0	0.000
EB Left	104	1600	0.065	0	104	1600	0.065	0	104	1600	0.065	3	8	115	1600	0.072	0	115	1600	0.072
EB Thru	747	4800	0.207 *	10	757	4800	0.209 *	0	757	4800	0.209 *	23	3	773	4800	0.214 *	10	783	4800	0.216 *
EB Right	245	0	0.000	0	245	0	0.000	0	245	0	0.000	7	3	255	0	0.000	0	255	0	0.000
WB Left	131	1600	0.082 *	7	138	1600	0.086 *	0	138	1600	0.086 *	4	4	139	1600	0.087 *	7	146	1600	0.091 *
WB Thru	959	4800	0.208	18	977	4800	0.213	0	977	4800	0.213	29	2	990	4800	0.216	18	1008	4800	0.221
WB Right	39	0	0.000	7	46	0	0.000	0	46	0	0.000	1	7	47	0	0.000	7	54	0	0.000
Yellow Allowance			0.150 *				0.150 *				0.150 *					0.150 *				0.150 *
ICU			0.736				0.743				0.743					0.762				0.769
LOS			C				C				C					C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by: City Traffic Counters
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Paramount Boulevard @ Washington Boulevard

N-S St: Paramount Boulevard
E-W St: Washington Boulevard
Project: The Mercury Project/1-21-4418-1
File: ICU1

Peak hr: PM
Annual Growth: 1.00%

Date: 7/4/2022
Existing Year: 2021
Projection Year: 2024

	2021 EXISTING TRAFFIC			2021 EXISTING WITH PROJECT				2021 EXISTING W/ PROJECT + MITIGATION				2024 FUTURE PRE-PROJECT					2024 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	341	2880	0.118 *	0	341	2880	0.118 *	0	341	2880	0.118 *	10	3	354	2880	0.123 *	0	354	2880	0.123 *
NB Thru	734	3200	0.229	0	734	3200	0.229	0	734	3200	0.229	22	11	767	3200	0.240	0	767	3200	0.240
NB Right	146	1600	0.091	8	154	1600	0.096	0	154	1600	0.096	4	3	153	1600	0.096	8	161	1600	0.101
SB Left	180	2880	0.063	8	188	2880	0.065	0	188	2880	0.065	5	7	192	2880	0.067	8	200	2880	0.069
SB Thru	613	3200	0.237 *	0	613	3200	0.237 *	0	613	3200	0.237 *	19	11	643	3200	0.250 *	0	643	3200	0.250 *
SB Right	146	0	0.000	0	146	0	0.000	0	146	0	0.000	4	8	158	0	0.000	0	158	0	0.000
EB Left	185	1600	0.116	0	185	1600	0.116	0	185	1600	0.116	6	7	198	1600	0.124	0	198	1600	0.124
EB Thru	1676	4800	0.408 *	20	1696	4800	0.412 *	0	1696	4800	0.412 *	51	4	1731	4800	0.421 *	20	1751	4800	0.425 *
EB Right	281	0	0.000	0	281	0	0.000	0	281	0	0.000	9	1	291	0	0.000	0	291	0	0.000
WB Left	118	1600	0.074 *	5	123	1600	0.077 *	0	123	1600	0.077 *	4	0	122	1600	0.076 *	5	127	1600	0.079 *
WB Thru	785	4800	0.188	14	799	4800	0.192	0	799	4800	0.192	24	4	813	4800	0.196	14	827	4800	0.200
WB Right	117	0	0.000	5	122	0	0.000	0	122	0	0.000	4	6	127	0	0.000	5	132	0	0.000
Yellow Allowance			0.150 *				0.150 *				0.150 *					0.150 *				0.150 *
ICU			0.987				0.994				0.994					1.021				1.028
LOS			E				E				E					F				F

** Key conflicting movement as a part of ICU*
1 Counts conducted by: City Traffic Counters
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

N-S St: Crossway Drive
E-W St: Washington Boulevard
Project: The Mercury Project/1-21-4418-1
File: ICU2

