Draft Environmental Impact Report
SCH No. 2017021049

Alliance California Gateway South Building 4

San Bernardino, California

Lead Agency
City of San Bernardino
600 North Arrowhead Ave., 3rd Floor
San Bernardino, CA 92401

Date: June 14, 2017

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CEQA Consultant
T&B Planning, Inc.
17542 East 17th Street, Suite 100
Tustin, CA 92780

Lead Agency Discretionary Permits
General Plan Amendment (GPA16-09)
Development Code Amendment (DCA16-11)
Subdivision (SUB16-08)
Development Permit (DP-D16-26)
Variance (VAR16-03)

Date: June 14, 2017

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ACRONYMS, ABBREVIATIONS, CHEMICAL SYMBOLS, AND GEOLOGIC SYMBOLS

Acronym	Definition
§	Section
<	less than
>	greater than
≥	greater than or equal to
A	
a.m.	Ante Meridiem (between the hours of midnight and noon)
AB	Assembly Bill
AB 32	Assembly Bill 32
AB 52	Assembly Bill 52
AB 341	Assembly Bill 341
AB 939	Assembly Bill 939
AB 1327	Assembly Bill 1327
AB 1493	Assembly Bill 1493
AB 1739	Assembly Bill 1739
AB 1881	Assembly Bill 1881
AB 2595	Assembly Bill 2595
Ac-ft/yr	Acre feet per year
ACMs	Asbestos Containing Materials
ACOE	Army Corps of Engineers
AD	"Anno Domini" or "in the year of the Lord"
ADT	Average Daily Traffic
AFY	acre feet a year
ALUCP	Airport Land Use Compatibility Plan
AMSL	Above Mean Sea Level
APSA	Above-ground Petroleum Storage Act
APN	Assessor Parcel Number
APS	Alternative Planning Strategy
AQIA	Air Quality Impact Analysis
AQMP	Air Quality Management Plan
ARB	Air Resources Board
ASPA	Aboveground Petroleum Storage Act
AST	Above-ground Storage Tank
ATSF	Atchison, Topeka, and Santa Fe Railway
Av.	Avenue
B	
BAU	Business-As-Usual
Bgs	below ground surface
BIOS	Biographic Observation System
Bl.	Boulevard
BMPs	Best Management Practices

BP	Before Present
BTEX	xylenes

C

C_2F_6	Hexaflouroethane
C_2H_6	Ethane
CF_4	Tetraflouromethane
CF_3CH_2F	Tetrafluoroethane
CH_4	Methane
CH_3CHF_2	Difluorethane
CHF_3	Trifluormethane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
COHb	carboxyhemoglobin
CA	California
ca	“circa” approximately
CA FIS UST	Facility Inventory System Underground Storage Tank
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFÉ	Corporate Average Fuel Economy
CalARP	California Accidental Release Prevention Act
CalEEMod™	California Emissions Estimator Model™
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
Calveno	California Vehicle Noise
CAPCOA	California Air Pollution Control Officers Association
CAPSSA	Criteria Area Plant Species Survey Area
CARB	California Air Resources Board
CASSA	Criteria Area Species Survey Area
Cal Mat	Cajon Conservation Bank
CBSC	California Building Standards Code
CCCC	California Climate Change Center
CCR	California Code of Regulations
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERS	California Environmental Reporting System
CESA	California Endangered Species Act
CFCs	Chlorofluorocarbons
CFR	Code of Federal Regulations
CGS	California Geologic Survey
cfs	cubic feet per second
CHE	Cargo Handling Equipment

CIWMB	California Integrated Waste Management Board
CIWMP	Countywide Integrated Waste Management Plan
CLUP	Comprehensive Land Use Plan
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CPUC	California Public Utilities Commission
CNEL	Community Noise Equivalent Level
CO	Carbon Monoxide
COG	Council of Governments
COHb	Carboxyhemoglobin
COP21	21st Annual Conference of Parties
CPUC	California Public Utilities Commission
CREC	Controlled Recognized Environmental Condition
CRHR	California Register of Historic Places Resources
CSUSB	California State University San Bernardino
CTP	Clean Truck Program
c.y.	cubic yards
CUPA	Certified Unified Program Agency
CWA	Clean Water Act

D

D/ERC	Development/Environmental Review Committee
dB	Decibel
dBA	A-weighted Decibels
DCA	Development Code Amendment
DCP	Drought Contingency Plan
DHS	Department of Health Services
DIF	Development Impact Fee
DOE	Department of Energy
DOGGR	California Department of Conservation Division of Oil, Gas, and Geothermal Resource Well Finder
DOI	Department of Interior
DOT	Department of Transportation
DPM	Diesel Particulate Matter
DPR	Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources

E

E	Eligible
E+A+P	Existing plus Ambient Growth plus Project
E+A+P+C	Existing plus Ambient Growth plus Project plus Cumulative Development
E+P	Existing (2017) plus Project
EDR	Environmental Data Review
EHS	Extremely Hazardous Substance

EIR	Environmental Impact Report
EMFAC	Emissions Factor Model
EO	Executive Order
EPA	Environmental Protection Agency
EPS	Emission Performance Standard
EPCRA	Emergency Planning and Community Right-To-Know Act
ESA	Environmentally Sensitive Areas
et seq.	*et sequentia*, meaning "and the following"
e.g.	*exempli gratia*, meaning "for example"

F

F	Fahrenheit
Ft.	Feet
FAA	Federal Aviation Administration
FAR	Floor Area Ratio
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FICON	Federal Interagency Committee on Noise
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FPS	feet per second
FTA	Federal Transit Administration

G

GCC	Global Climate Change
GCCC	Global Climate Change Center
Gg	gigagrams
GgCO2e	Gigagrams of carbon dioxide equivalent
GHGs	Greenhouse Gases
GIS	Geographic Information System
GPA	General Plan Amendment
GPD	gallons per day
GPM	gallons per minute
Gr	Grangeville fine sandy loam
GS-1	General Service Rate Schedule
GVWR	Gross Vehicle Weight Rating
GWP	Global Warming Potential

H

H_2O	Water Vapor
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HFCs	Hydrofluorocarbons
HHD	Heavy-Duty Trucks

HIST UST	Historical Underground Storage Tank
HMBEP	Hazardous Materials Business Emergency Plan
HMBP	Hazardous Materials Business Plan
HMD	Hazardous Materials Division
hp	horsepower
HREC	Historical Recognized Environmental Condition
HRA	Mobile Source Diesel Health Risk Assessment
HRS	Hazard Ranking System
HSC	California Health and Safety Code
HSAA	Hazardous Substance Account Act
HVAC	Heating, Ventilation, and Air Conditioning
HWCL	Hazardous Waste Control Law

I

I-10	Interstate 10
I-215	Interstate 215
i.e.	that is
in.	inches
in/sec	inches per second
in/yr	inches per year
IBC	International Building Code
IL	Industrial- Industrial Light
IPCC	Intergovernmental Panel on Climate Change
ISTEA	Intermodal Surface Transportation Efficiency Act
ITE	Institute of Transportation Engineers
IVDA	Inland Valley Development Agency

J

K

kBTU/yr	kilo-British Thermal Units per year
KV	kilovolts
kWh	kilowatt hours
kWh/yr	kilowatt-hours of electricity per year

L

LACM	Los Angeles County Museum
LCA	Life-Cycle Analysis
LCFS	Low Carbon Fuel Standard
LDA	Light-Duty-Auto Vehicles
LDN	Day-Night Average Noise Level
Leq	equivalent continuous sound level
LED	Light-Emitting Diode
LEED	Leadership in Energy and Environmental Design
LF	Linear Feet
LHD	Light-Heavy-Duty-Trucks
LOS	Level of Service

LST	Localized Significance Threshold
LUST	Leaking Underground Storage Tank

M

M^3	Cubic Meter
MATES	Multiple Air Toxics Exposure Study
MAWA	Maximum Applied Water Allowance
MBTA	Migratory Bird Treaty Act
MBTE	Methyl Tert-Butyl Ether
MCL	Maximum Contaminant Level
MEIR	maximally exposed individual receptor
MEIW	maximally exposed individual worker
mgd	Million gallons per day
MHD	Medium-Heavy-Duty Trucks
MLD	Most Likely Descendant
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
MMTs	million metric tons
$MTCO_{2e}$	Metric Tons of Carbon Dioxide Equivalent
MMTCO2e	million metric tons of carbon dioxide equivalent
MPG	Miles per gallon
Mph	Miles per hour
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System
MT	metric ton
MUTCD	Manual on Uniform Traffic Control Devices

N

N_2	Nitrogen
N_2O	Nitrous Oxide
No.	Number
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
NAFB	Norton Air Force Base
n.d.	no date
n/o	North of
n.p.	no page
NAHC	Native American Heritage Commission
NAAQS	National Ambient Air Quality Standards
NEPSSA	Narrow Endemic Plant Species Survey Area
NHRP	National Register of Historic Places
NIOSH	National Institute for Occupational Safety and Health
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NPDWR	National Primary Drinking Water Regulations

NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NPL	National Priorities List

O

O_2	Oxygen
O_3	Ozone
OCSD	Orange County Sanitation District
OD	Officially Designated
OHP	Office of Historic Preservation
OHWM	Ordinary High Water Mark
OIP	Industrial-Office Industrial Park
OPR	Office of Planning and Research
Ord.	Ordinance
OSFM	Office of the State Fire Marshal
OSHA	Occupational Safety and Health Administration

P

Pb	Lead
PCB	Poly-chlorinated biphenyls
PCC	Portland Cement Concrete-Grade
PCE	Passenger Car Equivalent
PCE	Primary Constituent Elements
PCR	Open Space-Public/Commercial Recreation
PeMS	Performance Measurement System
PFC	Publicly Owned Flood Control
PFCs	Perfluorocarbons
PGA_M	Maximum Peak Ground Acceleration
PHFS	Primary Highway Freight System
p.m.	Post Meridiem (between the hours of noon and midnight)
PM	Particulate Matter
$PM_{2.5}$	Fine Particulate Matter (2.5 microns or smaller)
PM_{10}	Fine Particulate Matter (10 microns or smaller)
ppb	parts per billion
ppm	parts per million
pp.	pages
ppt	parts per trillion
POLA	Port of Los Angeles
POLB	Port of Long Beach
POTWS	Publicly-Owned Treatment Works
PPV	Peak Particle Velocity
PRC	Public Resources Code
Ps	Psamments, Fluvents and Frequently flooded soils
PUC	Public Utilities Commission
PV	Photovoltaic

Q

Qw1	Alluvial wash deposits
Qya5	Quaternary Alluvial Channel

R

RAFSS	Riversidian Alluvial Fan Sage Scrub
RCB	Reinforced Concrete Box
RCPG	Regional Comprehensive Plan and Guide
RCRA	Resource Conservation and Recovery Act
Rd.	Road
RECs	Recognized Environmental Conditions
RECLAIM	Regional Clean Air Incentives Market
Regs	Regulations
REL	Reference Exposure Level
REMEL	Reference Mean Emission Level
RIX	Rapid Infiltration Extraction
RMP	Risk Management Plan
RMS	Root-Mean-Square
ROD	Record of Decision
ROGs	Reactive Organic Gasses
ROW	Right-of-Way
RPS	Renewable Portfolio Standard
RPU	Riverside Public Utilities/Water Department
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RUWMP	Regional Urban Water Management Plan
RWQCB	Regional Water Quality Control Board

S

SF_6	Sulfur Hexafluoride
SO_2	Sulfur Dioxide
SO_4	Sulfates
SO_X	Sulfur Oxides
s.f.	square feet
s/o	south of
sq.	square
SANBAG	San Bernardino Associated Governments
SARA	Superfund Act and Reauthorization Act
SARI	Santa Ana River Interceptor
SB	Southbound
SB	Senate Bill
SB 7	Senate Bill 7
SB 32	Senate Bill 32
SB 50	Senate Bill 50 or Greene
SB 221	Senate Bill 221
SB 375	Senate Bill 375
SB 610	Senate Bill 610

SB 1078	Senate Bill 1078
SB 1168	Senate Bill 1168
SB 1313	Senate Bill 1313
SB 1368	Senate Bill 1368
SBBA	San Bernardino Basin Area
SBIA	San Bernardino International Airport
SBIAA	San Bernardino International Airport Authority
SBCM	San Bernardino County Museum
SBMC	San Bernardino Municipal Code
SBMWD	San Bernardino Municipal Water Department
SBTAM	San Bernardino County Transportation Analysis Model
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SCH	State Clearinghouse
SCHWMA	Southern California Hazardous Waste Management Authority
SCS	Sustainable Communities Strategy
SDWA	Safe Drinking Water Act
Sec.	Seconds
SFHA	Special Flood Hazard Areas
SGMA	Sustainable Groundwater Management Act
SIPs	State Implementation Plans
SLF	Sacred Lands File
SOI	Sphere-of-Influence
SPCC	Spill, Prevention, Control, and Countermeasure Plan
SR	State Route
SR 18	State Route 18
SR 30	State Route 30
SR 38	State Route 38
SR 66	State Route 66
SR 259	State Route 259
SR 330	State Route 330
SRA	Source Receptor Area
St.	Street
STC	Sound Transmission Class
STL	Steel
STP	Sound Transmission Class
SVP	Society of Vertebrate Paleontology
SWEEPS	Statewide Environmental Evaluation and Planning System
SWEEPS UST	Statewide Environmental Evaluation and Planning System Underground Storage Tank
SWMD	Solid Waste Management Division
SWP	State Water Project
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board

T

TAC	Toxic Air Contaminant
TEA-21	Transportation Equity Act for the 21st Century
Terracon	Terracon Consultants, Inc.
TIA	Traffic Impact Analysis
TM	Transmission Main
TMDL	Total Maximum Daily Load
tpd	tons per day
TPM	Tentative Parcel Map
TPQ	Threshold Planning Quantity
TRT	Total Response Time
Tribe	San Manuel Tribe
TRI	Toxic Release Inventory
TS	Traffic Signal
TSF	Thousand Square Feet
TvC	Tujunga gravelly loamy sand

U

µg	microgram
UBC	Uniform Building Code
UCMP	University of California Museum of Paleontology
UFC	Uniform Fire Code
UNFCCC	United Nations Framework Convention on Climate Change
U.S.	United States
USACE	United States Army Corps of Engineers
USCB	United States Census Bureau
USDA	U.S. Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United Stated Geological Survey
UST	Underground Storage Tank
UTR	Utility Tractor
UWMP	Urban Water Management Plan

V

v/c	Volume-to-Capacity
VAR 16-03	Variance 16-03
VdB	Vibration Decibels
VMT	Vehicle Miles Traveled
VOCs	Volatile Organic Compounds

W

w/o	West of
WQMP	Water Quality Management Plan
WRF	Water Reclamation Facility
WRP	Water Reclamation Plant

WRP	Waste Recycling Plan
WSA	Water Supply Assessment
WSCP	Water Shortage Contingency Plan
Wy.	Way

S.0 EXECUTIVE SUMMARY

S.1 INTRODUCTION

The California Environmental Quality Act (CEQA), Public Resources Code § 21000, et seq. requires that before a public agency makes a decision to approve a project that could have one or more adverse effects on the physical environment, the agency must inform itself about the project's potential environmental impacts, give the public an opportunity to comment on the environmental issues, and take feasible measures to avoid or reduce potential harm to the physical environment.

This Environmental Impact Report (EIR), having California State Clearinghouse (SCH) No. 2017021049 was prepared in accordance with CEQA Guidelines Article 9, § 15120 to § 15132, to evaluate the potential environmental impacts associated with planning, constructing, and operating the proposed Alliance California Gateway South Building 4 (hereafter, the "Project" or "proposed Project"). This EIR does not recommend approval, approval with modification, or denial of the proposed Project; rather, this EIR is a source of impartial information regarding potential impacts that the Project may cause to the physical environment. The Draft EIR will be available for public review for a minimum period of 45 days. After consideration of public comment, the City of San Bernardino will consider certifying the Final EIR and adopting required findings in conjunction with considering the Project for approval. In the case that there are any adverse environmental impacts that cannot be fully mitigated, the City of San Bernardino must adopt a Statement of Overriding Considerations, stating why the City is taking action to approve the Project with or without modification despite its unavoidable significant environmental effects.

This Executive Summary complies with CEQA Guidelines § 15123, "Summary." This EIR document includes a description of the proposed Project and evaluates the physical environmental effects that could result from Project implementation. The City of San Bernardino determined that the scope of this EIR should cover twelve (12) environmental factors. The scope was determined through the completion of an Initial Study accepted by the City of San Bernardino's independent judgment pursuant to CEQA Guidelines § 15063, and in consideration of public comment received by the City in response to this EIR's Notice of Preparation (NOP). The Initial Study, NOP, and written comments received by the City in response to the NOP, are attached to this EIR as *Technical Appendix A*. As determined by the Initial Study and in consideration of public comment on the NOP, the 12 environmental factors that could be reasonably and significantly affected by planning, constructing, and/or operating the proposed Project are analyzed herein, including:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology /Soils
- Greenhouse Gas Emissions

- Hazards and Hazardous Materials
- Hydrology / Water Quality
- Land Use /Planning
- Noise
- Transportation / Circulation
- Utilities / Service Systems

Refer to EIR Section 4.0, *Environmental Analysis*, for a full account and analysis of the environmental factors listed above. As mentioned, the scope of this EIR includes these 12 environmental factors as determined through the completion of an Initial Study pursuant to CEQA Guidelines § 15063, and in consideration of public comment to this EIR's NOP. Environmental factors for which the Initial Study concluded that impacts would be clearly less than significant and that do not warrant further analysis in this EIR are addressed in EIR Section 5.0, *Other CEQA Considerations*. For each of the 12 environmental factors analyzed in detail in Section 4.0, this EIR describes: 1) the physical conditions that existed at the approximate time this EIR's NOP was filed with the California State Clearinghouse (February 14, 2017); 2) discloses the type and magnitude of potential environmental impacts resulting from Project planning, construction, and operation; and 3) if warranted, recommends feasible mitigation measures that have a proportional nexus to the Project's impacts and that would reduce or avoid significant adverse environmental impacts that the proposed Project may cause. A summary of the proposed Project's significant environmental impacts and the mitigation measures imposed by the City of San Bernardino on the Project to lessen or avoid those impacts is included in this *Executive Summary* as Table S-1, *Mitigation Monitoring and Reporting Program.*

This EIR also summarizes the considered alternatives to the proposed Project. Alternatives are described that would attain most of the Project's objectives while avoiding or substantially lessening the proposed Project's significant adverse environmental effects. A full discussion of alternatives to the Project is found in EIR Section 6.0, *Alternatives*.

S.2 PROJECT OVERVIEW

S.2.1 LOCATION AND REGIONAL SETTING

The Project site is located in the City of San Bernardino which is located in the southwestern portion of San Bernardino County. San Bernardino County is surrounded by Los Angeles County, Orange County, Riverside County, Kern County, and Inyo County. The City of San Bernardino is located approximately 60 miles east of the City of Los Angeles at the base of the San Bernardino Mountains on the northeast and east, Blue Mountain and Box Springs Mountain abutting the cities of Loma Linda and Redlands to the south, and the San Gabriel Mountains and the Jurupa Hills to the northwest and southwest, respectively. The City is surrounded by the San Bernardino National Forest to the north, the cities of Highland to the east, Redlands to the southeast, Loma Linda to the south, Colton to the southwest, and Rialto to the west. Arrowhead Springs is located north of the City of San Bernardino. (City of San Benardino, 2005a, p. 4-1)

Major freeways traversing the City of San Bernardino include State Route 259 (SR-259), SR-210, SR-330, SR-18, Interstate 215 (I-215) and I-10. The City of San Bernardino encompasses an area that stretches from I-10 on the south to the Cajon Creek Wash and the San Bernardino Mountains on the north. (City of San Benardino, 2005a, p. 4-1). The location of the Project site in a regional context is shown on Figure 3-1, *Regional Map*, of EIR Section 3.0, *Project Description*.

The Project site includes San Bernardino Assessor Parcel Numbers (APNs): 0141-421-14, 0141-421-18, 0141-421-19, 0141-421-20, 0141-431-17, and 0141-431-18. The Project site is located on an approximately 62.02-acre property located south of Dumas Street and east of S. Waterman Avenue in the south-central portion of the City of San Bernardino. A majority of the site encompasses the existing San Bernardino Public Golf Club. The Project site is located approximately 1.3 miles east of I-215 and approximately 0.50 miles north of I-10. A San Bernardino Flood Control Channel ("East Twin Creek") is located adjacent to the western boundary of the Project site, and the Santa Ana River is located near the southern boundary of the Project site. The location of the Project site in a local context is shown in Figure 3-2, *Vicinity Map*, in EIR Section 3.0, *Project Description*.

S.2.2 PROJECT OBJECTIVES

The underlying purpose of the proposed Project is to facilitate the reuse of the San Bernardino Public Golf Club in the City of San Bernardino for commerce and employment-generating purposes. The following objectives are intended to achieve this underlying purpose:

A. To remove the existing San Bernardino Public Golf Club and expeditiously redevelop the property.

B. To redevelop the San Bernardino Public Golf Club property with an employment-generating use that is compatible with existing and planned industrial warehousing development found in the surrounding area.