Crossway Drive @ Washington Boulevard
Peak hr: AM
Annual Growth: 1.00%

Date: 7/4/2022
Existing Year: 2021
Projection Year: 2024

	2021 EXISTING TRAFFIC			2021 EXISTING WITH PROJECT				2021 EXISTING W/ PROJECT + MITIGATION				2024 FUTURE PRE-PROJECT					2024 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	37	0	0.023 *	0	37	0	0.023 *	0	37	0	0.023 *	1	0	38	0	0.024 *	0	38	0	0.024 *
NB Thru	5	1600	0.026	0	5	1600	0.026	0	5	1600	0.026	0	0	5	1600	0.027	0	5	1600	0.027
NB Right	50	1600	0.031	0	50	1600	0.031	0	50	1600	0.031	2	0	52	1600	0.033	0	52	1600	0.033
SB Left	54	0	0.034	0	54	0	0.034	0	54	0	0.034	2	0	56	0	0.035	0	56	0	0.035
SB Thru	7	1600	0.046 *	0	7	1600	0.046 *	0	7	1600	0.046 *	0	0	7	1600	0.047 *	0	7	1600	0.047 *
SB Right	12	0	0.000	0	12	0	0.000	0	12	0	0.000	0	0	12	0	0.000	0	12	0	0.000
EB Left	15	1600	0.009 *	0	15	1600	0.009 *	0	15	1600	0.009 *	0	0	15	1600	0.009 *	0	15	1600	0.009 *
EB Thru	858	4800	0.179	18	876	4800	0.183	0	876	4800	0.183	26	8	892	4800	0.186	18	910	4800	0.190
EB Right	23	1600	0.014	0	23	1600	0.014	0	23	1600	0.014	1	0	24	1600	0.015	0	24	1600	0.015
WB Left	71	1600	0.044	11	82	1600	0.051	0	82	1600	0.051	2	0	73	1600	0.046	11	84	1600	0.053
WB Thru	1154	4800	0.243 *	32	1186	4800	0.249 *	0	1186	4800	0.249 *	35	13	1202	4800	0.253 *	32	1234	4800	0.259 *
WB Right	10	0	0.000	0	10	0	0.000	0	10	0	0.000	0	0	10	0	0.000	0	10	0	0.000
Yellow Allowance			0.150 *				0.150 *				0.150 *					0.150 *				0.150 *
ICU			0.471				0.477				0.477					0.483				0.489
LOS			A				A				A					A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by: City Traffic Counters
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

N-S St: Crossway Drive
E-W St: Washington Boulevard
Project: The Mercury Project/1-21-4418-1
File: ICU2

Crossway Drive @ Washington Boulevard
Peak hr: PM
Annual Growth: 1.00%

Date: 7/4/2022
Existing Year: 2021
Projection Year: 2024

	2021 EXISTING TRAFFIC			2021 EXISTING WITH PROJECT				2021 EXISTING W/ PROJECT + MITIGATION				2024 FUTURE PRE-PROJECT					2024 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	139	0	0.087	0	139	0	0.087	0	139	0	0.087	4	0	143	0	0.089	0	143	0	0.089
NB Thru	37	1600	0.110 *	0	37	1600	0.110 *	0	37	1600	0.110 *	1	0	38	1600	0.113 *	0	38	1600	0.113 *
NB Right	133	1600	0.083	0	133	1600	0.083	0	133	1600	0.083	4	0	137	1600	0.086	0	137	1600	0.086
SB Left	69	0	0.043 *	0	69	0	0.043 *	0	69	0	0.043 *	2	0	71	0	0.044 *	0	71	0	0.044 *
SB Thru	16	1600	0.063	0	16	1600	0.063	0	16	1600	0.063	0	0	16	1600	0.064	0	16	1600	0.064
SB Right	16	0	0.000	0	16	0	0.000	0	16	0	0.000	0	0	16	0	0.000	0	16	0	0.000
EB Left	109	1600	0.068	0	109	1600	0.068	0	109	1600	0.068	3	0	112	1600	0.070	0	112	1600	0.070
EB Thru	1469	4800	0.306 *	36	1505	4800	0.314 *	0	1505	4800	0.314 *	45	14	1528	4800	0.318 *	36	1564	4800	0.326 *
EB Right	61	1600	0.038	0	61	1600	0.038	0	61	1600	0.038	2	0	63	1600	0.039	0	63	1600	0.039
WB Left	164	1600	0.103 *	8	172	1600	0.108 *	0	172	1600	0.108 *	5	0	169	1600	0.106 *	8	177	1600	0.111 *
WB Thru	936	4800	0.205	24	960	4800	0.210	0	960	4800	0.210	28	10	974	4800	0.213	24	998	4800	0.218
WB Right	47	0	0.000	0	47	0	0.000	0	47	0	0.000	1	0	48	0	0.000	0	48	0	0.000
Yellow Allowance			0.150 *				0.150 *				0.150 *					0.150 *				0.150 *
ICU			0.712				0.724				0.724					0.731				0.744
LOS			C				C				C					C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by: City Traffic Counters
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Rosemead Boulevard @ Coffman & Pico Road

N-S St:	Rosemead Boulevard	Peak hr:	AM
E-W St:	Coffman & Pico Road	Annual Growth:	1.00%
Project:	The Mercury Project/1-21-4418-1		
File:	ICU3		

Date:	7/4/2022	
Existing Year:	2021	
Projection Year:	2024	

	2021 EXISTING TRAFFIC			2021 EXISTING WITH PROJECT				2021 EXISTING W/ PROJECT + MITIGATION				2024 FUTURE PRE-PROJECT					2024 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	16	1600	0.010 *	0	16	1600	0.010 *	0	16	1600	0.010 *	0	0	16	1600	0.010 *	0	16	1600	0.010 *
NB Thru [3]	569	3200	0.178	11	580	3200	0.181	0	580	3200	0.181	17	13	599	3200	0.187	11	610	3200	0.191
NB Right	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000
SB Left	10	1600	0.006	0	10	1600	0.006	0	10	1600	0.006	0	0	10	1600	0.006	0	10	1600	0.006
SB Thru [3]	922	3200	0.293 *	6	928	3200	0.294 *	0	928	3200	0.294 *	28	7	957	3200	0.303 *	6	963	3200	0.305 *
SB Right	14	0	0.000	0	14	0	0.000	0	14	0	0.000	0	0	14	0	0.000	0	14	0	0.000
EB Left	17	0	0.011	0	17	0	0.011	0	17	0	0.011	1	0	18	0	0.011	0	18	0	0.011
EB Thru	0	1600	0.039 *	0	0	1600	0.039 *	0	0	1600	0.039 *	0	0	0	1600	0.040 *	0	0	1600	0.040 *
EB Right	45	0	0.000	0	45	0	0.000	0	45	0	0.000	1	0	46	0	0.000	0	46	0	0.000
WB Left	6	0	0.004 *	0	6	0	0.004 *	0	6	0	0.004 *	0	0	6	0	0.004 *	0	6	0	0.004 *
WB Thru	0	1600	0.009	0	0	1600	0.009	0	0	1600	0.009	0	0	0	1600	0.009	0	0	1600	0.009
WB Right	8	0	0.000	0	8	0	0.000	0	8	0	0.000	0	0	8	0	0.000	0	8	0	0.000
Yellow Allowance			0.150 *				0.150 *				0.150 *					0.150 *				0.150 *
ICU			0.495				0.497				0.497					0.507				0.509
LOS			A				A				A					A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by: City Traffic Counters
2 Capacity expressed in veh/hour of green
3 Northbound and southbound existing through movements were adjusted by 15% due to COVID-19 conditions.

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INTERSECTION CAPACITY UTILIZATION

Rosemead Boulevard @ Coffman & Pico Road

N-S St: Rosemead Boulevard
E-W St: Coffman & Pico Road
Project: The Mercury Project/1-21-4418-1
File: ICU3

Peak hr: PM
Annual Growth: 1.00%

Date: 7/4/2022
Existing Year: 2021
Projection Year: 2024

	2021 EXISTING TRAFFIC			2021 EXISTING WITH PROJECT				2021 EXISTING W/ PROJECT + MITIGATION				2024 FUTURE PRE-PROJECT					2024 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	23	1600	0.014	0	23	1600	0.014	0	23	1600	0.014	1	0	24	1600	0.015	0	24	1600	0.015
NB Thru [3]	1251	3200	0.393 *	8	1259	3200	0.396 *	0	1259	3200	0.396 *	38	19	1308	3200	0.411 *	8	1316	3200	0.413 *
NB Right	7	0	0.000	0	7	0	0.000	0	7	0	0.000	0	0	7	0	0.000	0	7	0	0.000
SB Left	18	1600	0.011 *	0	18	1600	0.011 *	0	18	1600	0.011 *	1	0	19	1600	0.012 *	0	19	1600	0.012 *
SB Thru [3]	1106	3200	0.353	12	1118	3200	0.357	0	1118	3200	0.357	34	17	1157	3200	0.370	12	1169	3200	0.373
SB Right	25	0	0.000	0	25	0	0.000	0	25	0	0.000	1	0	26	0	0.000	0	26	0	0.000
EB Left	50	0	0.031	0	50	0	0.031	0	50	0	0.031	2	0	52	0	0.033	0	52	0	0.033
EB Thru	3	1600	0.048 *	0	3	1600	0.048 *	0	3	1600	0.048 *	0	0	3	1600	0.050 *	0	3	1600	0.050 *
EB Right	24	0	0.000	0	24	0	0.000	0	24	0	0.000	1	0	25	0	0.000	0	25	0	0.000
WB Left	7	0	0.004 *	0	7	0	0.004 *	0	7	0	0.004 *	0	0	7	0	0.004 *	0	7	0	0.004 *
WB Thru	0	1600	0.013	0	0	1600	0.013	0	0	1600	0.013	0	0	0	1600	0.013	0	0	1600	0.013
WB Right	14	0	0.000	0	14	0	0.000	0	14	0	0.000	0	0	14	0	0.000	0	14	0	0.000
Yellow Allowance			0.150 *				0.150 *				0.150 *					0.150 *				0.150 *
ICU			0.607				0.609				0.609					0.627				0.630
LOS			B				B				B					B				B