C. To develop a logistics warehouse use that capitalizes on the transportation and locational strengths of San Bernardino.

D. To develop a logistics warehouse use that meets industry standards for modern, operational design criteria and can accommodate a wide variety of users.

E. To attract new employment-generating business to San Bernardino, thereby reducing the needs of the local workforce to commute outside of the area for employment.

F. To develop a logistics warehouse use that offers truck loading docks and truck trailer parking in close proximity to the regional transportation system in order to facilitate the efficient movement of goods as part of the southern California goods movement network.

G. To develop a high cube logistics warehouse use that is economically competitive with similar industrial warehouse buildings in the County of San Bernardino and the surrounding region.

H. To increase the amount of available industrial warehouse space in the City of San Bernardino to attract new businesses and jobs to the City.

S.3 PROJECT DESCRIPTION SUMMARY

The proposed Project consists of a proposal to develop one high cube logistics warehouse building, associated infrastructure, and site improvements, on the approximately 62.02-acre Project site. The principal discretionary actions required of the City of San Bernardino and other governmental agencies to implement the Project are described in detail in EIR Section 3.0, *Project Description,* listed in Table 3-3, *Matrix of Project Approvals / Permit,* and summarized below

S.3.1 GENERAL PLAN AMENDMENT (GPA16-09)

The City of San Bernardino General Plan designates the majority of the Project site as "Open Space-Public/Commercial Recreation (PCR)" and a small area in in the northwest portion of the Project site as "Industrial – Industrial Light (IL)." GPA16-09 proposes to change the General Plan land use designation on the portion of the Project site designated "Open Space - Public/Commercial Recreation (PCR)" to "Industrial – Industrial Light (IL)" so that the entire Project site is designated "Industrial - Industrial Light (IL)." Refer to Figure 3-4, *General Plan Amendment (GPA16-09)*.

S.3.2 DEVELOPMENT CODE AMENDMENT (DCA16-11)

The majority of the Project site is zoned "Open Space – Public/Commercial Recreation (PCR)" and a small area in the northwest portion of the Project site is zoned "Industrial - Industrial Light (IL)" by the City of San Bernardino. DCA16-11 proposes to change the portion of the Project site currently zoned "Open Space – Public/Commercial Recreation (PCR)" to "Industrial - Industrial Light (IL)" so that the entire Project site is zoned "Industrial - Industrial Light (IL)" as shown on Figure 3-5, *Development Code Amendment (DCA16-11)*.

S.3.3 SUBDIVISION (SUB16-08)

Subdivision (SUB16-08) proposes to consolidate the site's existing parcels into one parcel through Tentative Parcel Map 19814 (TPM 19814) as illustrated in Figure 3-6, T*entative Parcel Map No. 19814 (SUB16-08) (Sheet 1 of 2)* and Figure 3-7, *Tentative Parcel Map No. 19814 (SUB16-08) (Sheet 2 of 2)*. As illustrated on Figure 3-6 and Figure 3-7, TPM 19814 identifies the proposed locations of easements, right-of-way dedications, and on-site and off-site infrastructure improvements. TPM 19814 provides for a vehicular access driveway near the northeast corner of the Project site with access to/from S. Waterman Avenue. In addition, TPM 19814 proposes interim off-site access improvements between the Project site and Orange Show Road in the form of an off-site private access easement. The easement would extend to Dumas Street, then north and east to existing Washington Avenue, then north to intersect with Orange Show Road. Interim roadway

improvements would occur within this easement to provide ingress and egress between the Project site and Orange Show Road. As a reasonable consequence of the Project, the City of San Bernardino may require the construction of permanent off-site access improvements between the Project site and Orange Show Road, the possible alignments of which also are evaluated by this EIR. As a part of these off-site road improvements, existing power poles would be removed, overhead wires would be undergrounded, and an existing traffic signal and pull box at the intersection of Washington Avenue and Orange Show Road would be relocated. In addition, two residential homes have the potential to be removed to implement the permanent access alignment.

TPM No. 19814 would accommodate the Project's proposed high cube logistics warehouse building and its associated site and utility infrastructure improvements. A water quality/ detention basin would be installed in the southwest corner of the Project site. In addition, one existing on-site City of Riverside Public Utilities (RPU) potable groundwater well, as well as a segment of the existing on-site Rice-Thorne non-potable groundwater pipeline, would be abandoned and replaced/realigned on site. TPM 19814 would also result in the abandonment of several inactive wells and protect other RPU assets in place as discussed in more detail in EIR Sections 4.8, *Hydrology/Water Quality* and 4.12, *Utilities/Service Systems.* Grading would balance on-site soil quantities and no import or export of soils would be required during the construction process. An existing SCE easement in the northwest portion of the Project site and the SCE easements in the south central and southwest portion the Project site would be vacated. In addition, one power pole near the western boundary of the Project site would be relocated.

S.3.4 DEVELOPMENT PERMIT (DP-D16-26)

According to City of San Bernardino Development Code Chapter 19.44 A*dministrative and Development Permits*, a Development Permit is required for the proposed Project because the Project is a new non-residential use with more than 5,000 sq. ft. of building space. As shown on Figure 3-15, *Development Permit Site Plan (DP-D16-026)*, DP-D16-26 proposes the construction of one high cube logistics warehouse building containing 1,063,852 s.f. of building area with 188 trailer dock doors (94 on the north side of the building and 94 on the south side of the building) four (4) grade level doors (drive thru doors) and approximately 1,171 parking stalls for auto and truck parking. Other improvements on the site would include landscaping, a water quality/detention basin, lighting, and signage. The total building area of 1,063,852 s.f. is comprised of 5,000 s.f. of office space and 1,058,852 s.f. of warehouse space resulting in a maximum Floor-to-Area Ratio (FAR) of 0.75 as allowed by the "Industrial- Industrial Light (IL)" land use and zoning designation.

S.3.5 VARIANCE (VAR16-03)

As illustrated on Figure 3-18, *Architectural Projections (Sheet 1 of 3)*, through Figure 3-20, *Architectural Projections (Sheet 3 of 3),* the proposed building would be constructed to a height of 44 feet above finished grade. The Project Applicant applied for a Variance (VAR16-03) to account for a possible 5-foot increase in the maximum permitted height of the building, including architectural projections, to a maximum height of 55 feet; whereas the City Development Code allows a maximum

building height of 50 feet in the "Industrial - Industrial Light (IL)" zone. The height of the building will be determined and approved by the City of San Bernardino upon final Project design. For purposes of analysis in the EIR, a 55-foot high building is assumed, even though the actual final height may be shorter.

S.4 EIR PROCESS

As a first step in complying with the procedural requirements of CEQA for an EIR, an Initial Study was prepared by the City of San Bernardino to determine whether any aspect of the proposed Project, either individually or cumulatively, may cause a significant adverse effect on the physical environment (refer to EIR *Technical Appendix A* for a copy of the Initial Study). For this Project, the Initial Study indicated that this EIR should focus on the 12 environmental factors listed above in Subsection S.1. After completion of the Initial Study, the City filed a NOP with the California Office of Planning and Research (State Clearinghouse) to indicate that an EIR would be prepared. In turn, the Initial Study and NOP were distributed for a 30-day public review period, which began on February 14, 2017. The City of San Bernardino received written comments on the scope of the EIR during those 30 days, which were considered by the City during the preparation of this EIR. In addition, and pursuant to CEQA Guidelines §15082(c)(1), a public meeting (called a scoping session) was held at the City of San Bernardino Council Chambers, City Hall on February 28, 2017, which provided members of the general public an additional opportunity to comment on the scope and range of potential environmental concerns to be addressed in this EIR. No members of the general public attended the EIR Scoping Meeting.

This EIR is being circulated for review and comment by the public and other interested parties, agencies, and organizations for a 45-day review period. During the 45-day public review period, public notices announcing availability of the Draft EIR will be mailed to interested parties, an advertisement will be published in the newspaper of general circulation in the Project area, and copies of the Draft EIR and its Technical Appendices will be available for review at the locations indicated in the public notices.

After the close of the 45-day Draft EIR public comment period, the City will prepare and publish responses to written comments it receives on the environmental effects of the proposed Project. The Final EIR will then be considered by the City of San Bernardino Planning Commission, which will issue recommendations to the City of San Bernardino City Council. The City Council must certify this EIR before making a decision to approve, or approve with modification, the proposed Project. Approval of the proposed Project would be accompanied by the adoption of written findings and a statement of overriding considerations for any significant unavoidable environmental impacts identified in the Final EIR. In addition, the City must adopt a Mitigation, Monitoring, and Reporting Program (MMRP), which describes the process to ensure implementation of the mitigation measures identified in the Final EIR. The MMRP will ensure CEQA compliance during construction and operation of the Project.

S.5 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

CEQA Guidelines § 15123(b)(2)(3) requires that areas of controversy known to the Lead Agency (City of San Bernardino) including issues raised by agencies and the public; and issues to be resolved, including the choice along alternatives and whether or how to mitigate the significant effects.

Regarding issues to be resolved, this EIR addresses the environmental issues that are known by the City, that are identified in the Initial Study prepared for the Project, and that were identified in the comment letters that the City received on this EIR's NOP (refer to *Technical Appendix A* of this EIR). Environmental factors raised in written comment to the NOP are summarized in Table 1-1, *Summary of NOP Comment*s, in Section 1.0, *Introduction* of this EIR, and include but are not limited to the topics of air quality, biological resources, cultural resources, hydrology/water quality, land use/planning, and transportation/circulation.

S.6 ALTERNATIVES TO THE PROPOSED PROJECT

In compliance with CEQA Guidelines §15126.6, an EIR must describe a range of reasonable alternatives to the Project or to the location of the Project. Each alternative must be able to feasibly attain most of the Project's objectives and avoid or substantially lessen the Project's significant effects on the environment. A detailed description of each alternative evaluated in this EIR, as well as an analysis of the potential environmental impacts associated with each alternative, is provided in EIR Section 6.0, *Alternatives*. Also described in Section 6.0 is a list of alternatives that were considered but rejected from further analysis. Refer to EIR Table 6-1, *Alternatives to the Proposed Project – Comparison of Environmental Impacts*, for a comparison of each alternative's environmental impacts to the proposed Project's level of impacts.

S.6.1 NO PROJECT ALTERNATIVE

The No Project Alternative considers retaining the Project site in its existing condition. As such, this alternative assumes that the San Bernardino Public Golf Club would remain in operation on the site for the foreseeable future. If the golf club is closed in the future due to economic or other conditions, it would be speculative to foresee if the site would attract another golf club tenant or if the site would be left as an abandoned golf course. However, because the location of an existing driving range located north of the Project site has already been approved for the development of a warehouse building, the more likely scenario is an abandoned golf course. Regardless, the analysis of the No Project Alternative considered in this EIR assumes continuation of the San Bernardino Public Golf Club.

Compared to the proposed Project, the selection of this alternative would avoid or reduce all of the Project's significant adverse effects on the environment, except for impacts associated with geology/soils, hazards and hazardous materials, hydrology/water quality, and utilities/service

systems, which would be similar when the No Project Alternative is compared to the Proposed Project. The No Project Alternative would not meet any of the Project's eight objectives.

S.6.2 EASTERN ACCESS ONLY ALTERNATIVE

The proposed Project includes the installation of an off-site access driveway between the northern boundary of the Project site and Orange Show Road. Vehicular noise generated by automobiles and trucks using this driveway would elevate noise levels experienced by adjacent properties to perceptible levels that exceed the significance criteria identified for noise impacts in this EIR. The Eastern Access Only Alternative would avoid this significant impact by eliminating the off-site access driveway and permitting ingress and egress to the Project site only via S. Waterman Avenue. On-site development would be identical to that proposed by the Project, but an access driveway would not be provided off-site to the north to intersect with Orange Show Road.

Compared to the proposed Project, the Eastern Access Only Alternative would result in similar impacts to air quality, greenhouse gas emissions, and land use /planning. Because the Project's physical disturbance footprint would be slightly smaller due to elimination of the off-site access road, this alternative would slightly reduce impacts associated with aesthetics, biological resources, cultural resources, geology/soils, and hydrology /water quality. However, this alternative would result in increased impacts associated with transportation /circulation by concentrating all vehicular traffic entering and exiting the site at the intersection of the Project's driveway connection to S. Waterman Avenue. Further, hazards impacts would increase by limiting emergency vehicle access roads to the site. The Eastern Access Alternative would meet all of the Project's objectives, but would not achieve any substantial environmental benefits and would increase traffic / circulation impacts along S. Waterman Avenue and create a potential safety hazard by limiting access routes to the site by emergency vehicles.

S.6.3 SMALLER BUILDING WITH TRUCK TRAILER PARKING ALTERNATIVE

Similar to the Smaller Building Alternative discussed below, the Smaller Building with Truck Trailer Parking Alternative considers the construction and operation of an approximately 600,000 s.f. high cube logistics warehouse building on the Project site; thereby reducing the Project's building area by approximately 44%. Under this alternative, the portion of the Project site not used for building operations would be developed as a truck trailer parking area to support the proposed building. Compared to the proposed Project, the grading footprint would be identical.

Because the demand for warehouse building space in the City of San Bernardino and surrounding area would be satisfied on the Project site to a lesser degree by this alternative as compared to the proposed Project, it is reasonable to assume that the demand for warehouse space not satisfied on the Project site under this alternative would be satisfied through the development of other warehouse projects on other properties. This would likely result in a displacement of the Project's environmental impacts to another location rather than an absolute reduction of impacts. Regardless, when considering the Project site in isolation, because less traffic would be generated under this

alternative due to the smaller building size, this alternative would result in reduced impacts to air quality, greenhouse gas emissions, noise, transportation / circulation, and utilities /service systems. The Smaller Building with Truck Trailer Parking Alternative would achieve most of the Project's objectives, but to a lesser degree than the proposed Project.

S.6.4 SMALLER BUILDING ALTERNATIVE – ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Similar to the Smaller Building with Truck Trailer Parking Alternative discussed above, the Smaller Building Alternative considers the construction and operation of an approximately 600,000 s.f. high cube logistics warehouse building on the Project site; thereby reducing the Project's building area by approximately 44%. Under this alternative, less of the Project site would be graded for development. The portion not graded in the western portion of the Project site would remain as an abandoned portion of the San Bernardino Public Golf Club.

Because the demand for warehouse building space in the City of San Bernardino and surrounding area would be satisfied on the Project site to a lesser degree by this alternative as compared to the proposed Project, it is reasonable to assume that the demand for warehouse space not satisfied on the Project site under this alternative would likely be satisfied through the development of other warehouse projects on other properties. This would result in a displacement of the Project's environmental impacts to another location rather than an absolute reduction of impacts. Regardless, when considering the Project site in isolation, because the physical disturbance area on the Project site would be smaller and less traffic would be generated due to the smaller building size, this alternative would result in reduced impacts to air quality, biological resources, cultural resources; geology /soils, greenhouse gas emissions, hazards and hazardous materials, hydrology /water quality, land use / planning, noise, transportation / circulation, and utilities /service systems. Because the building under this alternative would most likely be positioned along S. Waterman Avenue, the Smaller Building Alternative would result in similar impacts to aesthetics as compared to the proposed Project. The Smaller Building Alternative would achieve most of the Project's objectives, but to a lesser degree than the proposed Project. As such, the Smaller Building Alternative is identified as the environmentally superior alternative.

S.7 SUMMARY OF IMPACTS, MITIGATION MEASURES, AND CONCLUSIONS

S.7.1 EFFECTS FOUND NOT TO BE SIGNIFICANT

The scope of this EIR includes 12 environmental factors determined through the completion of an Initial Study prepared by the City of San Bernardino pursuant to CEQA Guidelines 15063 and CEQA Statute §21002(e), as well as consideration of public comments received by the City on this EIR's NOP. The Initial Study, NOP, and public comments received in response to the NOP, are attached to this EIR as *Technical Appendix A.* The City concluded that impacts to the following subject areas would clearly be less than significant and, as such, detailed analysis is not warranted in this EIR: 1) Agriculture and Forestry Resources; 2) Mineral Resources; 3) Population / Housing; 4) Public

Services; and 5) Recreation. This EIR addresses these five (5) environmental factors in EIR Subsection 5.0, *Other CEQA Considerations*.

S.7.2 IMPACTS OF THE PROPOSED PROJECT

Table S-1, *Mitigation Monitoring and Reporting Program*, provides a summary of the proposed Project's environmental impacts, as required by CEQA Guidelines § 15123(a). Also presented are the mitigation measures imposed on the Project by the City of San Bernardino to further avoid adverse environmental impacts or to reduce their level of significance. After the application of all feasible mitigation measures, the Project would result in six (6) significant and unavoidable environmental effects, as summarized below.

- Air Quality – Significant and Unavoidable Direct and Cumulatively Considerable Impact (AQMP Compliance). Because the SCAQMD's daily significance thresholds for air pollutants would be exceeded during the Project's operation even after the implementation of feasible mitigation measures (see below), the Project would not fully mitigate its conflict with the *Final 2016 AQMP*.

- Air Quality - Significant and Unavoidable Direct and Cumulatively Considerable Impact (Project Operation). The Project would exceed the applicable SCAQMD regional thresholds for NO_X emissions during operation. Emissions of NO_X also would contribute to an existing air quality violation in the SCAB (i.e., ozone – NO_X is a precursor for ozone). As such, Project-related emissions would violate SCAQMD air quality standards and contribute to the non-attainment of a criteria pollutant (i.e., NO_X and ozone). The effects to human health from NO_X exposure in the SCAB are decreases in lung function, such as asthma and pulmonary diseases. Mitigation measures would reduce the Project's operational NO_X emissions by reducing demand for certain types of energy resource to operate the building. However, mobile source (tailpipe) emissions account for approximately 94 percent, by weight, of the Project's total operational emissions. Mobile source emissions are regulated by standards imposed by federal and State agencies, not local governments. The types of vehicle engines and the types of fuel used by trucking companies and vehicle operators that may access the Project site are well beyond the direct control of the City of San Bernardino. CEQA Guidelines § 15091 provides that mitigation measures must be within the responsibility and jurisdiction of the Lead Agency in order to be implemented. No other mitigation measures are available that are feasible for the Project Applicant to implement and the City of San Bernardino to enforce that have a proportional nexus to the Project's level of impact.

- Greenhouse Gas Emissions – Significant and Unavoidable Cumulatively Considerable Impact. The Project is calculated to generate approximately 18,515.33 MTCO2e annually, which would exceed the SCAQMD screening threshold of 10,000 MTCO2e for greenhouse gas emissions. Required compliance with the California Code of Regulations

Titles 20 and 24, and the application of mitigation measures would reduce Project-related greenhouse gas emissions; however, these measures would not substantially reduce Project-related mobile source emissions, which comprise approximately 85 percent of the Project's total greenhouse gas emissions. Mobile source emissions are regulated by State and federal laws pertaining to vehicle engines and fuel, and are outside of the control of the Project Applicant, future Project occupants, and the City of San Bernardino. CEQA Guidelines § 15091 provides that mitigation measures must be within the responsibility and jurisdiction of the Lead Agency in order to be implemented. No other mitigation measures are available that are feasible for the Project Applicant to implement and for the City of San Bernardino to enforce that have a proportional nexus to the Project's level of impact.

- Land Use /Planning - Significant and Unavoidable Impact. The Project would be inconsistent with the growth projections for the Project site assumed by the *Final 2016 AQMP*, and the inconsistency would result in a significant environmental impact due to long-term criteria pollutant emissions. Because the *Final 2016 AQMP* is a long-range plan intended to reduce impacts to the environment, the Project's inconsistency is regarded as a significant direct and cumulatively considerable land use/planning impact.

- Noise - Significant and Unavoidable Direct and Cumulatively Considerable Off-Site Traffic-Related Noise Impact. Off-site Project-related traffic noise impacts would be significant for all analyzed traffic scenarios (Existing plus Project; Existing plus Ambient 2018; Existing plus Ambient Plus Cumulative 2018; and Horizon Year 2040) for the one roadway segment identified as Washington Avenue south of Orange Show Road (ID #1) because the Project would increase the noise level by a perceptible amount at receiver locations. Under existing conditions, the properties adjacent to this roadway segment are non-conforming residential uses located on properties designated by the San Bernardino General Plan as "Industrial-Industrial Light (IL)." Mitigation measures considered by the City of San Bernardino to address this impact would either be ineffective or infeasible.

- Transportation / Circulation - Significant and Unavoidable Cumulatively Considerable Impact. The Project would not cause any study area intersection to operate at unacceptable LOS; however, the Project would result in a cumulatively considerable impact at two intersections in the Horizon Year (2040) – the E Street / Auto Center Drive / Orange Show Road intersection (a Congestion Management Plan (CMP) intersection) and the Waterman Avenue / I-10 Westbound On-Ramp intersection, which are calculated to operate an unacceptable LOS with or without the addition of Project traffic. Mitigation measures would require the Project Applicant to pay development impact fees and participate in fair-share funding programs for improvements. However, to achieve acceptable LOS conditions, these intersections require improvements that either: 1) are not under the sole jurisdictional authority of the City of San Bernardino (meaning the City of San Bernardino cannot assure that the recommended improvements would be

implemented); and/or 2) are not included in any existing mitigation funding program to ensure a date-certain installation.