** Key conflicting movement as a part of ICU*
1 Counts conducted by: City Traffic Counters
2 Capacity expressed in veh/hour of green
3 Northbound and southbound existing through movements were adjusted by 15% due to COVID-19 conditions.

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INTERSECTION CAPACITY UTILIZATION

Rosemead Boulevard @ Washington Boulevard

N-S St: Rosemead Boulevard
E-W St: Washington Boulevard
Project: The Mercury Project/1-21-4418-1
File: ICU4

Peak hr: AM
Annual Growth: 1.00%

Date: 7/4/2022
Existing Year: 2021
Projection Year: 2024

	2021 EXISTING TRAFFIC			2021 EXISTING WITH PROJECT				2021 EXISTING W/ PROJECT + MITIGATION				2024 FUTURE PRE-PROJECT					2024 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	80	1600	0.050 *	6	86	1600	0.054 *	0	86	1600	0.054 *	2	2	84	1600	0.053 *	6	90	1600	0.056 *
NB Thru [3]	369	4800	0.092	0	369	4800	0.092	0	369	4800	0.092	11	13	393	4800	0.097	0	393	4800	0.097
NB Right	71	0	0.000	0	71	0	0.000	0	71	0	0.000	2	0	73	0	0.000	0	73	0	0.000
SB Left	151	1600	0.094	18	169	1600	0.106	0	169	1600	0.106	5	0	156	1600	0.098	18	174	1600	0.109
SB Thru [3]	647	4800	0.165 *	0	647	4800	0.165 *	0	647	4800	0.165 *	20	7	674	4800	0.171 *	0	674	4800	0.172 *
SB Right	144	0	0.000	2	146	0	0.000	0	146	0	0.000	4	0	148	0	0.000	2	150	0	0.000
EB Left	111	1600	0.069 *	0	111	1600	0.069 *	0	111	1600	0.069 *	3	0	114	1600	0.071 *	0	114	1600	0.071 *
EB Thru	731	4800	0.152	0	731	4800	0.152	0	731	4800	0.152	22	7	760	4800	0.158	0	760	4800	0.158
EB Right [4]	87	1600	0.004	11	98	1600	0.008	0	98	1600	0.008	3	1	91	1600	0.004	11	102	1600	0.008
WB Left	188	1600	0.118	0	188	1600	0.118	0	188	1600	0.118	6	0	194	1600	0.121	0	194	1600	0.121
WB Thru	941	4800	0.215 *	10	951	4800	0.217 *	0	951	4800	0.217 *	29	11	981	4800	0.224 *	10	991	4800	0.226 *
WB Right	89	0	0.000	0	89	0	0.000	0	89	0	0.000	3	0	92	0	0.000	0	92	0	0.000
Yellow Allowance			0.150 *				0.150 *				0.150 *					0.150 *				0.150 *
ICU			0.649				0.655				0.655					0.669				0.675
LOS			B				B				B					B				B

** Key conflicting movement as a part of ICU*
1 Counts conducted by: City Traffic Counters
2 Capacity expressed in veh/hour of green
3 Northbound and southbound existing through movements were adjusted by 15% due to COVID-19 conditions.
4 The eastbound right-turn lane has an overlapping phase with the northbound left-turn phase.