Table S-1 Mitigation Monitoring and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
4.1 Aesthetics					
Summary of Impacts					
Threshold a): The Project would not significantly impact a scenic vista. The Project site does not contain any scenic vistas, nor does it offer unique views of any visually prominent features.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.
Threshold b): The Project site is not visible from a state scenic highway and contains no scenic resources visible from a scenic highway under existing conditions; therefore, the Project would not adversely impact the view shed within a scenic highway corridor and would not damage important scenic resources within a scenic highway corridor, including trees, rock outcroppings, and historic buildings.	No mitigation is required.	N/A	N/A	N/A	No Impact.
Threshold c): Although the proposed Project would result in a change to the existing visual character of the site (a public golf course to a high cube logistics warehouse building with associated improvements), the Project incorporates a number of	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
site design, architectural, and landscaping elements that would ensure the provision of a high-quality development as seen from public viewing areas. The visual character of the site would not be substantially degraded.					
Threshold d): Mandatory compliance with the City's Municipal Code would ensure that the Project does not produce substantial amounts of light or glare from artificial lighting sources that would adversely affect the day or nighttime views of adjacent properties.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.
4.2 Air Quality					
Summary of Impacts					
Threshold a): The Project would be inconsistent with the growth projections contained in the *Final 2016 AQMP*, and the inconsistency would result in a significant environmental impact due to long-term criteria pollutant emissions	**MM 4.2-1** Prior to grading permit and building permit issuance, the City shall verify that the following note is specified on all grading and building plans. Project contractors shall be required to comply with this note and permit periodic inspection of the construction site by City of San Bernardino staff to confirm compliance. This note shall also be specified in bid documents issued to prospective construction contractors. a) All graders, scrapers, and rubber tired dozers shall be California	Project Applicant; Project Contractor	City of San Bernardino Planning Division	Prior to grading permit and building permit issuance.	Significant and Unavoidable Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	Air Resources Board (CARB) Tier 3 Certified or better.,				
	MM 4.2-2 Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations. At a minimum, each sign shall include: 1) instructions for truck drivers to shut off engines when not in use; 2) instructions for drivers of diesel trucks to restrict idling to no more than five (5) minutes once the vehicle is stopped, the transmission is set to "neutral" or "park," and the parking brake is engaged; and 3) telephone numbers of the building facilities manager and the CARB to report violations. Prior to occupancy permit issuance, the City of San Bernardino shall conduct a site inspection to ensure that the signs are in place.	Project Applicant; Project Construction Contractor	City of San Bernardino Community Development Department	Prior to occupancy permit issuance.	
	MM 4.2-3 Prior to the issuance of a building permit, the Project Applicant shall provide documentation to the City of San Bernardino demonstrating that the Project is designed to meet the mandatory California Energy Code Title 24, Part 6 standards in effect at the time of building permit application submittal and includes the energy efficiency design features listed	Project Applicant	City of San Bernardino Community Development Department	Prior to the issuance of a building permit.	

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	below at a minimum. a) Up to three (3) electric vehicle charging stations shall be provided; b) Solar or light-emitting diodes (LEDs) lights shall be installed for outdoor lighting; c) Any yard trucks used on-site shall be powered by natural gas or electricity; d) Service equipment used on the Project site, such as forklifts, shall be electric; e) Bicycle racks shall be provided at convenient locations on the Project site; f) The building's roof shall be designed and constructed to accommodate maximally-sized photovoltaic (PV) solar arrays taking into consideration limitations imposed by other rooftop equipment, roof warranties, building and fire code requirements, and other physical or legal limitations. Applicant must develop the building with the necessary electrical system and other infrastructure to accommodate maximally-sized PV arrays in the future. The				

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	electrical system and infrastructure must be clearly labeled with noticeable and permanent signage which informs future occupants/owners of the existence of this infrastructure. g) The building shall be designed and constructed to achieve the equivalent of the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) "Certified" rating. The Project Applicant shall provide the City with documentation demonstrating that the Project has achieved LEED "Certified" equivalency; but, the Project shall not be required to obtain the U.S. Green Building Council's official LEED certification. **MM 4.2-4** The building plans for each building shall specify that all fixtures installed in restrooms and employee break areas shall be U.S. EPA Certified Water Sense or equivalent. The City of San Bernardino shall verify this information is provided on the Project's building plans prior to issuance of building permits and inspect for adherence during building construction.	Project Proponent; Project Construction Contractor	City of San Bernardino Community Development Department	Prior to issuance of building permits.	

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	MM 4.2-5 Prior to the issuance of permits that would allow the installation of landscaping, the City of San Bernardino shall review and approve landscaping plans for the site that requires: 1) a plant palette emphasizing drought-tolerant plants; and 2) use of water-efficient irrigation techniques. The City of San Bernardino shall inspect for adherence to these requirements after landscaping installation.	Project Proponent; Project Construction Contractor	City of San Bernardino Community Development Department	Prior to the issuance of permits that would allow the installation of landscaping.	
Thresholds b) and c): The Project would exceed the applicable SCAQMD regional thresholds for NO_X emissions during construction and operation. Short- and long-term emissions of NO_X also would contribute to an existing air quality violation in the SCAB (i.e., ozone – NO_X is a precursor for ozone). As such, Project-related emissions would violate SCAQMD air quality standards and contribute to the non-attainment of a criteria pollutant (i.e., NO_X and ozone), which is a significant direct and cumulatively considerable impact.	MM 4.2-2 through **Error! Reference source not found.** are applicable.				Less-than-Significant Impact (Construction), Significant and Unavoidable Direct and Cumulative Impact (Operation)
Threshold d): The Project's localized criteria pollution emissions during construction and	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
operation would not exceed the applicable SCAQMD thresholds. The Project also would not expose sensitive receptors to toxic air contaminants (i.e., DPM) that exceed the applicable SCAQMD carcinogenic and non-carcinogenic risk thresholds. Lastly, the Project would not cause or contribute to the formation of a CO "hot spot."					
Threshold e): The unusual or substantial construction-related odors. Odors associated with long-term operation of the Project would be minimal and less than significant. The Project would comply with SCAQMD Rule 402, which prohibits the discharge of odorous emissions that would create a public nuisance.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.
4.3 Biological Resources					
Summary of Impacts					
Threshold a): The Project site does not contain sensitive habitat communities or sensitive plant species; therefore, the loss of vegetation on the Project site would be less than significant. In regards to wildlife species, no sensitive species were observed on the Project site or have the	**MM 4.3-1** A pre-construction clearance survey for nesting birds shall be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey shall document a negative survey with a brief letter report indicating that no	Project Applicant; Biologist Monitor	City of San Bernardino Community Development Department	Within 3 days of the start of any vegetation removal or ground disturbing activities.	Less-than-Significant Impact with Mitigation Incorporated.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
potential to occur on the Project site with the exception of nesting migratory birds and burrowing owl. If Project construction activities occur during the nesting season (February 1 to August 31), and migratory bird nests are present, the removal of such nests would be a significant direct and cumulatively considerable impact. Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code. Similarly, if burrowing owl is present on the site prior to grading, impacts to burrowing owls would be a significant direct and cumulatively considerable impact.	impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities shall stay outside of a 300-foot buffer around the active nest. For listed and raptor species, this buffer shall be expanded to 500 feet. A biological monitor shall be present to delineate the boundaries of the buffer area and monitor the active nest to ensure that nesting behavior is not adversely affected by construction activities. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area may occur. **MM 4.3-2** Prior to the start of any vegetation removal or ground disturbing activities, a pre-construction clearance survey for burrowing owls shall be conducted. In accordance with the California Department of Fish and Wildlife (CDFW) Staff Report on Burrowing Owl Mitigation, two pre-construction clearance surveys shall be conducted 14-30 days and 24 hours prior to any vegetation removal or ground disturbing activities. If an occupied burrow is found within the development footprint during the pre-construction clearance				

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	survey, a burrowing owl exclusion plan shall be prepared and submitted to California Department of Fish and Wildlife (CDFW) for approval. The exclusion plan, as approved by the CDFW, shall be implemented to ensure that burrowing owl are not significantly impacted by Project-related construction activities.				
Threshold b): No riparian habitats or special-status plant communities occur within the boundaries of the Project site. Further, the Project site is not located within federally designated Critical Habitat. Therefore, the Project would not impact any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS).	No mitigation is required.	N/A	N/A	N/A	No Impact.
Threshold c): The Project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act. Project activities would not result in the	No mitigation is required.	N/A	N/A	N/A	No Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
discharge of dredged or fill material to the Santa Ana River or East Twin Creek, which are adjacent to the Project site and contain federally protected wetlands. Four (4) artificial ponds are located on the Project site that were constructed as water hazards for the San Bernardino Public Golf Club and that would be removed by the Project. These ponds have no upstream or downstream surface hydrologic connection to the Santa Ana River or East Twin Creek, and thus do not qualify as jurisdictional "waters of the United States" or "waters of the State." Additionally, the ponds do not meet the three wetland parameters required to qualify as isolated wetland features.					
Threshold d): The Project site is not identified as a wildlife corridor or linkage or native wildlife nursery. However, the Santa Ana River, located to the south of the Project site is identified as a wildlife corridor by the San Bernardino County General Plan. Because Project activities would be limited to the existing San Bernardino Public Golf Club and	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
previously disturbed areas, and these areas are not part of an existing or planned wildlife corridor or linkage, the Project would not significantly impact wildlife movement opportunities or prevent the Santa Ana River from continuing to function as a wildlife corridor.					
Threshold e): City of San Bernardino Municipal Code 15.34.020, Permit Required, is the only applicable local policy or ordinance protecting biological resources, which requires that a permit be obtained from the City of San Bernardino Development Services Department prior to the removal of five (5) or more trees on any development site or parcel within any 36-month period. The Project site contains trees under existing conditions, which would be removed to accommodate construction of the Project. However, because Municipal Code compliance is required by law, the Project has no potential to conflict with the ordinance. No impact would occur as a result of the Project.	No mitigation is required.	N/A	N/A	N/A	No Impact.
Threshold f): The Project site is not	No mitigation is required.	N/A	N/A	N/A	No Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
located within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impact would occur as a result of the Project.					
4.4 Cultural Resources					
Summary of Impacts					
Threshold a): The Project site is the current location of the San Bernardino Public Golf Club. The San Bernardino Public Golf Club does not meet any criteria for listing on the California Register of Historic Places (CRHR) and as such, is not considered a historical resource for the purposes of CEQA. In addition, the single-family residences at 141 East Dumas Street and 145 East Dumas Street, and the 700-foot section of South Washington Avenue that are located in the Project's off-site improvement area, do not meet any criteria for listing on the CRHR. Therefore, because no resources on the Project site or within the Project's off-site improvement area meet any criteria for listing on the CRHR, the Project would not	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
cause a substantial adverse change in the significance of a historical resource as defined in CEQA Section 15064.5.					
Threshold b): There are no known archaeological resources within the Project area. Due to the high energy of the floodplain deposits and the young age of soils in the northern part of the Project area, there is a low potential for encountering intact buried archaeological deposits within the Project area. However, because there is a remote potential to uncover previously undiscovered archaeological resources during mass grading and excavation activities, if archaeological resources are unearthed during Project construction activities, and they meet the definition of a significant archeological resource as defined by California Code of Regulations § 15064.5, there is a potential that the resource(s) would be significantly impacted if not properly identified and treated.	**MM 4.4-1** Prior to the issuance of a grading permit, the Project Proponent or construction contractor shall provide evidence to the City of San Bernardino Community Development Department that the construction site supervisors and crew members involved with Project grading and trenching operations are trained to recognize archaeological resources and tribal cultural resources should such resources be unearthed during Project ground-disturbing construction activities. If a suspected archaeological resource or tribal cultural resource is identified on the property, the construction supervisor shall be required by his/her contract to immediately halt and redirect grading operations within a 100-foot radius of the suspected resource(s) and seek identification and evaluation of the suspected resource(s) by a professional archaeologist. This requirement shall be noted on all grading plans and the construction contractor shall be obligated to comply with the note. The	Project Proponent; Construction Contractor; Supervisor; Professional Archaeologist	City of San Bernardino Community Development Department	Prior to the issuance of a grading permit.	Less-than-Significant Impact with Mitigation Incorporated.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	archaeologist shall evaluate the suspected resource and make a determination of significance pursuant to California Public Resources Code Section 21083.2. If the resource is a suspected tribal cultural resource that potentially meets the definition given in Public Resources Code Section 21074, the professional archaeologist shall consult with the Gabrieleno Band of Mission Indians-Kizh Nation and/or the San Manuel Band of Mission Indians before making a definitive determination of significance. If the resource is determined to be significant, then Mitigation Measure MM 4.4-2 shall apply. **MM 4.4-2** If a significant archaeological resource(s) or tribal cultural resource is discovered on the property, ground-disturbing activities shall be suspended within a 100-foot radius of the resource(s). The archaeological monitor and a representative of the appropriate Native American Tribe(s), the Project Proponent, and the City of San Bernardino Community Development Department shall confer regarding mitigation of the discovered archaeological or tribal cultural	Archaeological Monitor; Representative of the appropriate Native American Tribe(s); Project Proponent; City of San Bernardino Community Development Department	City of San Bernardino Community Development Department	During ground-disturbing activities if a significant archaeological resource(s) is discovered.	

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	resource(s). A treatment plan shall be prepared and implemented by the archaeologist to protect the identified archeological resource(s) or tribal cultural resource from damage and destruction. A final report containing the significance and treatment findings shall be prepared by the archaeologist and submitted to the City of San Bernardino Community Development Department and the San Bernardino Archaeological Information Center.				
Threshold c): The Quaternary alluvium deposits on the Project site have a low paleontological resource potential because they are likely too young to contain fossilized materials. However, because there is a remote potential that Project-related ground disturbing activities could extend into sensitive Pleistocene age alluvial deposits that are buried at unknown depth within the Project boundary and unearth significant paleontological resources, impacts would be significant on a direct and cumulatively considerable basis.	**MM 4.4-3** Prior to the issuance of a grading permit, the Project Proponent or construction contractor shall provide evidence to the City of San Bernardino Community Development Department that the construction site supervisors and crew members involved with the Project's grading and trenching operations are trained to recognize paleontological resources (fossils), should resources be unearthed during Project ground-disturbing activities. If a suspected paleontological resource(s) is identified, the construction supervisor shall be required by his/her contract to immediately halt and redirect grading operations within a 100-foot radius of the suspected resource	Project Proponent; Construction Contractor; Qualified vertebrate paleontologist as defined in the County of San Bernardino Development Code Section 82.20.040.	City of San Bernardino Community Development Department	Prior to the issuance of a grading permit and during ground-disturbing activities.	Less-than-Significant Impact. With Mitigation Incorporated.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	and seek identification and evaluation of the suspected resource by a qualified paleontologist meeting the definition of a qualified vertebrate paleontologist as defined in the County of San Bernardino Development Code Section 82.20.040. This requirement shall be noted on all grading plans and the construction contractor shall be obligated to comply with the note. The significance of the discovered resource(s) shall be determined by the paleontologist. If the resource is significant, then Mitigation Measure MM 4.4-4 shall apply. **MM 4.4-4** If a significant paleontological resource is discovered on the property, discovered fossils or samples of such fossils shall be collected and identified by a qualified paleontologist meeting the definition of a qualified vertebrate paleontologist as defined in the County of San Bernardino Development Code Section 82.20.040. Significant specimens recovered shall be properly recorded, treated, and donated to the San Bernardino County Museum, Division of Geological Sciences, or other repository with permanent retrievable paleontologic	Project Proponent; Qualified vertebrate paleontologist as defined in the County of San Bernardino Development Code Section 82.20.040.	City of San Bernardino Community Development Department	If and when a significant paleontological resource is discovered on the property.	

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	storage. A final report shall be prepared and submitted to the City of San Bernardino that itemizes any fossils recovered, with maps to accurately record the original location of recovered fossils, and evidence that the resources were curated by an established museum repository.				
Threshold d): No known human remains are present on the Project site. In the unlikely event that human remains are discovered during Project grading or other ground-disturbing activities, compliance with the applicable provisions of the California Health and Safety Code § 5097 et. seq. is required. Mandatory compliance with State law would ensure that human remains, if encountered, are appropriately treated and would preclude the potential for significant impacts to Native American remains.	**MM 4.4-5** Pursuant to California Health and Safety Code Section 7050.5, if human remains are encountered, no further disturbance shall occur until the San Bernardino County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98 (b), human remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. In the event that the remains are determined to be of Native American origin, Native American Heritage Commission (NAHC) shall be contacted by the Coroner within the period specified by law (24 hours). Subsequently, the NAHC shall identify the "Most Likely Descendent." The "Most Likely Descendent" shall then make	Project Proponent; Construction Supervisor; San Bernardino County Coroner; Native American Heritage Commission; City of San Bernardino Archaeologist	City of San Bernardino Community Development Department	If human remains are encountered during the Project's ground-disturbing activities.	Less-than-Significant Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	recommendations and engage in consultation with the property owner concerning the treatment of the remains as provided in Public Resources Code Section 5097.98. Human remains from other ethnic/cultural groups with recognized historical associations to the Project area shall also be subject to consultation between the appropriate representatives from that group and the City Archaeologist.				
Threshold e): Although there are no known tribal cultural resources on the Project site, there is a remote potential to uncover previously undiscovered tribal cultural resources during mass grading and excavation activities. If resources are discovered that meet the definition of a tribal cultural resource as defined by California Code of Regulations § 21074, there is a potential that the resource(s) would be significantly impacted if not properly identified and treated.	Mitigation Measures MM 4.4-1 and MM 4.4-2 apply.				Less-than-Significant Impact with Mitigation Incorporated
4.5 Geology / Soils					
Summary of Impacts					
Threshold (a) (i) - (iv): The Project site is subject to seismic ground	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
shaking and liquefaction hazards. The Project's high cube logistics warehouse building is required to be constructed in accordance with the latest applicable seismic safety guidelines, and the most recent California Building Standards Code (CBCS). The City of San Bernardino also would impose the site-specific grading and construction recommendations contained within the Project's geotechnical feasibility study and infiltration study (*Technical Appendix E1 and E2*) as conditions of Project approval. Therefore, with compliance with the latest applicable seismic safety guidelines, the most recent CBSC, and the grading and construction recommendations as set forth in the Project's geotechnical studies (Technical Appendix E1 and E2), potential impacts associated with seismic hazards would be less than significant.					
Threshold (b): The Project would not result in substantial soil erosion or the loss of topsoil. The Project Applicant is required to obtain a National Pollutant Discharge Elimination System (NPDES)	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
permit for construction activities as well as adhere to SCAQMD Rule 403 during Project construction. With mandatory compliance to these regulatory requirements, the potential for soil erosion impacts during construction would be less than significant. Following construction, soil erosion on the Project site would be minimized, as the areas disturbed during construction would be landscaped or covered with impervious surfaces and drainage would be controlled through a storm drain system. Furthermore, the Project would be required to comply with the site-specific Water Quality Management Plan (WQMP) during operation, which would preclude substantial erosion impacts in the long-term. Impacts would be less than significant.					
Threshold (c): The Project site's soils are subject to subsidence and liquefaction. The Project's high cube logistics warehouse building is required to be constructed in accordance with the latest applicable seismic safety guidelines, including the most recent California Building	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Standard Code (CBSC). The City of San Bernardino also would impose the site-specific grading and construction recommendations contained within the Project's geotechnical feasibility study and infiltration study *(Technical Appendix E1 and E2*) as conditions of Project approval. With compliance with the grading and construction recommendations as set forth in the Project's geotechnical studies (Technical Appendix E1 and E2), potential impacts associated with unstable soils would be less than significant.					
Threshold (d): Soils on the Project site have a very low to non-expansive expansion potential and have little to no potential to create substantial risks to life or property. The City of San Bernardino would impose the site-specific grading and construction recommendations contained within the Project's geotechnical feasibility study and infiltration study (Technical Appendix E1 and E2) as conditions of Project approval. With compliance with the grading and construction recommendations as	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
set forth in the Project's geotechnical studies (Technical Appendix E1 and E2), the Project would not create substantial risks to life or property from exposure to expansive soils.					
Threshold (e): The Project would not install septic tanks or alternative wastewater disposal systems. Accordingly, no impact would occur.	No mitigation is required.	N/A	N/A	N/A	No Impact.
4.6 Greenhouse Gas Emissions					
Summary of Impacts					
Threshold a): The Project is calculated to generate approximately 18,515.33 MTCO2e annually, which would exceed the SCAQMD screening threshold of 10,000 MTCO2e for greenhouse gas emissions. As such, the Project would generate greenhouse gas emissions that could have a significant cumulatively considerable impact on the environment.	**Error! Reference source not found.** through **Error! Reference source not found.** above are applicable.				Significant and Unavoidable Cumulatively Considerable Impact.
Threshold b): The Project would be consistent with the CARB Scoping Plan and would not conflict with the greenhouse gas emission reduction mandates of	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
AB 32 or SB 32. In addition, the Project would be consistent with applicable regulations, policies, plans, and policy goals that would further reduce greenhouse gas emissions in California.					
4.7 Hazards and Hazardous Materials					
Summary of Impacts					
Thresholds a) and b): Construction and operation of the Project would involve the potential transport, use, and disposal of hazardous materials. However, during Project construction and operation, mandatory compliance to federal, state, and local regulations would ensure that the proposed Project would not create a significant hazard to the environment.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.
Threshold c): The nearest school to the Project site is the University of Phoenix-San Bernardino Learning Center which is located approximately 0.25 mile southeast of the Project site at 451 E. Vanderbilt Way #100 in the City of San Bernardino. The transport of hazardous substances or materials to-and-from the Project site during	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
construction and long-term operational activities would be required to comply with applicable federal, State, and local regulations to preclude substantial public safety hazards. With mandatory compliance with applicable hazardous materials regulations, the Project would not create a significant hazard associated with the emission of hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.					
Threshold d): The Project site is not listed on a list of hazardous materials sites pursuant to Government Code Section 65962.5	No mitigation is required.	N/A	N/A	N/A	No Impact.
Thresholds e) and f): Because the Project site is located approximately 2.0 miles southwest of the San Bernardino International Airport (SBIA) and is not in the direct flight path of airport operations, the Project would have no potential to affect SBIA flight operations and would not create an air operations safety hazard for future workers on-site. The Project has no potential to interfere with	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
operation of a private airstrip or heliport and would not create an air operations safety hazard for future workers on-site.					
Threshold g): The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route. During construction and long-term operation, adequate emergency access would be required to be provided for emergency vehicles. Accordingly, implementation of the Project would not impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.
Threshold h): The Project would not be developed in a Fire Hazards Zone and would not introduce wildfire hazards.	No mitigation is required.	N/A	N/A	N/A	No Impact.
4.8 Hydrology / Water Quality					
Summary of Impacts					
Threshold a): Mandatory compliance with the Project's Water Quality Management Plan (WQMP) and its best management practices (BMPs), the San Bernardino County's Municipal Storm Water Management	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Program and the National Pollutant Discharge Elimination System (NPDES) Permit, would ensure that the Project would not violate any water quality standards or waste discharge requirements during construction of the Project or long-term operation of the Project.					
Threshold b): The Project would not adversely affect the groundwater table. Stormwater runoff would be routed to a water quality/detention basin and the Santa Ana River, where percolation into the groundwater table would occur.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold c): The Project proposes to install a storm drain system to direct site runoff to a water quality/detention basin before discharge to the Santa Ana River that would reduce peak flow compared to existing conditions. In addition, the Project would be required to comply with best management practices (BMPs) specified in the Project's Water Quality Management Plan	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
(WQMP). As such, the Project would not result in substantial erosion or siltation on-or off-site.					
Threshold d): The Project proposes to install a storm drain system that would reduce peak flow discharge to the Santa Ana River compared to existing conditions. Thus, the proposed Project would not substantially increase the rate or amount of surface runoff in a manner that could result in flooding on- or off-site.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold e): The Project's proposed storm drain system is designed to direct on-site runoff to an on-site detention/water quality basin, from which water would be discharged into the Santa Ana River at a peak flow rate that is approximately 25% less than the peak flow rate under existing conditions. Water that runs onto the Project site under existing conditions from off-site is proposed to be routed around the Project site and not comingled with Project site runoff. In addition, the Project would be required to	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
comply with BMPs specified in the Project's WQMP. As such, the Project would not 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.					
Threshold f): There are no conditions associated with the proposed Project that would otherwise result in the substantial degradation of water quality beyond what is described in Thresholds (a) and (c).	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold g): The proposed Project does not include housing. Therefore, there is no potential for the Project to place housing within a 100-year flood hazard area.	No mitigation is required.	N/A	N/A	N/A	No Impact
Threshold h): The 100-year floodplain line is located adjacent to and south of the proposed building's truck trailer parking lot. In addition, the Project's proposed building pad would be constructed above the base flood elevation of the 100-year floodplain. Therefore,	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
the Project would not place structures within a 100-year flood hazard area which would impede or redirect flood flows.					
Threshold i): The proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of a levee or the Seven Oaks Dam.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.
Threshold j: The Project would not expose people or property to inundation by seiche, tsunami, or mudflow.	No mitigation is required.	N/A	N/A	N/A	No Impact
4.9 Land Use / Planning					
Summary of Impacts					
Threshold a): There are no components of the proposed Project that would result in the physical division of an established community. Therefore, no impact would occur as a result of the Project.	No mitigation is required.	N/A	N/A	N/A	No Impact.
Threshold b): The Project would be inconsistent with the growth projections for the Project site assumed by the *Final 2016 AQMP*, and the inconsistency would result in a significant environmental	MM 4.2-1 through MM 4.2-5 above are applicable.				Significant and Unavoidable Impact