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INTERSECTION CAPACITY UTILIZATION

Rosemead Boulevard @ Washington Boulevard

N-S St: Rosemead Boulevard
E-W St: Washington Boulevard
Project: The Mercury Project/1-21-4418-1
File: ICU4

Peak hr: PM
Annual Growth: 1.00%

Date: 7/4/2022
Existing Year: 2021
Projection Year: 2024

	2021 EXISTING TRAFFIC			2021 EXISTING WITH PROJECT				2021 EXISTING W/ PROJECT + MITIGATION				2024 FUTURE PRE-PROJECT					2024 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	113	1600	0.071 *	12	125	1600	0.078 *	0	125	1600	0.078 *	3	2	118	1600	0.074 *	12	130	1600	0.081 *
NB Thru [3]	685	4800	0.176	0	685	4800	0.176	0	685	4800	0.176	21	19	725	4800	0.185	0	725	4800	0.185
NB Right	158	0	0.000	0	158	0	0.000	0	158	0	0.000	5	0	163	0	0.000	0	163	0	0.000
SB Left	132	1600	0.083	14	146	1600	0.091	0	146	1600	0.091	4	0	136	1600	0.085	14	150	1600	0.094
SB Thru [3]	823	4800	0.200 *	0	823	4800	0.201 *	0	823	4800	0.201 *	25	17	865	4800	0.210 *	0	865	4800	0.211 *
SB Right	138	0	0.000	4	142	0	0.000	0	142	0	0.000	4	0	142	0	0.000	4	146	0	0.000
EB Left	261	1600	0.163 *	0	261	1600	0.163 *	0	261	1600	0.163 *	8	0	269	1600	0.168 *	0	269	1600	0.168 *
EB Thru	1055	4800	0.220	0	1055	4800	0.220	0	1055	4800	0.220	32	11	1098	4800	0.229	0	1098	4800	0.229
EB Right [4]	204	1600	0.057	8	212	1600	0.054	0	212	1600	0.054	6	3	213	1600	0.059	8	221	1600	0.057
WB Left	209	1600	0.131	0	209	1600	0.131	0	209	1600	0.131	6	0	215	1600	0.134	0	215	1600	0.134
WB Thru	785	4800	0.203 *	20	805	4800	0.207 *	0	805	4800	0.207 *	24	8	817	4800	0.210 *	20	837	4800	0.215 *
WB Right	187	0	0.000	0	187	0	0.000	0	187	0	0.000	6	0	193	0	0.000	0	193	0	0.000
Yellow Allowance			0.150 *				0.150 *				0.150 *					0.150 *				0.150 *
ICU			0.786				0.799				0.799					0.812				0.825
LOS			C				C				C					D				D

** Key conflicting movement as a part of ICU*
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2 Capacity expressed in veh/hour of green
3 Northbound and southbound existing through movements were adjusted by 15% due to COVID-19 conditions.
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APPENDIX G

SYNCHRO ANALYSIS DATA
SYNCHRO ANALYSIS DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	932	1310	13	0	37
Future Vol, veh/h	55	932	1310	13	0	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	130	-	-	-	-	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	60	1013	1424	14	0	40

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1438	0	-	0	-	719
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	3.92
Pot Cap-1 Maneuver	239	-	-	-	0	318
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	239	-	-	-	-	318
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	18
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	239	-	-	-	318
HCM Lane V/C Ratio	0.25	-	-	-	0.126
HCM Control Delay (s)	25	-	-	-	18
HCM Lane LOS	D	-	-	-	C
HCM 95th %tile Q(veh)	1	-	-	-	0.4

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	108	1598	1098	12	0	67
Future Vol, veh/h	108	1598	1098	12	0	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	130	-	-	-	-	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	117	1737	1193	13	0	73

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1206	0	-	0	-	603
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	3.92
Pot Cap-1 Maneuver	311	-	-	-	0	379
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	311	-	-	-	-	379
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	16.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	311	-	-	-	379
HCM Lane V/C Ratio	0.377	-	-	-	0.192
HCM Control Delay (s)	23.4	-	-	-	16.7
HCM Lane LOS	C	-	-	-	C
HCM 95th %tile Q(veh)	1.7	-	-	-	0.7

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	57	968	1363	13	0	38
Future Vol, veh/h	57	968	1363	13	0	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	130	-	-	-	-	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	62	1052	1482	14	0	41

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1496	0	-	0	-	748
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	3.92
Pot Cap-1 Maneuver	224	-	-	-	0	305
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	224	-	-	-	-	305
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	18.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	224	-	-	-	305
HCM Lane V/C Ratio	0.277	-	-	-	0.135
HCM Control Delay (s)	27.1	-	-	-	18.6
HCM Lane LOS	D	-	-	-	C
HCM 95th %tile Q(veh)	1.1	-	-	-	0.5