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
impact due to long-term criteria pollutant emissions. Because the *Final 2016 AQMP* is a long-range plan intended to reduce impacts to the environment, the Project's inconsistency is regarded as a significant direct and cumulatively considerable land use/planning impact.					
Threshold c): Because no adopted habitat conservation plans are applicable to the Project site, the Project would not conflict with an adopted habitat conservation plan. Therefore, no impact would occur as a result of the Project.	No mitigation is required.	N/A	N/A	N/A	No Impact.
4.10 Noise					
Summary of Impacts					
Thresholds a), c), and d): Short-term construction-related noise would be less than significant. Stationary operational noise impacts would be less than significant. Off-site Project-related traffic noise impacts would be significant direct and cumulatively considerable for all analyzed traffic scenarios (Existing plus Project; Existing plus Ambient 2018; Existing plus Ambient Plus	**MM 4.10-1** Prior to approval of grading plans and/or issuance of building permits, plans shall include the following notes. The Project construction supervisor shall ensure compliance with the notes and the City shall conduct periodic inspection at its discretion. a) Noise-generating Project construction activities shall only occur between the hours of 7:00 a.m. and 8:00 p.m. on any day, as specified in the City of San	Project Proponent; Project Construction Supervisor	City of San Bernardino Community Development Department	Prior to the approval of grading plans and/or issuance of building permits.	Significant and Unavoidable Off-Site Traffic-Related Noise Impact

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Cumulative 2018; and Horizon Year 2040) for the one roadway segment identified as Washington Avenue south of Orange Show Road (ID #1) because the Project would increase the noise level by a perceptible amount at receiver locations. Under existing conditions, the properties adjacent to this roadway segment are non-conforming residential uses located on properties designated by the San Bernardino General Plan as "Industrial-Industrial Light (IL)."	Bernardino Noise Ordinance. b) The construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer's standards. c) No stationary construction equipment shall be placed within 500 feet of residential homes and other noise-sensitive receivers. The construction contractor shall place all stationary construction equipment so that the emitted noise is directed away from the noise-sensitive receivers nearest the Project site. d) The construction contractor shall locate equipment staging in the western portion of the property, near the western façade of the proposed building, which is the area that would create the greatest distance between the construction-related noise sources and noise-sensitive receivers nearest the Project site. e) The construction contractor shall schedule truck haul deliveries to occur during the hours specified for construction				

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	equipment by the City of San Bernardino Noise Ordinance (between the hours of 7:00 a.m. and 8:00 p.m. on any day) and the construction contractor shall design haul truck delivery routes to minimize the use of roads that pass by noise-sensitive land uses. **MM 4.10-2** Prior to the issuance of a building permit, the City of San Bernardino shall review the building plans to ensure that the following notes are included on the plans. In addition, prior to the issuance of a building permit, the Project's property owner shall provide documentation to the City of San Bernardino verifying that the provisions are made in the building's lease agreement that inform the user(s) of the following: a) All on-site operating equipment under control of the building user(s) that is used in outdoor areas shall be equipped with properly functioning and well-maintained mufflers. b) Quality pavement conditions shall be maintained on the property that are free of vertical deflection (no speed bumps are	Project Proponent; Project's Property Owner	City of San Bernardino Community Development Department	Prior to the issuance of a building permit.	

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	allowed) to minimize noise. c) The truck access gates and loading docks within the Project's truck court shall be posted with signs which state: 1) truck drivers shall turn off engines when not in use; 2) diesel trucks servicing the Project site shall not idle for more than five (5) minutes; and 3) in order for idling violations to be reported, telephone numbers of the building facilities managers shall be posted in a visible location.				
Threshold b): The proposed Project would not result in the exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels during the Project's short-term construction activities or during the long-term operation of the Project	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
Thresholds e) and f): The proposed Project would not expose people residing or working in the project area to excessive noise levels associated with a public airport or public use airport, private airstrip, or heliport.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
4.11 Transportation/ Circulation					
Summary of Impacts					
Threshold a): The Project would not cause any study area intersection to operate at unacceptable LOS; however, the Project would result in a cumulatively considerable impact at two intersections in the Horizon Year (2040) – the E Street / Auto Center Drive / Orange Show Road intersection and the Waterman Avenue / I-10 Westbound On-Ramp intersection – under Horizon Year (2040) traffic conditions, which are calculated to operate an unacceptable LOS with or without the addition of Project traffic.	**MM 4.11-1** Prior to issuance of building permits, the Project Applicant shall comply with the City of San Bernardino Development Impact Fee (DIF) program, which requires the payment of a fee to the City (less fee credits), a portion of which is applied to reduce traffic congestion by funding the installation of roadway improvements. **MM 4.11-2** Prior to issuance of an occupancy permit, the Project Applicant shall make a fair-share payment to the City of San Bernardino, to be held in trust, for the improvements to the E Street / Auto Center Road / Orange Show Road intersection improvements listed below. The required fair-share payment shall be in accordance with Table 1-4 of the "Gateway South Building 4 Traffic Impact Analysis" prepared by Urban Crossroads (dated April 6, 2017). The City of San Bernardino shall only use the funds for the purpose of implementing improvements to the E Street / Auto Center Road / Orange Show Road intersection listed below. If within five years of the date of collection of the Project's fair-share fee payment, the	Project Applicant Project Applicant	City of San Bernardino Community Development Department City of San Bernardino Community Development Department	Prior to issuance of building permits. Prior to issuance of an occupancy permit.	Significant and Unavoidable Cumulatively Considerable Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	City of San Bernardino has not completed the improvements or established a fair-share funding program for the specified improvements to the E Street / Auto Center Road / Orange Show Road intersection, then the City of San Bernardino shall return the funds to the Project Applicant. a) Re-stripe and lengthen the storage for the existing dual northbound left turn lanes; and b) Modify the traffic signal with overlap phasing on the eastbound right turn lane. **MM 4.11-3** Prior to issuance of an occupancy permit, the Project Applicant shall make a fair-share payment to the City of San Bernardino, to be held in trust, for the improvements to the Waterman Avenue / I-10 Westbound On-Ramp intersection improvements listed below. The required fair-share payment shall be in accordance with Table 1-4 of the "Gateway South Building 4 Traffic Impact Analysis" prepared by Urban Crossroads (dated April 6, 2017). The City of San Bernardino shall only use the funds for the purpose of implementing improvements to the Waterman Avenue / I-10 Westbound On-Ramp intersection listed below. If	Project Applicant	City of San Bernardino Community Development Department	Prior to issuance of an occupancy permit.	

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	within five years of the date of collection of the Project's fair-share fee payment, the City of San Bernardino has not completed the improvement or established a fair-share funding program for the specified improvements to the Waterman Avenue / I-10 Westbound On-Ramp intersection, then the City of San Bernardino shall return the funds to the Project Applicant. a) Install traffic signal. **MM 4.11-4** Prior to issuance of an occupancy permit, the Project Applicant shall make a fair-share payment to the City of San Bernardino, to be held in trust, for the improvements to the Waterman Avenue / Orange Show Road intersection improvements listed below. The required fair-share payment shall be in accordance with Table 1-4 of the "Gateway South Building 4 Traffic Impact Analysis" prepared by Urban Crossroads (dated April 6, 2017). The City of San Bernardino shall only use the funds for the purpose of implementing improvements to the Waterman Avenue / Orange Show Road intersection listed below. If within five years of the date of collection of the Project's fair-share fee payment, the City of San Bernardino has not completed the improvements or established a fair-share	Project Applicant	City of San Bernardino Community Development Department	Prior to issuance of an occupancy permit.	

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	funding program for the specified improvements to the Waterman Avenue / Orange Show Road intersection, then the City of San Bernardino shall return the funds to the Project Applicant. a) Install second northbound left turn lane; b) Install northbound right turn lane; c) Modify traffic signal to apply a railroad preemption.				
Threshold b): The Project would cumulatively contribute to a conflict with the San Bernardino CMP arterial roadway/intersection performance standards under Horizon Year (2040) traffic conditions at the E Street / Auto Center Drive / Orange Show Road intersection. The Project would not conflict with CMP performance standards related to the performance of freeway facilities under any analysis scenario.	MM 4.11-1 through MM 4.11-4 are applicable.	Project Applicant	City of San Bernardino Community Development Department	Prior to issuance of a building permit and an occupancy permit.	Significant and Unavoidable Cumulatively Considerable Impact.
Threshold c): The proposed Project does not include an air travel component and would not affect local air traffic levels. In addition, the Project would not introduce any physical features that	No mitigation is required.	N/A	N/A	N/A	No Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
would alter or obstruct air traffic patterns.					
Threshold d): The proposed Project would not substantially increase transportation safety hazards due to incompatible uses or design features.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.
Threshold e): Adequate emergency access would be provided to the Project site during both short-term construction and long-term operation. The Project would not result in inadequate emergency access to the site or surrounding properties.	No mitigation is required.	N/A	N/A	N/A	No Impact.
Threshold f): The Project is consistent with adopted policies and programs regarding public transit, bicycle, and pedestrian facilities, and is designed to minimize potential conflicts with non-vehicular means of transportation.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.
4.12 Utilities/Service Systems					
Summary of Impacts					
Threshold a): The proposed Project would not exceed the wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board (RWQCB). The	No mitigation is required.	N/A	N/A	N/A	No Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
San Bernardino Municipal Water Department (SBMWD) is required to operate all of its treatment facilities in accordance with applicable waste treatment and discharge standards and requirements as set forth by the RWQCB. The proposed Project would not install or use septic systems or alternative wastewater treatment systems.					
Threshold b): The existing San Bernardino Municipal Water Department (SBMWD) off-site water and sewer conveyance infrastructure are adequate to serve the proposed Project. Thus, the Project would not result in any physical impacts associated with off-site water or sewer infrastructure facilities.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.
Threshold c): Stormwater would be collected on the Project site by an on-site drainage system installed during the Project's construction. With the exception of on-site stormwater conveyance facilities, drains, and the water quality/detention basin, that would be installed during the Project's construction, the Project would not require or result in the construction	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
of new off-site storm water drainage facilities or expansion of existing facilities.					
Threshold d): San Bernardino Municipal Water Department (SBMWD) would provide wastewater treatment services to the Project site via the San Bernardino Water Reclamation Plant (WRF). The WRF has adequate capacity to service the proposed Project and no new or expanded facilities would be needed.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.
Threshold e): When the proposed Project's generation of wastewater is taken into consideration in addition to the San Bernardino Municipal Water Department's (SBMWD) existing commitments, the SBWMD Water Reclamation Plant (WRP) would have adequate capacity to serve the proposed Project.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.
Threshold f): The Mid-Valley Landfill has sufficient permitted capacity to accept the solid waste that would be generated by the proposed Project.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.
Threshold g): The Project would comply with all applicable federal, state, and local statutes and	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE AFTER MITIGATION
regulations related to solid waste and recycling.					

1.0 INTRODUCTION

1.1 PURPOSES OF CEQA AND THIS EIR

As stated by the California Environmental Quality Act (CEQA) Guidelines Section (§) 15002(a), the basic purposes of CEQA are to:

- *"Inform governmental decision makers and the public about the potential, significant environmental effects of proposed government actions"* (CEQA Guidelines § 15002(a)(1));

- *"Identify the ways that environmental damage can be avoided or significantly reduced"* (CEQA Guidelines § 15002(a)(2));

- *"Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible"* (CEQA Guidelines § 15002(a)(3)); and

- *"Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved."* (CEQA Guidelines § 15002(a) (4)."

This Environmental Impact Report is an informational document that represents the independent judgment of the City of San Bernardino (as the Lead Agency) and evaluates the physical environmental effects that could result from constructing and operating the proposed Alliance California Gateway South Building 4 project (hereafter the "Project"). Governmental approvals requested from the City of San Bernardino from the Project Applicant to implement the Project include General Plan Amendment 16-09 (GPA 16-09), Development Code Amendment (DCA16-11), Subdivision (SUB 16-08), Development Permit (DP-D16-026), and Variance (VAR16-03). These and other related discretionary and administrative actions that are required to construct and operate the Project are evaluated in this EIR.

As a first step in the CEQA compliance process, the City of San Bernardino completed an Initial Study pursuant to CEQA Guidelines § 15063 to determine if the Project could have a significant effect on the environment. The Initial Study determined that implementation of the Project has the potential to result in significant environmental effects, and a Project EIR, as defined by CEQA Guidelines § 15161, is required. Pursuant to CEQA Guidelines § 15161, a Project EIR should *"…focus primarily on the changes in the environment that would result from the development project,"* and *"…examine all phases of the project including planning, construction, and operation."*

Accordingly, and in conformance with CEQA Guidelines § 15121(a), the purposes of this Project EIR are to: (1) disclose information by informing public agency decision makers and the public generally, of the significant environmental effects associated with all phases of the Project, (2) identify feasible ways to minimize or avoid those significant effects, and (3) to describe a reasonable range of alternatives to the Project that would feasibly attain most of the basic Project objectives but would avoid or substantially lessen its significant environmental effects.

1.2 SUMMARY OF THE PROJECT EVALUATED BY THIS EIR

For purposes of this EIR, the term "Project" refers to the discretionary actions required to implement the Alliance California Gateway South Building 4 as proposed and all of the activities associated with its implementation including planning, construction, and ongoing operation of the Project. In summary, the Project proposes to develop an approximate 62.02-acre property with one high cube logistics warehouse building providing up to 1,063,852 s.f. of building area. The future building user(s) is not yet known. Associated improvements to the Project site would include driveways, vehicle drive aisles, auto and truck trailer parking, utility infrastructure, water quality basin, a Southern California Edison (SCE) transmission line easement (existing), landscaping, lighting, signage, and other associated improvements. In addition, interim roadway access improvements are proposed between the Project site and Orange Show Road. As a reasonable consequence of the Project, the City of San Bernardino is likely to require that the interim off-site roadway access be replaced in the future with a permanent roadway in a different alignment. As such, two options for a future permanent alignment are also evaluated in this EIR. As part of the Project, one existing on-site City of Riverside Public Utilities/Water Department (RPU) potable groundwater well, as well as the Rice-Thorne non-potable groundwater pipeline, would be abandoned and replaced/realigned on site. In addition, other on-site RPU facilities would be abandoned and protected in place. The Project also would vacate existing SCE easements and relocate power poles.

The Project Applicant proposes the following discretionary actions, which are under consideration by the City of San Bernardino:

- **General Plan Amendment (GPA16-09)** proposes to change the General Plan land use designation on the portion of the Project site designated "Open Space-Public/ Commercial Recreation (PCR) to "Industrial – Industrial Light (IL)" so that the entire Project site is designated "Industrial-Industrial Light (IL)."

- **Development Code Amendment (DCA16-11)** proposes to change the portion of the Project site currently zoned "Open Space – Public/Commercial Recreation (PCR)" to "Industrial - Industrial Light (IL)" so that the entire Project site is zoned "Industrial - Industrial Light (IL)."

- **Subdivision (SUB 16-08)** proposes to consolidate the site's existing parcels into one parcel through Tentative Parcel Map No. 19814 (TPM 19814)). TPM 19814 identifies the proposed locations of easements, right-of-way dedications, and on-site and off-site infrastructure improvements. Of note, TPM 19814 proposes interim off-site access improvements between the Project site and Orange Show Road in the form of an off-site private access easement. The easement would extend to Dumas Street, then north and east to existing Washington Avenue, then north to intersect with Orange Show Road. Interim roadway improvements would occur within this easement to provide ingress and egress between the Project site and Orange Show Road. Although not currently proposed and thus not shown on Figure 3-6 and Figure 3-7 in EIR Section 3.0, *Project Description*, as a reasonable consequence of the Project, the City of San Bernardino may require that the interim off-site roadway access be replaced in the future with a permanent roadway in a different alignment, extending from the Project site's northern boundary to Orange Show Road. As such, two options for a future permanent alignment are also evaluated in this EIR.

- **Development Permit (DP-D16-26)** proposes the construction of one high cube logistics warehouse building containing 1,063,852 s.f. of building area with 188 trailer dock doors (94 on the north side of the building and 94 on the south side of the building) and four (4) grade level doors (drive thru doors). Other improvements on the site would include approximately 1,171 parking stalls for auto and truck trailer parking, landscaping, a detention basin, lighting, and signage.

- **Variance (VAR16-03)** proposes to account for a possible 5-foot increase in the maximum permitted height of the building, including architectural projections, to a maximum height of 55 feet, whereas the City Development Code allows a maximum building height of 50 feet in the "Industrial - Industrial Light (IL)" zone.

Refer to EIR Section 3.0, *Project Description*, for a detailed description of the proposed Project, including a list of discretionary approvals and other permits and actions that would be required of the City of San Bernardino and other agencies to authorize the construction and operation the Project.

1.3 PRIOR CEQA REVIEW

The Project site was evaluated as part of the Final San Bernardino General Plan Update and Associated Specific Plans EIR (SCH No. 2004111132), dated September 30, 2005. The General Plan Update assumed full buildout of the Project site in accordance with the "Industrial-Industrial Light (IL)" and "Open Space-Public/Commercial Recreation (PCR)" land use designations applied by the General Plan. The Final San Bernardino General Plan Update and Associated Specific Plans EIR (SCH No. 2004111132) is herein incorporated by reference pursuant to CEQA Guidelines §

15150 and is available for review at the City of San Bernardino Community Development Department located at 600 North Arrowhead Ave., 3rd Floor, San Bernardino, CA. 92401.

1.4 LEGAL AUTHORITY FOR THIS EIR

This EIR has been prepared in accordance with all criteria, standards, and procedures of CEQA (California Public Resource Code § 21000 et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, § 15000 et seq.).

Pursuant to CEQA § 21067 and CEQA Guidelines Article 4 and § 15367, the City of San Bernardino is the Lead Agency under whose authority this EIR has been prepared. The definition of "Lead Agency" refers to the public agency that has the principal responsibility for carrying out or approving a project. Serving as the Lead Agency and before taking action to approve the Project, the City of San Bernardino has the obligation to: (1) ensure that this EIR has been completed in accordance with CEQA; (2) review and consider the information contained in this EIR as part of its decision making process; (3) make a statement that this EIR reflects the City of San Bernardino's independent judgment; (4) ensure that all significant effects on the environment are eliminated or substantially lessened where feasible; and, if necessary, (5) make written findings for each unavoidable significant environmental effect stating the reasons why mitigation measures or project alternatives identified in this EIR are not feasible and citing the specific benefits of the proposed Project that outweigh its unavoidable adverse effects (CEQA Guidelines §§ 15090 through 15093).

Pursuant to CEQA Guidelines §§ 15040 through 15043 and upon completion of the CEQA review process, the City of San Bernardino will have the legal authority to do any of the following:

- Approve the proposed Project;
- Require feasible changes in any or all activities involved in the Project in order to substantially lessen or avoid significant effects on the environment;
- Deny approval of the Project, if necessary, in order to avoid one or more significant effects on the environment that would occur if the Project was approved as proposed; or
- Approve the Project even through the Project would cause a significant effect on the environment if the City of San Bernardino makes a fully informed and publicly disclosed decision that: 1) there is no feasible way to lessen the effect or avoid the significant effect; and 2) expected benefits from the Project will outweigh significant environmental impacts of the Project.

This EIR fulfills the CEQA environmental review requirements for the proposed GPA16-09, DCA16-11, SUB16-08, DP-D16-26, VAR16-03, and all other governmental discretionary and administrative actions related to the Project.

1.5 RESPONSIBLE AND TRUSTEE AGENCIES

The California Public Resource Code (§ 21104) requires that all EIRs be reviewed by state responsible and trustee agencies (see also CEQA Guidelines § 15082 and § 15086(a)). As defined by CEQA Guidelines § 15381, *"the term 'Responsible Agency' includes all public agencies other than the Lead Agency which have discretionary approval power over the project."* A Trustee Agency is defined in CEQA Guidelines § 15386 as *"a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California."*

For the proposed Project, the San Bernardino Flood Control District is identified as Responsible Agency associated with their need to issue approvals for on- and off-site drainage infrastructure improvements. Southern California Edison (SCE) is a Responsible Agency in association with the proposed relocation of power poles and lines. In addition, the City of Riverside is identified as a Responsible Agency associated with their need to issue approvals for the decommission and relocation of water wells and associated infrastructure that currently exist on the Project site. The Santa Ana Regional Water Quality Control Board (RWQCB) is identified as a Trustee Agency that is responsible for the protection of the State's water resources. The Santa Ana RWQCB is responsible for issuance of a Construction Activity General Construction Permit, and issuance of a National Pollutant Discharge Elimination System (NPDES) Permit to ensure that during and after Project construction, on-site water flows do not result in siltation, other erosional actions, or degradation of surface or subsurface water quality.

1.6 EIR SCOPE, FORMAT, AND CONTENT

1.6.1 EIR SCOPE

As a first step in complying with the procedural requirements of CEQA, the City of San Bernardino prepared an Initial Study to preliminarily identify the environmental issue areas that may be adversely impacted by the Project. Following completion of the Initial Study, the City filed a Notice of Preparation (NOP) with the California Office of Planning and Research (OPR) (State Clearinghouse) to indicate that an EIR would be prepared to evaluate the Project's potential to impact the environment. The NOP was filed with the State Clearinghouse and distributed to Responsible Agencies, Trustee Agencies, and other interested parties on February 14, 2017, for a 30-day public review period. The City distributed the NOP for public review to solicit responses that may assist the City in identifying the full scope and range of potential environmental concerns associated with the Project so that these issues could be fully examined in this EIR. In addition, an EIR Scoping Meeting was held at the City of San Bernardino Council Chambers, City Hall on February 28, 2017, which provided members of the general public an additional opportunity to comment on the scope

and range of potential environmental concerns to be addressed in this EIR. No members of the general public attended the EIR Scoping Meeting.

Based on the information contained in the Initial Study and in consideration of all comments received by the City on the NOP and during the Scoping Meeting, this EIR evaluates the Project's potential to cause adverse effects to the following environmental factors:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology/Soils
- Greenhouse Gas Emissions
- Hazards & Hazardous Materials
- Hydrology/Water Quality
- Land Use/ Planning
- Noise
- Transportation/Circulation
- Utilities/Service Systems

The Initial Study, NOP, and written comments received by the City of San Bernardino during the NOP public review period are provided in *Technical Appendix A t*o this EIR. Substantive issues raised in response to the NOP are summarized below in Table 1-1, *Summary of NOP Comments*. The purpose of this table is to present the primary environmental issues of concern raised in comments submitted to the City of San Bernardino during the NOP review period. The table is not intended to list every comment received by the City during the NOP review period. Regardless of whether or not a comment is listed in the table, all applicable comments received in responses to the NOP are addressed in this EIR.

Table 1-1 Summary of NOP Comments

COMMENTER	DATE	COMMENTS	LOCATION IN EIR WHERE COMMENT IS ADDRESSED
California Department of Fish and Wildlife	March 15, 2017	– The EIR should assess the flora and fauna within and adjacent to the Project footprint, with particular emphasis on identifying rare, threatened, endangered and other sensitive species and their associated habitat.	Subsection 4.3, *Biological Resources*
		– The EIR should	Subsection 4.3, *Biological Resources*

		provide a discussion of the direct, indirect, and cumulative impacts expected to adversely affect biological resources as a result of the Project. – The EIR should include avoidance, minimization, and/or mitigation measures for all biological impacts that are expected to occur as a result of the Project.	Subsection 4.3, *Biological Resources*
City of Loma Linda, Community Development Department	February 15, 2017	– The City of Loma Linda requests the opportunity to review the Project's Traffic Impact Analysis to assess potential impacts within the city limits of Loma Linda.	Subsection 4.11, *Transportation/Circulation*
City of Redlands Development Services Department	March 15, 2017	– The City of Redlands requests the opportunity to review the Project's Traffic Impact Analysis, particularly in regard to any Project-related traffic along Mountain View Avenue, and at the border of the cities of San Bernardino and Redlands.	Subsection, 4.11, *Transportation/Circulation*
San Bernardino Department of Public Works	March 13, 2017	– The EIR should state that according to the most recent Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map,	Subsection 4.8, *Hydrology/Water Quality*

		the Project lies within Zones A, AE, X-shaded (500-year floodplain) and the Regulatory Floodway. – The EIR should document how the proposed Project will assess and mitigate potential direct, indirect, and cumulative impacts to Least Bell's vireo. – The EIR should assess rare plants surveys following the California Department of Fish and Wildlife protocols (2009) for the special status plants known to occur in the area.	Subsection 4.3, *Biological Resources* Subsection 4.3, *Biological Resources*
Southern California Association of Governments (SCAG)	March 15, 2017	– SCAG encourages the EIR to include a side-by-side comparison (in table format) of SCAG goals with discussions of the consistency, non-consistency or non-applicability of the goals and supportive analysis.	Subsection 4.9, *Land Use/Planning* and Subsection 4.11, *Transportation/Planning*
South Coast Air Quality Management District (SCAQMD)	March 3, 2017	– The SCAQMD recommends that the Project's air quality analysis be prepared in accordance with the criteria listed in the SCAQMD NOP Comment letter.	Subsection 4.2, *Air Quality*

		– In the event that the proposed Project generates significant adverse air quality impacts, the EIR should include all feasible mitigation measures that go beyond what is required by law.	Subsection 4.2, *Air Quality*
State of California Native American Heritage Commission (NAHC)	February 24,2017	– The NAHC recommends that the EIR consider the example mitigation measures provided in the NAHC letter that may be considered to avoid or minimize significant adverse impacts to Tribal Cultural Resources.	Subsection 4.4, *Cultural Resources*

The Lead Agency has not identified any issues of controversy associated with the proposed Project after consideration of all comments received in response to the NOP.

1.6.2 EIR FORMAT AND CONTENT

This EIR contains all of the information required to be included in an EIR as specified by the CEQA Statutes and Guidelines (California Public Resources Code, § 21000 et. seq. and California Code of Regulations, Title 14, Chapter 5). CEQA requires that an EIR contain, at a minimum, certain specified content. Table 1-2, *Location of CEQA Required Topics*, provides a quick reference in locating the CEQA-required sections within this document.

Table 1-2 Location of CEQA Required Topics

CEQA REQUIRED TOPIC	CEQA GUIDELINES REFERENCE	LOCATION IN THIS EIR
Table of Contents	§ 15122	Table of Contents
Summary	§ 15123	Section S.0
Project Description	§ 15124	Section 3.0
Environmental Setting	§ 15125	Section 2.0
Consideration and Discussion of Environmental Impacts	§ 15126	Section 4.0

CEQA REQUIRED TOPIC	CEQA GUIDELINES REFERENCE	LOCATION IN THIS EIR
Significant Environmental Effects Which Cannot be Avoided if the Proposed Project is Implemented	§ 15126.2(b)	Section 4.0 & Subsection 5.1
Significant Irreversible Environmental Changes Which Would be Caused by the Proposed Project Should it be Implemented	§ 15126.2(c)	Subsection 5.2
Growth-Inducing Impact of the Proposed Project	§ 15126.2(d)	Subsection 5.3
Consideration and Discussion of Mitigation Measures Proposed to Minimize Significant Effects	§ 15126.4	Section 4.0 & Table S-1
Consideration and Discussion of Alternatives to the Proposed Project	§ 15126.6	Section 6.0
Effects Not Found to be Significant	§ 15128	Subsection 5.5
Organizations and Persons Consulted	§ 15129	Section 7.0 & Technical Appendices
Discussion of Cumulative Impacts	§ 15130	Section 4.0
Energy Conservation	Appendix F	Subsection 5.4

In summary, the content and format of this EIR is as follows:

- **Section 1.0, *Introduction***, provides introductory information about the CEQA process and the responsibilities of the City of San Bernardino, serving as the Lead Agency of this EIR.

- **Section 2.0, *Environmental Setting***, describes the existing environmental setting, including descriptions of the Project site's physical conditions and surrounding context. The existing setting is defined as the condition of the Project site and surrounding area at the approximate date this EIR's NOP was released for public review (February 14, 2017).

- **Section 3.0, *Project Description***, serves as the EIR's Project Description for purposes of CEQA and contains a level of specificity commensurate with the level of detail proposed by the Project, including the summary requirements pursuant to CEQA Guidelines § 15123.

- **Section 4.0, *Environmental Analysis,*** provides an analysis of potential direct, indirect, and cumulative impacts that may occur with implementation of the proposed Project. A conclusion concerning significance is reached for each discussion; mitigation measures are presented as warranted. The environmental changes identified in Section 4.0 and throughout this EIR are referred to as "effects" or "impacts" interchangeably. The CEQA Guidelines also identify the terms "effects" and "impacts" as being synonymous (CEQA Guidelines § 15358). In the environmental analysis subsections of Section 4.0, the existing conditions are disclosed that are pertinent to the subject area being analyzed, accompanied by a specific analysis of physical impacts that may be caused by implementation of the proposed Project. The analyses are based in part upon technical reports that are appended to this EIR. Information also is drawn from other sources of analytical materials that directly or indirectly relate to the proposed Project and cited in Section 7.0, *References*. Where the analysis demonstrates that a physical adverse environmental effect may or would occur without undue speculation, feasible mitigation measures are recommended if available to reduce or avoid the significant effect. In most cases, implementation of the mitigation measures would reduce the adverse environmental impact to below a level of significance. If mitigation measures are not available or feasible to reduce an identified impact to below a level of significance, the environmental effect is identified as a significant and unavoidable adverse impact, for which a statement of overriding considerations would need to be adopted by the City of San Bernardino pursuant to CEQA § 15093.

- **Section 5.0, *Other CEQA Considerations***, includes specific topics that are required by CEQA. These include a summary of the Project's significant and unavoidable environmental effects, a discussion of the significant and irreversible environmental changes that would occur should the Project be implemented, an analysis of the Project's energy consumption, as well as potential growth-inducing impacts of the proposed Project. Section 5.0 also includes a discussion of the potential environmental effects that were found not be significant during this EIR's Initial Study and NOP process and that, therefore, do not require a detailed evaluation in this EIR.

- **Section 6.0, *Project Alternatives***, describes and evaluates potential alternatives to the proposed Project that could reduce or avoid the Project's adverse environmental effects, while still achieving the Project's objectives. CEQA does not require an EIR to consider every conceivable alternative to the Project but rather the consideration of a reasonable range of alternatives that will foster informed decision making and public participation. A range of four (4) Project Alternatives is presented in Section 6.0.

- **Section 7.0, *References***, cites all reference sources used in preparing this EIR and lists the agencies and persons that were consulted in preparing this EIR. Section 7.0 also lists the persons who authored or participated in preparing this EIR.

- **Technical Appendices.** CEQA Guidelines § 15147 states that the "*information contained in an EIR shall include summarized…information sufficient to permit full assessment of significant environmental impacts by reviewing agencies and members of the public,*" and that the *"placement of highly technical and specialized analysis and data in the body of an EIR shall be avoided."* Therefore, the detailed technical studies, reports, and supporting documentation that were used in preparing this EIR are bound separately as Technical Appendices. The Technical Appendices are available for review at the City of San Bernardino Community Development Department located at 300 N. D Street, 3rd Floor, San Bernardino, CA 92418, during the City's regular business hours and can be requested in electronic form by contacting the City's Community Development Department. The individual technical studies, reports, and supporting documentation that comprise the EIR's Technical Appendices are as follows:

Appendix A:	Initial Study, Notice of Preparation (NOP), and Written Comments on the NOP
Appendix B1:	Air Quality Impact Analysis
Appendix B2:	Mobile Source Diesel Health Risk Assessment
Appendix B3:	Site Access Alternatives Health Risk Assessment Memorandum
Appendix C1:	Habitat and Jurisdictional Assessment
Appendix D1:	Cultural Resources Assessment
Appendix D2:	Paleontological Resource Assessment
Appendix E1:	Geotechnical Feasibility Study
Appendix E2:	Results of Infiltration Study
Appendix F:	Greenhouse Gas Analysis
Appendix G1:	Phase I Environmental Site Assessment
Appendix H1:	Preliminary Hydrology Calculations
Appendix H2:	Water Quality Management Plan
Appendix I1:	Noise Impact Analysis
Appendix J1:	Traffic Impact Analysis
Appendix J2:	Site Access Alternatives Traffic Assessment Memorandum
Appendix K:	Water Supply Assessment
Appendix L:	Energy Analysis Report
Appendix M:	Written Correspondence

- **Documents Incorporated by Reference**. CEQA Guidelines § 15150 allows for the incorporation *"by reference all or portions of another document… [and is] most appropriate for including long, descriptive, or technical materials that provide general background but do not contribute directly to the analysis of a problem at hand."* Documents, analyses, and reports that are incorporated into this EIR by reference are listed in Section 7.0, *References*, of this EIR. The purpose of incorporation by reference is to assist the Lead Agency in limiting the length of an EIR. Where this EIR

incorporates a document by reference, the document is identified in the body of the EIR, citing the appropriate section(s) of the incorporated document and describing the relationship between the incorporated part of the referenced document and this EIR.

2.0 ENVIRONMENTAL SETTING

2.1 REGIONAL SETTING AND LOCATION

The Project site is located in the City of San Bernardino. The City of San Bernardino is located in the southwestern portion of San Bernardino County, which is surrounded by Los Angeles County, Orange County, Riverside County, Kern County, and Inyo County. The City of San Bernardino is located approximately 60 miles east of the City of Los Angeles at the base of the San Bernardino Mountains on the northeast and east, Blue Mountain and Box Springs Mountain abutting the cities of Loma Linda and Redlands to the south, and the San Gabriel Mountains and the Jurupa Hills to the northwest and southwest, respectively. The City is surrounded by the San Bernardino National Forest to the north, the cities of Highland to the east, and Redlands to the southeast, Loma Linda to the south, Colton to the southwest, and Rialto to the west. Arrowhead Springs is located north of the City of San Bernardino (City of San Bernardino, 2005a, p. 4-1).

Major freeways traversing the City of San Bernardino include State Route 259 (SR-259), SR-210, SR-330, SR-18, Interstate 215 (I-215) and I-10. The City of San Bernardino encompasses an area that stretches from I-10 on the south to the Cajon Creek Wash and the San Bernardino Mountains on the north (City of San Bernardino, 2005a p. 4-1).

The location of the Project site in a regional context is shown on Figure 3-1, *Regional Map,* of EIR Section 3.0, *Project Description.*

2.2 LOCAL SETTING AND LOCATION

The Project site includes San Bernardino Assessor Parcel Numbers (APNs): 0141-421-14, 0141-421-18, 0141-421-19, 0141-421-20, 0141-431-17, and 0141-431-18. The Project site is located on an approximately 62.02-acre property located south of Dumas Street and west of S. Waterman Avenue in the south-central portion of the City of San Bernardino, San Bernardino County, California. The Project site is located approximately 1.3 miles east of I-215 via existing roadways and approximately 0.50 miles north of I-10. A San Bernardino Flood Control Channel (hereafter, "East Twin Creek") is located adjacent to the western boundary of the Project site, and the Santa Ana River is located near the southern boundary of the Project site. The location of the Project site in a local context is shown in Figure 3-2, *Vicinity Map,* in EIR Section 3.0, *Project Description*.

2.3 SURROUNDING LAND USES AND DEVELOPMENT

Existing land uses in the immediate vicinity of the Project site are depicted on Figure 2-1, *Surrounding Land Uses and Development*, and summarized below.

North: Directly north of the Project site is a golf driving range. North of the driving range is land developed with scattered residences and the First Presbyterian Church and its associated infrastructure, all with access via E. Dumas Street. Located north of a small portion of the Project site is Dumas

Street. Dumas Street is currently an unimproved roadway. North of Dumas Street is vacant undeveloped land, S. Washington Avenue, land developed with scattered residential homes, truck trailer parking lots, S. Amos Street, and the Atchison, Topeka, and Santa Fe Railway (ATSF).

South: Located south of the Project site is the Santa Ana River and Wash. The San Timoteo Wash joins the Santa Ana River and Wash southeast of the Project site. South of the Santa Ana River and Wash and the San Timoteo Wash is the Santa Ana River Trail. South of the Santa Ana River Trail is land developed with office and commercial uses.

East: S. Waterman Avenue forms the eastern boundary of the Project site. East of S. Waterman Avenue are commercial and office uses and a portion of the Santa Ana River and Wash.

West: Located directly west of the Project site is East Twin Creek and an associated unpaved trail that traverses along the bank of the channel. West of East Twin Creek is the San Bernardino Water Reclamation Facility (WRF).