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	111	1660	1141	12	0	69
Future Vol, veh/h	111	1660	1141	12	0	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	130	-	-	-	-	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	121	1804	1240	13	0	75

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1253	0	-	0	-	627
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	3.92
Pot Cap-1 Maneuver	295	-	-	-	0	365
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	295	-	-	-	-	365
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1.6	0	17.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	295	-	-	-	365
HCM Lane V/C Ratio	0.409	-	-	-	0.205
HCM Control Delay (s)	25.4	-	-	-	17.4
HCM Lane LOS	D	-	-	-	C
HCM 95th %tile Q(veh)	1.9	-	-	-	0.8

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	75	979	1363	31	0	80
Future Vol, veh/h	75	979	1363	31	0	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	130	-	-	-	-	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	82	1064	1482	34	0	87

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1516	0	-	0	-	758
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	3.92
Pot Cap-1 Maneuver	219	-	-	-	0	300
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	219	-	-	-	-	300
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	21.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	219	-	-	-	300
HCM Lane V/C Ratio	0.372	-	-	-	0.29
HCM Control Delay (s)	30.9	-	-	-	21.8
HCM Lane LOS	D	-	-	-	C
HCM 95th %tile Q(veh)	1.6	-	-	-	1.2

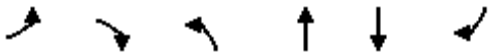
Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	147	1668	1141	48	0	100
Future Vol, veh/h	147	1668	1141	48	0	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	130	-	-	-	-	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	160	1813	1240	52	0	109

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1292	0	-	0	-	646
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	3.92
Pot Cap-1 Maneuver	282	-	-	-	0	355
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	282	-	-	-	-	355
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	2.7	0	19.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	282	-	-	-	355
HCM Lane V/C Ratio	0.567	-	-	-	0.306
HCM Control Delay (s)	33.2	-	-	-	19.6
HCM Lane LOS	D	-	-	-	C
HCM 95th %tile Q(veh)	3.2	-	-	-	1.3



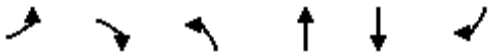
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	46	33	18	797	972	53
Future Volume (veh/h)	46	33	18	797	972	53
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1945	1870	1870	1945
Adj Flow Rate, veh/h	50	36	20	866	1057	58
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	65	47	465	4257	2609	143
Arrive On Green	0.07	0.07	0.02	0.83	0.76	0.76
Sat Flow, veh/h	974	702	1853	5274	3519	188
Grp Volume(v), veh/h	87	0	20	866	548	567
Grp Sat Flow(s),veh/h/ln	1695	0	1853	1702	1777	1837
Q Serve(g_s), s	4.5	0.0	0.2	3.1	9.6	9.6
Cycle Q Clear(g_c), s	4.5	0.0	0.2	3.1	9.6	9.6
Prop In Lane	0.57	0.41	1.00			0.10
Lane Grp Cap(c), veh/h	112	0	465	4257	1354	1399
V/C Ratio(X)	0.77	0.00	0.04	0.20	0.40	0.41
Avail Cap(c_a), veh/h	480	0	538	4257	1354	1399
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	41.3	0.0	2.5	1.5	3.7	3.7
Incr Delay (d2), s/veh	10.7	0.0	0.0	0.1	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.0	0.0	0.1	0.6	4.4	4.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	52.0	0.0	2.5	1.6	4.6	4.6
LnGrp LOS	D	A	A	A	A	A
Approach Vol, veh/h	87			886	1115	
Approach Delay, s/veh	52.0			1.6	4.6	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		79.5		10.5	6.5	73.1
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		55.5		25.5	5.5	45.5
Max Q Clear Time (g_c+I1), s		5.1		6.5	2.2	11.6
Green Ext Time (p_c), s		4.2		0.2	0.0	4.8

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

Notes

User approved volume balancing among the lanes for turning movement.