2.4 PLANNING CONTEXT

2.4.1 SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS (SCAG)

The Southern California Association of Governments (SCAG) is a Joint Powers Authority under California state law, established as an association of local governments and agencies that voluntarily convene as a forum to address regional issues. Under federal law, SCAG is designated as a Metropolitan Planning Organization (MPO) and under state law as a Regional Transportation Planning Agency and a council of governments. The SCAG region encompasses six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura) and 191 cities in an area covering more than 38,000 square miles. The agency develops long-range regional transportation plans including sustainable communities strategy and growth forecast components, regional transportation improvement programs, regional housing needs allocations and a portion of the South Coast Air Quality Management District (SCAQMD). (SCAG, 2017)

In addition to the six counties and 191 cities that make up SCAG's region, there are six County Transportation Commissions that hold the primary responsibility for programming and implementing transportation projects, programs and services in their respective counties (SCAG, 2017). On April 4, 2016, SCAG adopted the *2016-2040 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS)* with goals to: 1) align the plan investments and policies with improving regional economic development and competitiveness; 2) maximize mobility and accessibility for all people and goods in the region; 3) ensure travel safety and reliability for all people and goods in the region; 4) preserve and ensure a sustainable regional transportation system; 5) maximize the productivity of the transportation system; 6) protect the environment and health of SCAG residents by improving air quality and encouraging active transportation (e.g. bicycling and walking); 7) actively encourage and create incentives for energy efficiency, where possible; 8) encourage land use and growth patterns that facilitate transit and active transportation; and 9) maximize the security of the regional transportation

system through improved system monitoring, rapid recovery planning, and coordination with other security agencies (SCAG does not yet have an agreed-upon security performance measure). (SCAG, 2016a, p. 64)

The SCAG region is home to one of the largest clusters of logistics activity in North America. In 2015, the region had close to 1.2 billion square feet of facility space for warehousing, distribution, cold storage and truck terminals. Nearly 750 million square feet of this space, in 4,900 buildings, were facilities larger than 50,000 s.f. An estimated 10% of the occupied warehouse space served port-related users, while the remaining 90% supported domestic shippers. Many of these warehouses are clustered along key movement corridors. National and regional distribution facilities tend to be located in the Inland Empire. (SCAG, 2016a, p. 35)

A. SCAG's Regional Goods Movement System

SCAG refers to the region's network for moving goods as their "goods movement system," which relies on a complex infrastructure that supports multiple modes of transportation (SCAG, 2016b, p. 1). The goods movement system in the SCAG region is comprised of deep-water seaports (San Pedro Bay Ports (Ports of Los Angeles and Long Beach) and Heueme), land ports, air cargo facilities, railroads, warehouse and distribution centers, roads (including interstates, highways, and local roads) and a primary highway freight system (PHFS) that covers about 1,477 miles of highway in the SCAG region. In southwestern San Bernardino County, I-215, I-15, I-10, and SR-60 are identified as part of the PHFS. The goods movement system provides the backbone for the flow of goods between businesses and consumers. (SCAG, 2016b, pp. 2-4)

The SCAG region is a major gateway for international containers; over 32.5 percent of containers arriving to the U.S. from Asia move through the San Pedro Bay Ports and then out through the SCAG region. In addition, the movement of local and domestics freight through the SCAG region is dominant. An overwhelming majority of goods movement activity in the SCAG region is generated by local businesses moving goods to local customers and serving national domestic trade systems. These local goods movement-dependent industries rely on transportation as a key part of their business model, and generally utilize a more geographically dispersed transportation network than the international container market. About 85% of truck trips in the SCAG region are associated with intra-regional goods movement. (SCAG, 2016b, p. 11)

The SCAG *RTP/SCS* plans for continued growth in freight demands and regional truck-related activities. The *2016-2040 RTP/SCS* envisions a future system of truck-only lanes on the regional roadway network extending from the San Pedro Bay Ports to downtown Los Angeles along I-710, connecting to the SR-60 corridor and finally reaching I-15 in San Bernardino County. SCAG reports that truck-only lanes would add capacity in congested transportation corridors, improve truck operations and safety by separating trucks and autos, and provide a platform for the introduction and adoption of zero- and near zero-emission technologies. Evaluation of a regional freight corridor system is underway by SCAG. The *2016-2040 RTP/SCS* also allocates an estimated $5 billion toward goods movement bottleneck relief strategies, including the completion of capital improvements in congested

areas. SCAG is also pursuing rail strategies, intelligent transportation system strategies, zero-emission technologies, and other strategies to improve regional goods movement and lessen its impacts on the environment, as outlined in the *Goods Movement Appendix* to the *2016 -2040 RTP/SCS*. (SCAG, 2016b, pp. 11-84)

2.4.2 SAN BERNARDINO GENERAL PLAN

The prevailing planning document for the Project site and its surrounding area is the San Bernardino General Plan. As shown on Figure 2-2, *Existing General Plan Land Use Designations*, the General Plan designates the majority of the Project site for "Open Space-Public/Commercial Recreation (PCR)" with intended uses as intensive recreational uses, such as golf courses, sports complexes, and fair grounds, as approved through the public review process (City of San Bernardino, 2005a, Table LU-2) A small area in the northwest portion of the Project site is designated "Industrial-Industrial Light (IL)." The "Open Space-Public/Commercial Recreation (PCR)" land use designation is inconsistent with the Project's proposed warehouse use. Refer to EIR Section 4.9, *Land Use/Planning*, for a discussion of the Project's proposed General Plan Amendment (GPA) application.

2.4.3 ZONING

As shown on Figure 2-3, *Existing Zoning Designations*, the majority of the Project site is zoned "Open Space – Public/Commercial Recreation (PCR)" and a small area in the northwest portion of the Project site is zoned "Industrial - Industrial Light (IL)" by the City of San Bernardino. The "Open Space-Public/Commercial Recreation (PCR)" zoning designation is inconsistent with the Project's proposed warehouse use. Refer to EIR Section 4.9, *Land Use/Planning*, for a discussion of the Project's proposed Development Code Amendment application.

2.5 EXISTING PHYSICAL SITE CONDITIONS

2.5.1 LAND USE

As depicted on Figure 2-4, *Aerial Photograph*, under existing conditions, the majority of the Project site is developed and operating as the San Bernardino Public Golf Club with the physical address of 1494 S. Waterman Avenue, San Bernardino, CA. The 18-hole golf course comprises the majority of the central and southern portion of the site. The golf course contains a variety of ornamental landscaping including expansive grass lawns (fairways), mature trees and shrubs, golf cart trails, numerous sand pits, and four water features. The golf course is generally dominated by small hills and slopes as is typical for a golf course. Site improvements associated with the golf course are located north of the golf course and include a clubhouse/restaurant, parking lot, maintenance building, and two driving ranges. The first driving range is located on-site in the northwestern portion of the Project site and the second driving range is located off-site to the north of the Project site. The entry driveway for the golf course is accessible from S. Waterman Avenue and traverses the northeastern portion of the site to the golf course's parking lot in the northwest portion of the Project site. Several Southern California (SCE) transmission lines transect the central portion of the site from east to west.

2.5.2 AESTHETICS AND TOPOGRAPHIC FEATURES

The Project site is located within the City of San Bernardino, which contains gently sloping topography and is primarily urban in character. The low-lying valley is framed by the San Bernardino Mountains on the north and east, Blue Mountain and Box Springs Mountain to the south, and the San Gabriel Mountains and the Jurupa Hills to the northwest and southwest. The background views of the City of San Bernardino are dominated by the San Bernardino Mountains. (City of San Bernardino, 2005b, p. 5.1-1) The Project site is located in the low-lying south-central portion of the City and is not in close proximity to any of these scenic resources. The Santa Ana River is located to the south of the Project site and a segment of the Santa Ana River Trail follows the river corridor. The City's General Plan considers the Santa Ana River that meanders through the valley in the southern portion of the City to provide an aesthetically pleasing quality to the southern portions of the City (City of San Bernardino, 2005b, p. 5.1-8). As depicted on Figure 3-3, *USGS Topographic Map*, in EIR Section 3.0, *Project Description*, the Project site is situated at an elevation of approximately 1,000 feet above mean sea level (AMSL).

There are no State-designated scenic highways within the City of San Bernardino, or in the vicinity of the Project site. The nearest State-eligible scenic highway is State Route (SR) 38 (from east of South Fork Campground to State Lane) in the location of the San Bernardino Mountains. SR-38 is located approximately 6.0 miles east of the Project site.

Under existing conditions, the Project site contains artificial lighting associated with the public golf course currently located on the Project site. Numerous sources of lighting occur off-site in close proximity to the Project site. Light poles occur in association with S. Waterman Avenue, located along the eastern boundary of the Project site. Lighting also occurs in association with the Inland Regional Center and other development to the east of the Project site, as well as commercial development to the south of the Project site (south of the Santa Ana River), as well as the San Bernardino Water Reclamation Facility (WRF), located west of the Project site (west of East Twin Creek).

Refer to EIR Section 4.1, *Aesthetics,* for a detailed discussion of the Project site's aesthetics and topographic features.

2.5.3 AGRICULTURAL SETTING

According to maps pursuant to the Farmland Mapping and Monitoring Program (FMMP), the Project site contains lands classified as "Urban and Built Up Land" and does not contain any lands mapped by the California Department of Conservation as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) (State of California Department of Conservation, 2014a). Under existing conditions, the Project site is a public golf course and is not used for agricultural purposes.

2.5.4 AIR QUALITY AND CLIMATE

The Project site is located in the 6,745-square-mile South Coast Air Basin (SCAB), which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The

SCAB is bound by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The SCAB is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD), the agency charged with bringing air quality in the SCAB into conformity with federal and state air quality standards. As documented in the Project's air quality impact analysis (*Technical Appendix B1* to this EIR), although the climate of the SCAB is characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. More than 90% of the SCAB's rainfall occurs from November through April. Temperatures during the year range from an average minimum of 36°F in January to over 100°F maximum in the summer. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Ana[s]" each year.

Air quality within the SCAB is regulated by the SCAQMD and standards for air quality are documented in the SCAQMD's 2016 AQMP. Although air quality in the SCAB has improved over the past several decades, according to the SCAQMD, the SCAB currently does not meet National Air Quality Standards (NAAQS) attainment status for ozone (O_3) and particulate matter less than 2.5 microns ($PM_{2.5}$). The SCAB's designation for lead is currently nonattainment (partial) and the attainment determination is to be requested. The SCAB's California Ambient Air Quality Standards (CAAQS) designates O_3, $PM_{2.5}$, PM_{10} as nonattainment. (SCAQMD, 2016c)

Refer to EIR Sections 4.2, *Air Quality*, and 4.6, *Greenhouse Gas Emissions*, for a detailed discussion of the Project site's air quality and climate.

2.5.5 CULTURAL SETTING

Under existing conditions, the Project site is comprised of a public golf course with associated structures and infrastructure. According to the City's General Plan, no historic structures are identified as occurring on the Project site. The City's General Plan does not identify the Project site as an area of high archaeological sensitivity and no known archaeological or paleontological resources occur on the property. (City of San Bernardino, 2005b, p.5.4-8 and Figure 5.4-2). Archival and published reports suggest that the Project area is situated where the traditional use territories of the Serrano, Cahuilla, and Gabrielino meet, just southwest of the present-day city of San Bernardino (Applied EarthWorks, Inc., 2017a, p. 11).

Refer to EIR Section 4.4, *Cultural Resources*, for a detailed discussion of the site's cultural and paleontological resources.

2.5.6 GEOLOGIC SETTING

The Uniform Building Code (UBC) Seismic Zone Map divides the United States into zones of potential earthquake damage. The City of San Bernardino is located in Seismic Zone 4 defined as major damage caused by near-by fault movements. (City of San Bernardino, 2005b, p. 5.5-13) The City of San

Bernardino contains numerous strands of active faults that transverse the planning area, including the San Andreas and San Jacinto faults. The Alquist-Priolo Earthquake Fault Zones Act requires the State Geologist to establish Earthquake Fault Zones to encompass all potentially active fault traces of the San Andreas and San Jacinto Faults. The Earthquake Fault Zones boundaries extend approximately 500 feet away from major active faults and about 200 to 300 feet away from well-defined minor faults. Within the City of San Bernardino planning area, the San Andreas Fault system and the San Jacinto Fault system, including the Glen Helen and Loma Linda Faults, are included in these Special Studies Zones. (City of San Bernardino, 2005b, p. 5.5-16) According to General Plan Figure 5.5-5, *Alquist-Priolo Earthquake Fault Zones*, the Project site is not underlain by an Alquist-Priolo Fault although the site is in close proximity to the San Jacinto Fault System and an Alquist-Priolo Special Study Zone (City of San Bernardino, 2005b, Figure 5.5-5).

Refer to EIR Section 4.5, *Geology/Soils* for a detailed discussion of the Project site's geology and soils.

2.5.7 HYDROLOGIC SETTING

The Project site is located within the Santa Ana River Basin (Region 8). The Santa Ana River Watershed drains a 2,650 square-mile area and is the principal surface flow water body within the region. The Santa Ana River's headwaters are in the San Bernardino Mountains from which the River flows southwesterly for approximately 96 miles across San Bernardino, Riverside, Los Angeles, and Orange counties before spilling into the Pacific Ocean. The Santa Ana River has a number of tributaries in the vicinity of San Bernardino that contribute flow to the main stem of the River, including Lytle Creek, Waterman Canyon, Warm Creek, and East and West Twin Creek. The east branch of the California Aqueduct traverses the northwestern portion of the City. The City is in the Bunker Hill Groundwater Basin and receives recharge form the Santa Ana River, Mill Creek, and Lytle Creek. (City of San Bernardino, 2005a, p. 4-3) The Project site is located west of East Twin Creek Channel and north of the Santa Ana River.

According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM), a portion of the Project site is located within Zone X, an area of 0.2% annual chance of flood; area of 1% annual chance of flood with average depths of less than 1-foot with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

Refer to EIR Section 4.8, *Hydrology/Water Quality* for a detailed discussion of the Project site's hydrologic conditions.

2.5.8 NOISE SETTING

Several State routes and Interstates (SR-18, SR-210, SR-330, SR-66, I-10, and I-215), major arterials, railways and the San Bernardino International Airport (SBIA) are the major contributors of noise in the City of San Bernardino (City of San Bernardino, 2005a, p. 4-4) The Project site is located approximately 1.3 miles east of I-215 via existing roadways and approximately 0.50 miles north of I-10. The background ambient noise levels in the Project study area are dominated by the transportation-

related noise associated with the arterial roadway network that includes the auto and heavy truck activities on Orange Show Road and S. Waterman Avenue. Additional background noise sources in the Project study area include aircraft overflight noise from the SBIA.

Refer to EIR Section 4.10, *Noise,* for a detailed discussion of the Project site's noise conditions.

2.5.9 TRANSPORTATION AND TRAFFIC SETTING

The Project site is bound on the north by Dumas Street and on the east by S. Waterman Avenue. Under existing conditions the Project site is developed with a golf course with access available to the east from S. Waterman Avenue. Major freeways in the vicinity of the Project site include I-215 and I-10. As discussed above, the Project site is located approximately 1.3 miles east of I-215 via Orange Show Road and approximately 0.50 miles north of I-10 via S. Waterman Avenue.

Refer to EIR Section 4.11, *Transportation/Traffic*, for a detailed discussion of the Project site's transportation and traffic conditions.

2.5.10 UTILITIES AND SERVICE SYSTEMS

Under existing conditions no water or sewer connections are provided to the Project site. Active water wells owned and operated by the City of Riverside Public Utilities/Water Department (RPU) are present on the Project site under existing conditions.

Power poles exist near the western boundary of the Project site and an existing transmission tower is present in the northern portion of the Project site with transmission lines that traverse the northern portion of the Project site in an east to west direction. The Project site is located in the service area of the following additional utility providers: San Bernardino Municipal Water District (water), Southern California Edison (electric), Southern California Gas Company (gas), City of San Bernardino (sewer), and Verizon-Redlands (telephone/cable). A SCE transmission easement is present on the Project site under existing conditions.

Refer to EIR Section 4.12, *Utilities and Service Systems*, for a detailed discussion of the Project site's utilities and service systems.

2.5.11 VEGETATION AND WILDLIFE

Under existing conditions, a golf course with water features and associated infrastructure occur on the Project site. The golf course is composed of manicured grass lawns (fairways), sand traps, artificial ponds, and ornamental, landscaped plantings with intervening developed areas. The majority of the Project site is comprised of landscaped vegetation. This plant community is primarily composed of manicured lawns on the fairways and greens, with rows of ornamental/planted vegetation separating the fairways between each hole. Disturbed areas within the Project site have been exposed to routine anthropogenic (man-made) activities that have resulted in the growth of early successional and non-native weedy plant species. Developed areas within the Project site generally consist of paved,

impervious surfaces such as golf cart paths, a storage yard, the club house and parking lot. Park Center Circle is located within the northern portion of the project site and consists of a paved road. Four (4) artificial ponds are located within the boundaries of the Project site. These artificial ponds were constructed as water hazards for the golf course. (Michael Baker International, 2017, pp. 12-14)

The Santa Ana River borders the southern boundary of the Project site and East Twin Creek borders the western boundary of the Project site. East Twin Creek converges with the Santa Ana River southwest of the Project site, and the Santa Ana River is ultimately tributary to the Pacific Ocean. (Michael Baker International, 2017, ES-1) The San Bernardino General Plan identifies the Santa Ana River, that abuts the southern Project boundary as a Wildlife Corridor or Linkage. Although heavily constrained by development, the Santa Ana River supports natural habitats which allows wildlife to move through the region in search of food, shelter, or nesting habitat. (Michael Baker International, 2017, p. 16)

Refer to EIR Section 4.3, *Biological Resources*, for a detailed discussion of the Project site's biological resources.