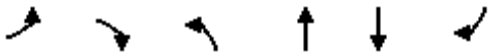
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	98	76	39	1056	1124	90
Future Volume (veh/h)	98	76	39	1056	1124	90
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1945	1870	1870	1945
Adj Flow Rate, veh/h	107	83	42	1148	1222	98
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	129	100	359	3900	2258	181
Arrive On Green	0.14	0.14	0.04	0.76	0.68	0.68
Sat Flow, veh/h	947	735	1853	5274	3426	267
Grp Volume(v), veh/h	191	0	42	1148	651	669
Grp Sat Flow(s),veh/h/ln	1691	0	1853	1702	1777	1822
Q Serve(g_s), s	9.9	0.0	0.6	6.2	16.8	16.8
Cycle Q Clear(g_c), s	9.9	0.0	0.6	6.2	16.8	16.8
Prop In Lane	0.56	0.43	1.00			0.15
Lane Grp Cap(c), veh/h	230	0	359	3900	1204	1235
V/C Ratio(X)	0.83	0.00	0.12	0.29	0.54	0.54
Avail Cap(c_a), veh/h	479	0	405	3900	1204	1235
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	37.9	0.0	5.4	3.2	7.4	7.4
Incr Delay (d2), s/veh	7.5	0.0	0.1	0.2	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.1	0.0	0.3	2.4	9.2	9.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.3	0.0	5.5	3.4	9.1	9.1
LnGrp LOS	D	A	A	A	A	A
Approach Vol, veh/h	191			1190	1320	
Approach Delay, s/veh	45.3			3.5	9.1	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		73.2		16.8	7.8	65.5
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		55.5		25.5	5.5	45.5
Max Q Clear Time (g_c+I1), s		8.2		11.9	2.6	18.8
Green Ext Time (p_c), s		6.0		0.5	0.0	6.0

Intersection Summary		
HCM 6th Ctrl Delay		9.2
HCM 6th LOS		A

Notes

User approved volume balancing among the lanes for turning movement.



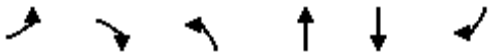
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	47	34	19	834	1008	55
Future Volume (veh/h)	47	34	19	834	1008	55
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1945	1870	1870	1945
Adj Flow Rate, veh/h	51	37	21	907	1096	60
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	66	48	449	4249	2602	142
Arrive On Green	0.07	0.07	0.02	0.83	0.76	0.76
Sat Flow, veh/h	971	705	1853	5274	3519	187
Grp Volume(v), veh/h	89	0	21	907	568	588
Grp Sat Flow(s),veh/h/ln	1695	0	1853	1702	1777	1837
Q Serve(g_s), s	4.6	0.0	0.2	3.3	10.2	10.2
Cycle Q Clear(g_c), s	4.6	0.0	0.2	3.3	10.2	10.2
Prop In Lane	0.57	0.42	1.00			0.10
Lane Grp Cap(c), veh/h	115	0	449	4249	1349	1395
V/C Ratio(X)	0.77	0.00	0.05	0.21	0.42	0.42
Avail Cap(c_a), veh/h	480	0	520	4249	1349	1395
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	41.3	0.0	2.6	1.5	3.8	3.8
Incr Delay (d2), s/veh	10.5	0.0	0.0	0.1	1.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.1	0.0	0.1	0.6	4.7	4.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	51.8	0.0	2.6	1.7	4.8	4.8
LnGrp LOS	D	A	A	A	A	A
Approach Vol, veh/h	89			928	1156	
Approach Delay, s/veh	51.8			1.7	4.8	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		79.4		10.6	6.5	72.9
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		55.5		25.5	5.5	45.5
Max Q Clear Time (g_c+I1), s		5.3		6.6	2.2	12.2
Green Ext Time (p_c), s		4.4		0.2	0.0	5.0

Intersection Summary	
HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



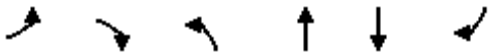
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	101	78	40	1107	1175	93
Future Volume (veh/h)	101	78	40	1107	1175	93
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1945	1870	1870	1945
Adj Flow Rate, veh/h	110	85	43	1203	1277	101
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	132	102	341	3884	2249	177
Arrive On Green	0.14	0.14	0.04	0.76	0.67	0.67
Sat Flow, veh/h	949	733	1853	5274	3430	263
Grp Volume(v), veh/h	196	0	43	1203	679	699
Grp Sat Flow(s),veh/h/ln	1691	0	1853	1702	1777	1823
Q Serve(g_s), s	10.2	0.0	0.6	6.6	18.1	18.3
Cycle Q Clear(g_c), s	10.2	0.0	0.6	6.6	18.1	18.3
Prop In Lane	0.56	0.43	1.00			0.14
Lane Grp Cap(c), veh/h	235	0	341	3884	1198	1229
V/C Ratio(X)	0.83	0.00	0.13	0.31	0.57	0.57
Avail Cap(c_a), veh/h	479	0	386	3884	1198	1229
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	37.7	0.0	5.8	3.4	7.7	7.8
Incr Delay (d2), s/veh	7.5	0.0	0.2	0.2	1.9	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.2	0.0	0.3	2.6	9.9	10.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.2	0.0	6.0	3.6	9.7	9.7
LnGrp LOS	D	A	A	A	A	A
Approach Vol, veh/h	196			1246	1378	
Approach Delay, s/veh	45.2			3.7	9.7	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		73.0		17.0	7.8	65.2
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		55.5		25.5	5.5	45.5
Max Q Clear Time (g_c+I1), s		8.6		12.2	2.6	20.3
Green Ext Time (p_c), s		6.4		0.5	0.0	6.3