Figure 2-1

SURROUNDING LAND USES AND DEVELOPMENT

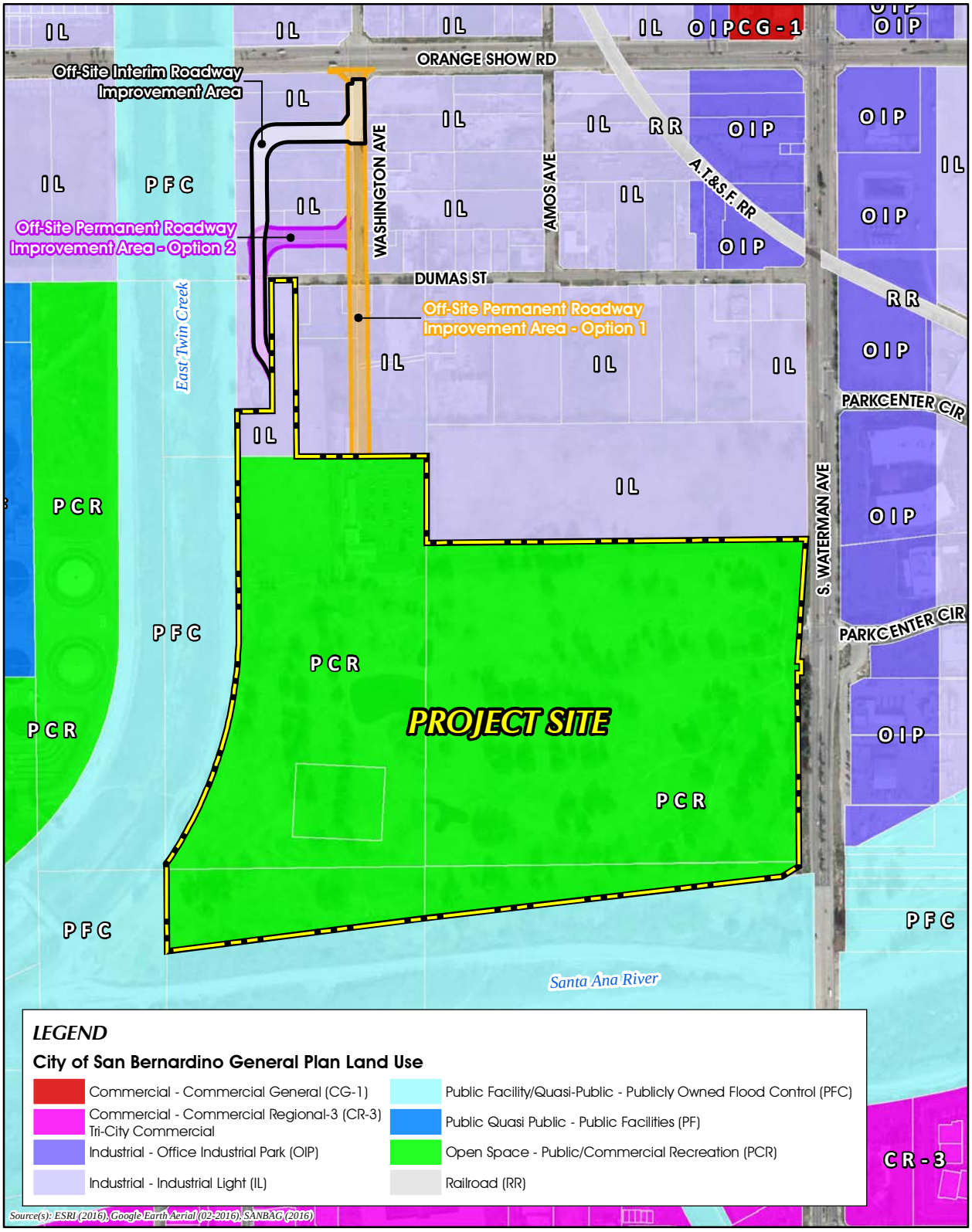


Figure 2-2
EXISTING GENERAL PLAN LAND USE DESIGNATIONS

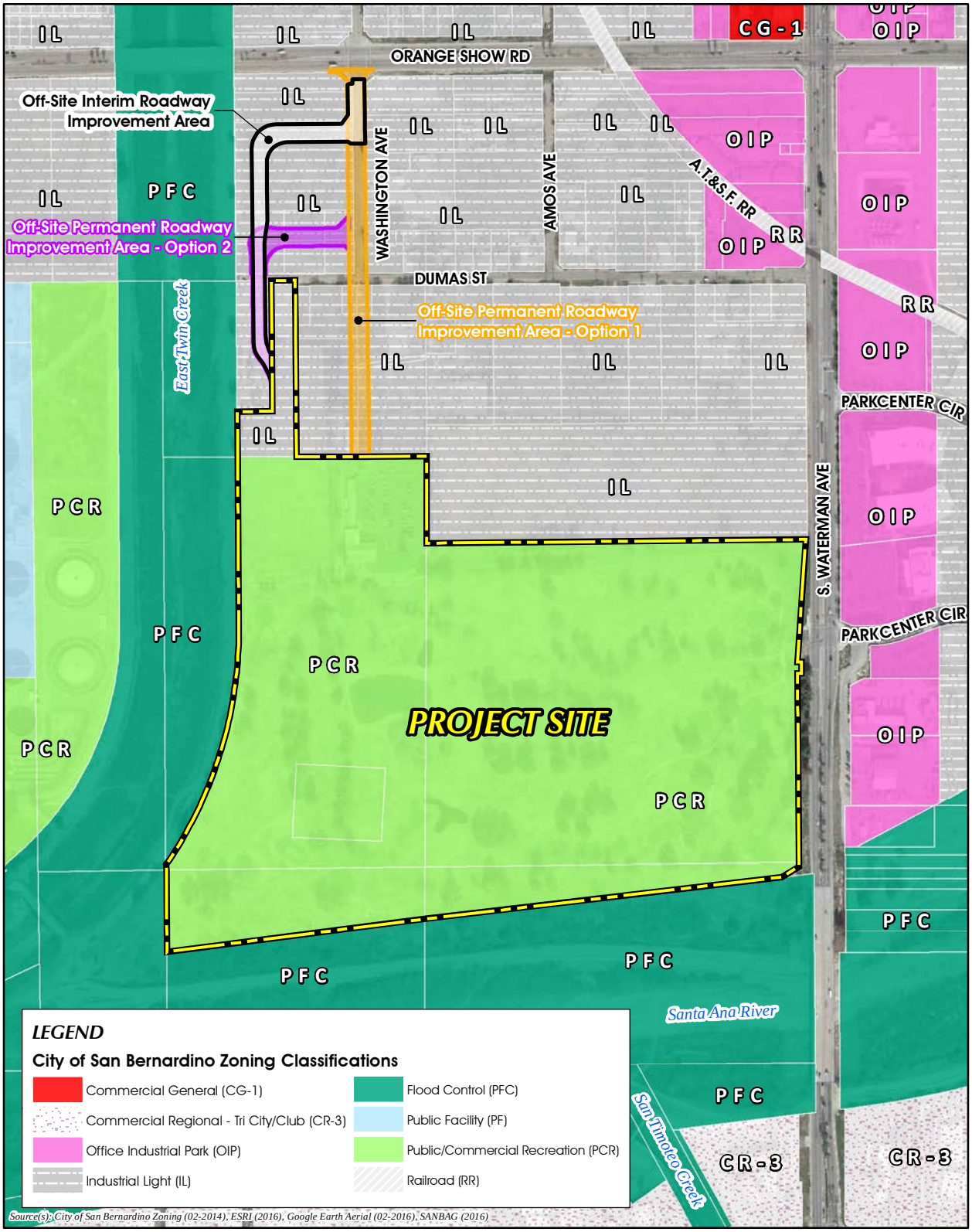


Figure 2-3

EXISTING ZONING DESIGNATIONS

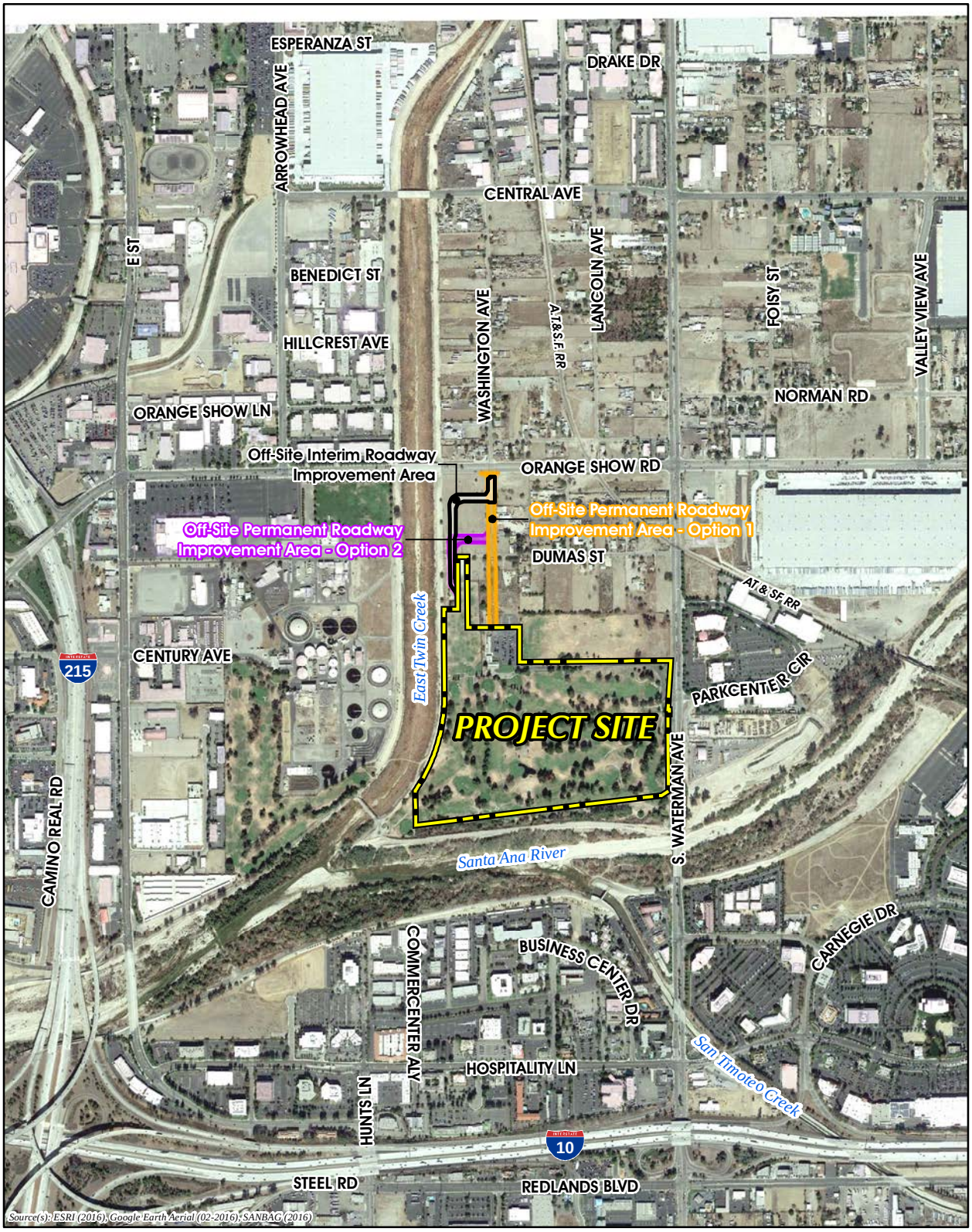


Figure 2-4

0 312.5 625 1,250 Feet

AERIAL PHOTOGRAPH

3.0 PROJECT DESCRIPTION

This Section provides all of the information required of an EIR Project Description by CEQA Guidelines § 15124, including a description of the Project's precise location and boundaries; a statement of the Project's objectives; a description of the Project's technical, economic, and environmental characteristics; and a description of the intended uses of this EIR, including a list of the governmental agencies that are expected to use this EIR in their decision-making processes, a list of the permits and approvals that are required to implement the Project, and a list of related environmental review and consultation requirements.

The Project site is approximately 62.02 acres. Under existing conditions, the majority of the Project site is developed with the San Bernardino Public Golf Club with the physical address of 1494 S. Waterman Avenue, San Bernardino, CA.

The proposed Project involves the demolition of existing structures and paved surfaces, and the construction and operation of one high cube logistics warehouse building having 1,063,852 square feet (s.f.) of interior floor space, 188 truck loading dock doors, and 1,171 auto and truck parking stalls. Associated improvements to the Project site would include truck courts and drive aisles, landscaping, a water quality/detention basin, utility infrastructure, lighting, signage, and other associated improvements. A Project driveway with access from S. Waterman Avenue is proposed near the northeast corner of the Project site. In addition, interim roadway access improvements are proposed off-site between the Project site and Orange Show Road. As a reasonable consequence of the Project, the City of San Bernardino is likely to require that the interim off-site roadway access be replaced in the future with a permanent roadway in a different alignment. As such, two options for a future permanent alignment are also evaluated in this EIR. As part of the Project, one existing on-site City of Riverside Public Utilities/Water Department (RPU) potable groundwater well, as well as the Rice-Thorne non-potable groundwater pipeline, would be abandoned and replaced/realigned on site. In addition, other on-site RPU facilities would be abandoned and protected in place. The Project also would vacate existing SCE easements and relocate power poles.

The Project Applicant is pursuing the Project on a speculative basis, meaning that the building's future user(s) is not yet identified. This EIR assumes that the building would operate 24-hours per day and be occupied by a high cube warehouse user as permitted by the City of San Bernardino's "Industrial - Industrial Light (IL)" land use and zoning designation (City of San Benardino, 2005a Table LU-2), which provides a realistic assessment of the potential environmental impacts that would occur once the Project is operational.

This EIR analyzes the physical environmental effects associated with all components of the Project, including planning, construction, and ongoing operation. Governmental approvals requested by the Project Applicant from the City of San Bernardino to implement the Project include a General Plan Amendment 16-09 (GPA16-09), Development Code Amendment (DCA16-11), Subdivision (SUB16-08), Development Permit (DP-D16-26), and Variance (VAR16-03). These applications, as submitted

to the City of San Bernardino by the Project Applicant are herein incorporated by reference and are available for review at the City of San Bernardino Community Development Department located at 600 North Arrowhead Avenue, 3rd Floor, San Bernardino, CA. 92401. Any and all other discretionary approvals that may be required of the City of San Bernardino or other governmental agencies to fully implement the Project are also within the scope of the proposed Project analyzed in this EIR.

3.1 PROJECT SITE LOCATION

As shown on Figure 3-1, *Regional Map*, Figure 3-2, *Vicinity Map*, and Figure 3-3, *USGS Topographic Map*, the Project site is approximately 62.02 acres, situated at an elevation of approximately 1,000 feet above mean sea level (ASML), and located south of Dumas Street and west of S. Waterman Avenue in the south-central portion of the City of San Bernardino, San Bernardino County, California. A detailed discussion of the Project site's location in a regional and local context is provided in EIR Section, 2.0, *Environmental Setting*.

3.2 STATEMENT OF PURPOSE AND PROJECT OBJECTIVES

The underlying purpose of the proposed Project is to facilitate the reuse of the San Bernardino Public Golf Club in the City of San Bernardino for commerce and employment-generating purposes. The following objectives are intended to achieve this underlying purpose:

A. To remove the existing San Bernardino Public Golf Club and expeditiously redevelop the property.

B. To redevelop the San Bernardino Public Golf Club property with an employment-generating use that is compatible with existing and planned industrial warehousing development found in the surrounding area.

C. To develop a logistics warehouse use that capitalizes on the transportation and locational strengths of San Bernardino.

D. To develop a logistics warehouse use that meets industry standards for modern, operational design criteria and can accommodate a wide variety of users.

E. To attract new employment-generating business to San Bernardino, thereby reducing the needs of the local workforce to commute outside of the area for employment.

F. To develop a logistics warehouse use that offers truck loading docks and truck trailer parking in close proximity to the regional transportation system in order to facilitate the efficient movement of goods as part of the southern California goods movement network.

G. To develop a high cube logistics warehouse use that is economically competitive with similar industrial warehouse buildings in the County of San Bernardino and the surrounding region.

H. To increase the amount of available industrial warehouse space in the City of San Bernardino to attract new businesses and jobs to the City.

3.3 PROJECT'S COMPONENT PARTS

The proposed Project consists of a proposal to develop one high cube logistics warehouse building, associated infrastructure, and site improvements, on the approximately 62.02-acre Project site. The principal discretionary actions required of the City of San Bernardino and other governmental agencies to implement the Project are described in detail on the following pages and are listed in Table 3-3, *Matrix of Project Approvals / Permits.*

3.3.1 GENERAL PLAN AMENDMENT (GPA16-09)

The City of San Bernardino General Plan designates the majority of the Project site as "Open Space-Public/Commercial Recreation (PCR)" and a small area in in the northwest portion of the Project site as "Industrial – Industrial Light (IL)." GPA16-09 proposes to change the General Plan land use designation on the portion of the Project site designated "Open Space - Public/Commercial Recreation (PCR)" to "Industrial – Industrial Light (IL)" so that the entire Project site is designated "Industrial - Industrial Light (IL)." Refer to Figure 3-4, *General Plan Amendment (GPA16-09*).

3.3.2 DEVELOPMENT CODE AMENDMENT (DCA16-11)

The majority of the Project site is zoned "Open Space – Public/Commercial Recreation (PCR)" and a small area in the northwest portion of the Project site is zoned "Industrial - Industrial Light (IL)" by the City of San Bernardino. DCA16-11 proposes to change the portion of the Project site currently zoned "Open Space – Public/Commercial Recreation (PCR)" to "Industrial - Industrial Light (IL)" so that the entire Project site is zoned "Industrial - Industrial Light (IL)" as shown on Figure 3-5, *Development Code Amendment (DCA16-11).*

3.3.3 SUBDIVISION (SUB16-08)

Subdivision (SUB16-08) proposes to consolidate the site's existing parcels into one parcel through Tentative Parcel Map 19814 (TPM 19814) as illustrated in Figure 3-6, *Tentative Parcel Map No. 19814 (SUB16-08) (Sheet 1 of 2)* and Figure 3-7, *Tentative Parcel Map No. 19814 (SUB16-08) (Sheet 2 of 2*). As illustrated on Figure 3-6 and Figure 3-7, TPM 19814 identifies the proposed locations of easements, right-of-way dedications, and on-site and off-site infrastructure improvements. TPM 19814 provides for a vehicular access driveway near the northeast corner of the Project site with access to/from S. Waterman Avenue. In addition, TPM 19814 proposes interim off-site access improvements between the Project site and Orange Show Road in the form of an off-site private access easement. The easement would extend to Dumas Street, then north and east to existing Washington Avenue, then north to intersect with Orange Show Road. Interim roadway improvements would occur within this easement to provide ingress and egress between the Project site and Orange Show Road. Although not currently proposed and thus not shown on Figure 3-6 and Figure 3-7, as a reasonable consequence of the Project, the City of San Bernardino may require that the interim off-site roadway access be replaced

in the future with a permanent roadway in a different alignment, extending from the Project site's northern boundary to Orange Show Road. As such, two options for a future permanent alignment are also evaluated in this EIR.

As identified on Figure 3-6 and Figure 3-7, TPM No. 19814 proposes the following easements:

- Thirty-foot wide dedication of Dumas Street to the City of San Bernardino for street and utility purposes.
- Ten-foot wide dedication on the east side of Washington Avenue to the City of San Bernardino for street and utility purposes.
- Ten-foot wide dedication on the west side of Washington Avenue to the City of San Bernardino for street and utility purposes.
- Varying width easement for private driveway access purposes granted by City of San Bernardino to the City of Riverside.
- Twenty-foot wide access road along the west and south boundaries of the Project site to provide third-party access to water wells on the site.

TPM No. 19814 would accommodate the Project's proposed high cube logistics warehouse building and its associated site and utility infrastructure improvements. A water quality/ detention basin would be installed in the southwest corner of the Project site. In addition, one existing on-site City of Riverside Public Utilities (RPU) potable groundwater well, as well as an existing segment of the on-site Rice-Thorne non-potable groundwater pipeline, would be abandoned and replaced/realigned on site. TPM 19814 would also protect other RPU assets in place as discussed in more detail in EIR Sections 4.8, *Hydrology/Water Quality* and 4.12, *Utilities/Service Systems*. As shown on Figure 3-8 *Conceptual Grading Plan (Sheet 1 of 3)*, soils would balance on-site and no import or export of soils would be required during the construction process.

As shown on Figure 3-8, the existing SCE easement in the northwest portion of the Project site and the SCE easements in the south central and southwest portion the Project site would be vacated. In addition, one 9-foot power pole near the western boundary of the Project site would be relocated.

As shown on Figure 3-9, *Conceptual Grading Plan (Sheet 2 of 3)*, in the off-site roadway improvement area, the Project would remove an existing 12-foot power pole and underground existing overhead wires (less than 65 kilovolts (KV)) from the east side of Washington Avenue and relocate the existing power pole to the west side of Washington Avenue closer to the intersection of Washington Avenue and Orange Show Road. The Project also would relocate an existing traffic signal and pull box that is present on the east side of Washington Avenue, to an area north and closer to the intersection of

Washington Avenue and Orange Show Road. In addition, the Project would remove and relocate an existing 18-foot wooden power pole on the east side of Dumas Street.

As a reasonable consequence of the proposed Project, the City of San Bernardino may require that the Project's proposed interim off-site roadway access be replaced in the future with a permanent roadway in a different alignment. As such, two possible future permanent alignments are also evaluated in this EIR. Option 1 would consist of widening Washington Avenue on its west side between Orange Show Road and Dumas Street to a right-of-way width of between 57 feet and 60 feet to accommodate 40 feet of pavement plus shoulders; then, extending Washington Avenue as a 60-foot right-of-way south of Dumas Street to the planned parking area at the northern portion of the Project site. The installation of all or some of these reasonably foreseeable future permanent roadway improvements has the potential to affect four (4) power poles and two (2) traffic signals on the west side of Washington Avenue, and the possible undergrounding of electrical lines along the east side of Washington Avenue. Also, two (2) existing residential structures located on the south side of Dumas Street near the current intersection of Dumas Street and Washington Avenue would be removed. Option 2 also would consist of widening Washington Avenue on its west side between Orange Show Road and approximately 80 feet north of existing Dumas Street to a right-of-way width of between 57 feet and 60 feet to accommodate 40 feet of pavement plus shoulders. At the southerly extent of the Washington Avenue improvements (approximately 80 feet north of Dumas Street), a 60-foot wide private street access easement containing 40 feet of pavement plus shoulders would be provided between Washington Avenue and the Project's proposed interim off-site access roadway. At this point, access to the Project site under Option 2 would make use of the interim access roadway alignment, which would narrow to a 30-foot wide roadway and extend to the planned parking area at the northern portion of the Project site. Under both Option 1 and Option 2, roadway improvement work to accomplish the permanent improvements would likely include clearing and grubbing, grading, subgrade excavation, and the installation of curb, gutter, and asphalt pavement/overlay on the streets. In addition, under both Option 1 and Option 2, a culvert would be proposed at Dumas Street to allow the stormwater flow to continue to flow easterly and catch basins would be installed north of Dumas Street to collect runoff in the street for water quality treatment while allowing the offsite flow to continue east via a culvert.

A. Public Roadway Improvements

S. Waterman Avenue is an existing north-south Major Arterial roadway abutting the eastern boundary of the Project site. E. Dumas Street is an existing east-west two-lane local street abutting a portion of the northern boundary of the Project site and Washington Avenue is an existing north-south local street running north from Dumas Street to the east-west running Orange Show Road. Orange Show Road is constructed to its full planned width, including four vehicular travel lanes. Figure 3-11, *Roadway Cross-Sections*, depicts the Project's proposed improvements to S. Waterman Avenue along the eastern frontage of the Project site and the proposed improvements to Washington Avenue.

B. Utility Infrastructure Plans

1. Water Service Facilities

Water service would be provided to the Project by the San Bernardino Municipal Water District (SBMWD). As shown on Figure 3-12, *Water Plan,* existing water lines are present beneath S. Waterman Avenue and east of the Project site adjacent to East Twin Creek (Flood Control Channel). In addition, a water line exists traversing the central portion of the Project site. As shown on Figure 3-12, the Project proposes to connect to the existing water lines beneath S. Waterman Avenue.

2. Wastewater Service Facilities

The City of San Bernardino would provide wastewater conveyance and treatment services to the proposed Project. As shown on Figure 3-13, *Sewer Plan,* an existing gravity sewer line is present beneath S. Waterman Avenue and an existing Santa Ana River Interceptor (SARI) sewer line that connects to the sewer line beneath S. Waterman Avenue, is present west of the Project site along the East Twin Creek Channel and north of the Project's proposed building. The SARI is a 23-mile long wastewater pipeline that extends from the Orange/San Bernardino County boundary just southwest of Prado Dam to the Orange County Sanitation District (OCSD) in Fountain Valley. Besides serving Orange County, the SARI also serves segments of Riverside and San Bernardino counties by conveying raw sewage and brine (wastewater from agriculture, commercial, industrial, and other sources) to OCSD's treatment plant. (OC Flood Division, 2017)

As shown on Figure 3-13, the Project proposes to construct a gravity sewer line beneath the north and east side of the building. This sewer line would connect to a force main sewer line that the Project would construct to connect to the existing sewer connection beneath S. Waterman Avenue.

3. Storm Drain Improvement Plan

The drainage system for TPM 19814 is depicted on Figure 3-14, *Storm Drain Improvement Plan.* As shown on Figure 3-14, there is an existing storm drain line beneath S. Waterman Avenue. The Project's stormwater flows would be captured by on-site storm drains and routed to a water/quality detention basin to be constructed in the southwest corner of the Project site. The water quality/detention basin would be designed to treat and temporarily detain stormwater to ensure that post-development discharge from the site is less than, or equal to, existing conditions. The water quality/detention basin would outlet to the Santa Ana River located south of the Project site.