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



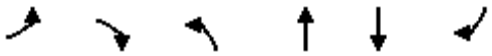
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	58	52	19	834	1010	59
Future Volume (veh/h)	58	52	19	834	1010	59
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1945	1870	1870	1945
Adj Flow Rate, veh/h	63	57	21	907	1098	64
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	80	72	429	4130	2512	146
Arrive On Green	0.09	0.09	0.02	0.81	0.74	0.74
Sat Flow, veh/h	877	793	1853	5274	3506	199
Grp Volume(v), veh/h	121	0	21	907	572	590
Grp Sat Flow(s),veh/h/ln	1684	0	1853	1702	1777	1835
Q Serve(g_s), s	6.3	0.0	0.2	3.7	11.3	11.3
Cycle Q Clear(g_c), s	6.3	0.0	0.2	3.7	11.3	11.3
Prop In Lane	0.52	0.47	1.00			0.11
Lane Grp Cap(c), veh/h	153	0	429	4130	1308	1351
V/C Ratio(X)	0.79	0.00	0.05	0.22	0.44	0.44
Avail Cap(c_a), veh/h	477	0	500	4130	1308	1351
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	40.1	0.0	3.2	2.0	4.6	4.6
Incr Delay (d2), s/veh	8.7	0.0	0.0	0.1	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.4	0.0	0.1	1.0	5.6	5.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	48.7	0.0	3.2	2.1	5.7	5.6
LnGrp LOS	D	A	A	A	A	A
Approach Vol, veh/h	121			928	1162	
Approach Delay, s/veh	48.7			2.1	5.7	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		77.3		12.7	6.5	70.8
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		55.5		25.5	5.5	45.5
Max Q Clear Time (g_c+I1), s		5.7		8.3	2.2	13.3
Green Ext Time (p_c), s		4.4		0.3	0.0	5.1

Intersection Summary	
HCM 6th Ctrl Delay	6.5
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	109	91	40	1107	1179	101
Future Volume (veh/h)	109	91	40	1107	1179	101
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	1945	1870	1870	1945
Adj Flow Rate, veh/h	118	99	43	1203	1282	110
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	140	117	327	3814	2188	187
Arrive On Green	0.15	0.15	0.04	0.75	0.66	0.66
Sat Flow, veh/h	913	766	1853	5274	3406	283
Grp Volume(v), veh/h	218	0	43	1203	686	706
Grp Sat Flow(s),veh/h/ln	1687	0	1853	1702	1777	1819
Q Serve(g_s), s	11.3	0.0	0.6	7.0	19.2	19.4
Cycle Q Clear(g_c), s	11.3	0.0	0.6	7.0	19.2	19.4
Prop In Lane	0.54	0.45	1.00			0.16
Lane Grp Cap(c), veh/h	258	0	327	3814	1173	1201
V/C Ratio(X)	0.84	0.00	0.13	0.32	0.58	0.59
Avail Cap(c_a), veh/h	478	0	373	3814	1173	1201
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	37.1	0.0	6.5	3.8	8.5	8.5
Incr Delay (d2), s/veh	7.4	0.0	0.2	0.2	2.1	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.9	0.0	0.3	3.0	10.6	10.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.5	0.0	6.7	4.0	10.6	10.6
LnGrp LOS	D	A	A	A	B	B
Approach Vol, veh/h	218			1246	1392	
Approach Delay, s/veh	44.5			4.1	10.6	
Approach LOS	D			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		71.7		18.3	7.8	63.9
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		55.5		25.5	5.5	45.5
Max Q Clear Time (g_c+I1), s		9.0		13.3	2.6	21.4
Green Ext Time (p_c), s		6.4		0.5	0.0	6.4

Intersection Summary			
HCM 6th Ctrl Delay		10.3	
HCM 6th LOS		B	

Notes

User approved volume balancing among the lanes for turning movement.