3.3.4 DEVELOPMENT PERMIT (DP-D16-26)

According to City of San Bernardino Development Code Chapter 19.44 *Administrative and Development Permits*, a Development Permit, which is acted upon by the City's Development/Environmental Review Committee (D/ERC) is required for the proposed Project because the Project is a new non-residential use with more than 5,000 sq. ft. of building space. As shown on Figure 3-15, *Development Permit Site Plan (DP-D16-026),* DP-D16-26 proposes the construction of one high cube logistics warehouse building containing 1,063,852 s.f. of building area with 188 trailer

dock doors (94 on the north side of the building and 94 on the south side of the building) four (4) grade level doors (drive thru doors) and approximately 1,171 parking stalls for auto and truck parking. Other improvements on the site would include landscaping, a water quality/detention basin, lighting, and signage. The total building area of 1,063,852 s.f. is comprised of 5,000 s.f. of office space and 1,058,852 s.f. of warehouse space resulting in a maximum Floor-to-Area Ratio (FAR) of 0.75 as allowed by the "Industrial- Industrial Light (IL)" land use and zoning designation.

A. Architecture

As illustrated on Figure 3-16, *Architectural Elevations*, the proposed high cube logistics warehouse building would be constructed to a maximum height of approximately 44 feet above finished grade. The building would be constructed with painted concrete tilt-up panels and aluminum storefront framing with tempered glass at all doors. Articulated building elements, including clear-anodized mullions and metal canopies, are provided as decorative elements.

B. Conceptual Landscaping Plan

As illustrated on Figure 3-17, *Conceptual Landscape Plan*, the conceptual landscape plan prepared for the proposed Project indicates that trees, shrubs, and accents (groundcover) would be provided along the Project site's street frontage along Waterman Avenue and along the Project's driveway access north to Dumas Street. Landscaping also would be provided along the east and west sides of the building, within the parking area on the east side of the building, and along the Project site's southern boundary. A water quality/detention basin is proposed in the southwest corner of the Project site. The City of San Bernardino requires that at least 15% of the surface parking area of a development site be comprised of landscaping (72,162 s.f. in the case of the proposed Project). As shown on Figure 3-17, 373,568 s.f. of landscaping would be provided on the Project site. Prior to the issuance of a building permit, construction documents pertaining to the planting and irrigation of the Project site would be required to be submitted to the City of San Bernardino for review and approval, consistent with City of San Bernardino Development Code Chapter 19.28, *Landscaping Standards*, which establishes screening requirements and standards for parking areas, setback and parkway treatment standards, corner treatment standards, installation and maintenance of landscaping, removal or destruction of trees, erosion control landscaping, and water efficient landscaping.

3.3.5 VARIANCE (VAR16-03)

As illustrated on Figure 3-18, *Architectural Projections (Sheet 1 of 3)*, through Figure 3-20, *Architectural Projections (Sheet 3 of 3*), the proposed building would be constructed to a height of 44 feet above finished grade. The Project Applicant applied for a Variance (VAR16-03) to account for a possible 5-foot increase in the maximum permitted height of the building, including architectural projections, to a maximum height of 55 feet; whereas the City Development Code allows a maximum building height of 50 feet in the "Industrial - Industrial Light (IL)" zone. The height of the building will be determined and approved by the City of San Bernardino upon final Project design. For purposes of analysis in the EIR, a 55-foot high building is assumed, even though the actual final height may be shorter.

3.4 CONSTRUCTION CHARACTERISTICS

For purposes of analysis, the proposed Project is assumed to be operational in the Year 2018. As shown on Table 3-1, *Construction Duration*, the proposed Project would consist of demolition, site preparation, grading, building construction, applications of architectural coatings, and paving. The initial phase of construction activities would entail that the existing golf club structures and pavement debris be hauled off-site to a nearby recycling facility. The existing asphalt would be pulverized on-site and used for fill material and the existing concrete would be either crushed on-site or hauled to a nearby recycling plant. During typical construction activities, equipment is expected to operate on the Project site 8 hours per day, 5 days per week, during the permitted daytime hours of 7:00 a.m. to 8:00 p.m. per San Bernardino Municipal Code Section 8.54.70. Should construction activities need to occur at night (such as concrete pouring activities that require air temperatures to be lower than typically occur during the daytime hours), the Project Applicant would be required to obtain authorization for nighttime construction activities per San Bernardino Municipal Code Section 8.54.70. For purposes of analysis, the types and numbers of heavy construction equipment that the Project Applicant expects to be used during the proposed Project's construction activities are listed in Table 3-2, *Construction Equipment to be Used*.

Table 3-1 Construction Duration

Phase Name	Start Date	End Date	Days
Demolition	06/01/2017	07/12/2017	30
Site Preparation	07/13/2017	09/06/2017	40
Grading	09/07/2017	11/22/2017	55
Building Construction	11/23/2017	09/12/2018	210
Architectural Coating	09/13/2018	11/21/2018	50
Paving	11/22/2018	12/19/2018	20

(Urban Crossroads, Inc., 2017a, Table 3-2)

Table 3-2 Construction Equipment to be Used

Activity	Equipment	Number	Hours Per Day
Demolition	Concrete/ Industrial Saws	1	8
	Excavators	1	8
	Rubber Tired Dozers	1	8
	Water Truck	1	8
Site Preparation	Water Trucks	2	8
	Rubber Tired Dozer	2	8
	Graders	1	8
	Tractors/Loaders/Backhoes	1	8
Grading	Water Trucks	2	8
	Scraper	8	8
	Grader	1	8
	Rubber Tired Dozer	2	8
	Tractors/Loaders/Backhoes	2	8
Building Construction	Welder	2	8
	Forklift	5	8
	Generator Sets	2	8
	Water Trucks	1	8
	Cranes	2	8
Paving	Pavers	2	8
	Rollers	2	8
	Paving Equipment	2	8
	Water Trucks	1	8
Architectural Coatings	Air Compressor	2	8

(Urban Crossroads, Inc., 2017a, Table 3-3)

B. City of Riverside Public Utilities (RPU) Facilities

As part of the Project, one existing on-site RPU potable groundwater well, as well as the Rice-Thorne non-potable groundwater pipeline, would be abandoned and replaced/realigned on site. In addition, other on-site RPU facilities would be abandoned and protected in place.

The RPU is proposing to abandon and replace the existing Warren 4 well and approximately 1,250 linear feet (LF) of the existing Rice-Thorne pipeline in the Warren Tract within the City of San Bernardino that are located within the limits of the Project site. A new well (Warren 4) and a realigned section of 24-inch Rice-Thorne pipeline would be constructed as part of the proposed Project. The existing Warren 4 well is part of the Waterman system which produces potable water out of the Bunker Hill Basin. The existing 18-inch/30-inch diameter Rice-Thorne irrigation pipeline conveys non-potable groundwater form the Bunker Hill Groundwater Basin to the Riverside Canal.

Other RPU wells that are present within the Project site include the Thorne 5 (non-potable, inactive), Thorne 6 (non-potable, inactive), Thorne 7 (non-potable inactive), Thorne 8 (non-potable, inactive), Thorne 9 (monitoring, active), Thorne 10 (non-potable, active), Thorne 11 (non-potable, active), Thorne 12 (potable, active), Warren 2 (potable, inactive), Warren 3 (potable, inactive), and Warren 4 (potable, active) wells. Also, located on the Project site are segments of the Thorne pipeline (supply main, active), Warren 3 and 4 pipeline (supply main, active), and the Rice-Thorne Pipeline (non-potable TM). Refer to EIR Subsection 4.12, *Utilities/Service Systems*, for a more detailed discussion of on-site RPU facilities.

3.4.2 OFF-SITE IMPROVEMENTS

As shown on Figure 3-9, *Conceptual Grading Plan (Sheet 2 of 3)*, interim roadway access improvements are proposed between the Project site and Orange Show Road. The Project proposes a 40-foot private street access which will widen to 50-feet prior to the street turning east and then to 60-feet before it connects to existing Washington Avenue that connects to Orange Show Road. As part of this access improvement, the existing traffic signal and pull boxes would be relocated at the intersection of Washington Avenue and Orange Show Road.

As also shown on Figure 3-9, as part of the interim roadway access improvements, Project construction activities would include storm drains, gravity walls, curbs, and catch basins for drainage purposes. In addition, an existing 12-foot power pole and underground existing overhead wires would be removed from the eastern side of Washington Avenue and would be replaced on the western side of Washington Avenue near the intersection of Washington Avenue and Orange Show Road.

As a reasonable consequence of the proposed Project, the City of San Bernardino may require that the Project's proposed interim off-site roadway access be replaced in the future with a permanent roadway in a different alignment. As such, two possible future permanent alignments are also evaluated in this EIR. Option 1 would consist of widening Washington Avenue on its west side between Orange Show Road and Dumas Street to a right-of-way width of between 57 feet and 60 feet to accommodate 40 feet of pavement plus shoulders; then, extending Washington Avenue as a 60-foot right-of-way south of Dumas Street to the planned parking area at the northern portion of the Project site. The installation of all or some of these reasonably foreseeable future permanent roadway improvements has the potential to affect four (4) power poles and two (2) traffic signals on the west side of Washington Avenue, and the possible undergrounding of electrical lines along the east side of Washington Avenue. Also, two (2) existing residential structures located on the south side of Dumas Street near the current intersection

of Dumas Street and Washington Avenue would be removed. Option 2 also would consist of widening Washington Avenue on its west side between Orange Show Road and approximately 80 feet north of existing Dumas Street to a right-of-way width of between 57 feet and 60 feet to accommodate 40 feet of pavement plus shoulders. At the southerly extent of the Washington Avenue improvements (approximately 80 feet north of Dumas Street), a 60-foot wide private street access easement containing 40 feet of pavement plus shoulders would be provided between Washington Avenue and the Project's proposed interim off-site access roadway. At this point, access to the Project site under Option 2 would make use of the interim access roadway alignment, which would narrow to a 30-foot wide roadway and extend to the planned parking area at the northern portion of the Project site. Under both Option 1 and Option 2, roadway improvement work to accomplish the permanent improvements would likely include clearing and grubbing, grading, subgrade excavation, and the installation of curb, gutter, and asphalt pavement/overlay on the streets. In addition, under both Option 1 and Option 2, a culvert would be proposed at Dumas Street to allow the stormwater flow to continue to flow easterly and catch basins would be installed north of Dumas Street to collect runoff in the street for water quality treatment while allowing the offsite flow to continue east via a culvert.

3.5 OPERATIONAL CHARACTERISTICS

At the time this EIR was prepared, the future user(s) of the proposed high cube logistics warehouse building was unknown. During long-term operating conditions, the Project is estimated to generate a net total of approximately 2,941 passenger equivalent (PCE) trip ends per day, of which 1,834 are estimated to be truck trips and 1,107 are estimated to be passenger cars (Urban Crossroads, Inc. , 2016e, Table 4-2) (refer to EIR Section 4.11, *Transportation / Circulation*, for more detail).

For purposes of analysis in this EIR, the building is assumed to be operational 24 hours per day, seven days a week, with exterior loading and parking areas illuminated at night. The building would be designed such that business operations are conducted primarily within the enclosed building, with the exception of parking, traffic movement, and the loading and unloading of truck trailers at loading dock doors. The outdoor cargo handling equipment (CHE) used during loading and unloading of trailers (e.g., yard trucks, hostlers, yard goats, pallet jacks, forklifts, and other on-site equipment) would be powered by non-diesel-fueled engines (electric or natural gas) and all on-site indoor forklifts would be powered by electricity.

Because the user(s) of the Project's building is not yet known, the number of jobs that the proposed Project would generate cannot be precisely determined; therefore, for purposes of analysis, employment estimates were calculated using the San Bernardino General Plan's Square Feet/Employee Factor. Per the General Plan, employment for commercial, industrial, and office land uses are calculated by dividing the total number of building square feet by the SF/Employee factor. The SF/Employee factor for Light Industrial (IL) is 1,500. Therefore, because the building is proposed to be 1,063,852 s.f., the number of employees calculated to be generated by the proposed Project would be approximately 709 (1,063,852 ÷ 1,500 =709). (City of San Benardino, 2005a, Appendix 5, Methodology Report)

Based on typical usage rates for industrial warehouse buildings, the Project is estimated to result in an indoor water demand of 88 gallons per minute (gpm) or 142 acre-feet per year (ac-ft/yr), and an outdoor water demand of 40 gpm or 65 ac-ft/yr, for a total demand of 128 gpm or 201 ac/ft/yr. The Project is estimated to demand 3,346,564 kilowatt hours of electricity per year (kWh/yr) and 2,076,520 kilo-British Thermal Energy Units of natural gas per year (kBTU/yr.)

3.6 STANDARD REQUIREMENTS AND CONDITIONS OF APPROVAL

The proposed Project (GPA16-09, DCA16-11, SUB16-08, DP-D16-26, and VAR 16-03) and its technical aspects were reviewed in detail by the City of San Bernardino Community Development Department Planning Division and the Building and Safety Division. Review of the proposed Project by these divisions will result in a comprehensive set of draft Conditions of Approval that will be available for public review prior to consideration of the proposed Project for approval by the City of San Bernardino. Conditions of Approval and other applicable regulations, codes, and requirements to which the Project is required to comply that result in the reduction or avoidance of an environmental impact are specified in each Subsection of EIR Section 4.0, *Environmental Analysis.*

3.7 SUMMARY OF ACTIONS REQUESTED OF THE CEQA LEAD AGENCY

The City of San Bernardino has primary approval responsibility for the proposed Project. As such, the City of San Bernardino serves as the Lead Agency for this EIR pursuant to CEQA Guidelines §15050. The role of the Lead Agency was previously detailed in EIR Section 1.0, *Introduction*.

The Development and Environmental Review Committee (D/ERC) is a City staff committee responsible for technical review of projects. The D/ERC is made up of representatives from the Police Department; Fire Department; Water Department; Public Works Department; and the Land Development, Building & Safety; and Planning Divisions of the Community Development Department. The City Planning Commission will consider the Project's requested discretionary permit applications and approvals and make recommendations on the Project to the City Council. The City Council will consider the information contained in this EIR and this EIR's Administrative Record in its decision-making processes. Upon approval of the Project and certification of this EIR, the City will subsequently conduct administrative reviews and grant ministerial permits and approvals to implement Project requirements and Conditions of Approval. A list of the primary actions under City jurisdiction is provided in Table 3-3, *Matrix of Project Approvals / Permits*.

3.8 RELATED ENVIRONMENTAL REVIEW AND CONSULTATION REQUIREMENTS

Should the City of San Bernardino approve the Project and certify the Final EIR, additional discretionary and/or administrative actions would be necessary to implement the proposed Project. Table 3-3 list the agencies that are expected to use this EIR and provides a summary of the subsequent actions associated with the Project. This EIR covers all federal, state, and local government and quasi-governmental approvals which may be needed to construct and implement the Project, whether or not they are explicitly listed in Table 3-3 or elsewhere in this EIR (CEQA Guidelines § 15124 (d)).

Table 3-3 Matrix of Project Approvals / Permits

PUBLIC AGENCY	APPROVALS AND DECISIONS
City of San Bernardino	
Proposed Project-City of San Bernardino Discretionary Approvals	
Development and Environmental Review Committee (D/ERC)	• Provide recommendations to the San Bernardino Planning Commission and City Council whether to approve Subdivision (SUB16-08), Development Permit (DP-D16-026), General Plan Amendment (GPA16-09), Development Code Amendment (DCA16-11) and Variance (VAR16-03). • Provide recommendations to the San Bernardino Planning Commission whether to approve this EIR.
City of San Bernardino Planning Commission	• Recommend that City Council approve, conditionally approve, or deny Subdivision (SUB16-08), Development Permit (DP-D16-026), General Plan Amendment (GPA16-09), Development Code Amendment (DCA16-11), and Variance (VAR16-003). • Recommend that City Council reject or certify this EIR with appropriate CEQA Findings.
City of San Bernardino City Council	• Approve, conditionally approve, or deny Subdivision (SUB16-08), Development Permit (DP-D16-026), General Plan Amendment (GPA16-09), Development Code Amendment (DCA16-11) and Variance (VAR16-03). • Reject or certify this EIR along with appropriate CEQA findings.
Subsequent City of San Bernardino Discretionary and Ministerial Approvals	
City of San Bernardino Implementing Approvals	• Approval of Final maps, parcel mergers, or parcel consolidations, as may be appropriate. • Approval of Conditional or Temporary Use Permits, if required. • Approval of water, sewer, and storm drain plans. • Issuance of Grading Permits. • Issuance of a Building Permit. • Approval of road improvement plans. • Issuance of encroachment permits. • Acceptance of dedications.
Other Agencies – Subsequent Approvals and Permits	
Santa Ana Regional Water Quality Control Board (RWQCB)	• Issuance of a Construction Activity General Construction Permit (MS4). • Issuance of a National Pollutant Discharge Elimination System (NPDES) Permit.
San Bernardino Flood Control District	• Approvals for on-and off-site drainage infrastructure.
City of Riverside	• Approvals for one existing on-site City of Riverside Public Utilities (RPU) potable groundwater well, as well as the Rice-Thorne non-potable groundwater pipeline, to be abandoned and replaced/realigned on site.
Southern California Edison (SCE)	• Approval for abandonment of existing SCE easements, relocation of power poles, and undergrounding of existing above-ground SCE transmission lines

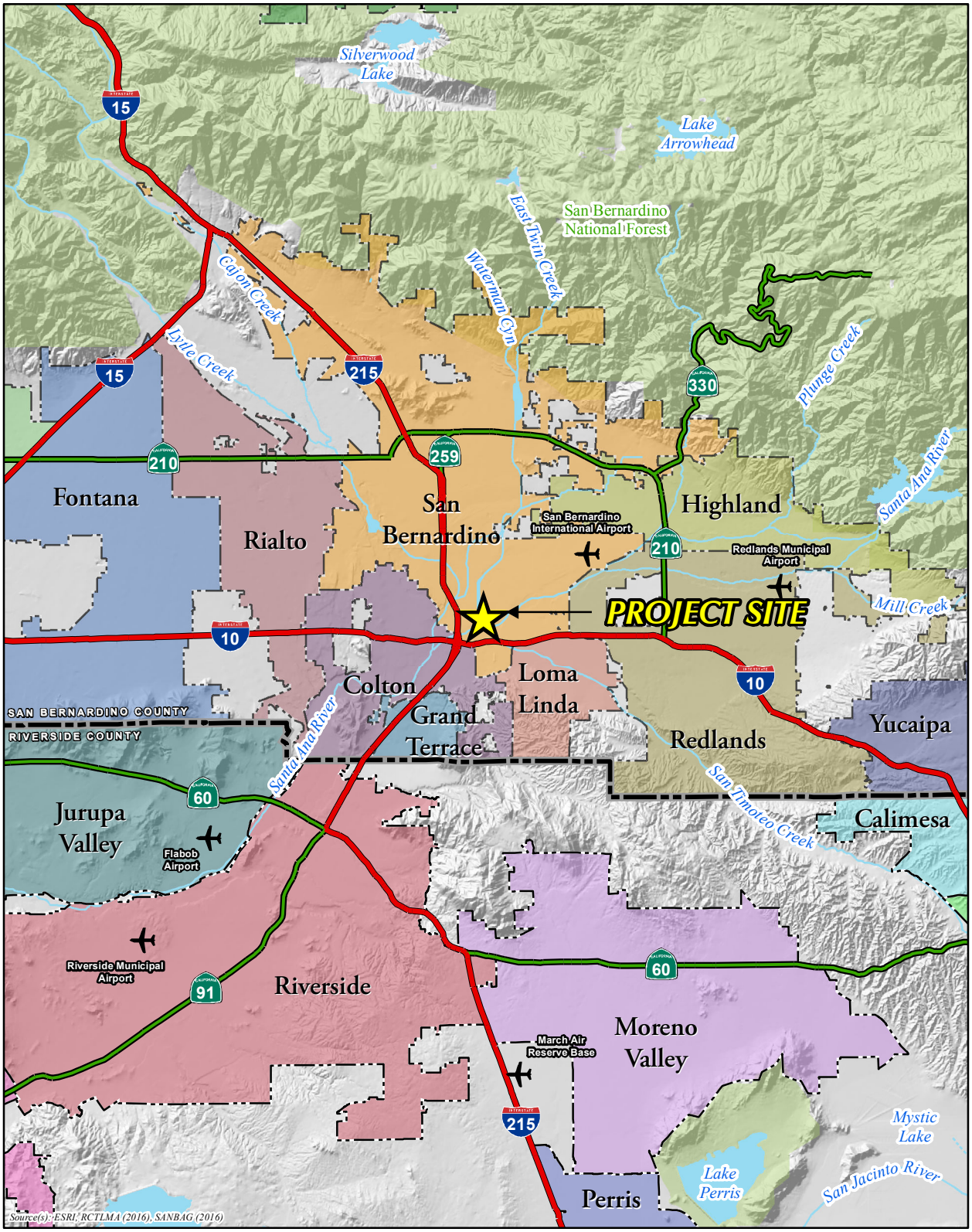


Figure 3-1

REGIONAL MAP

Figure 3-2

VICINITY MAP

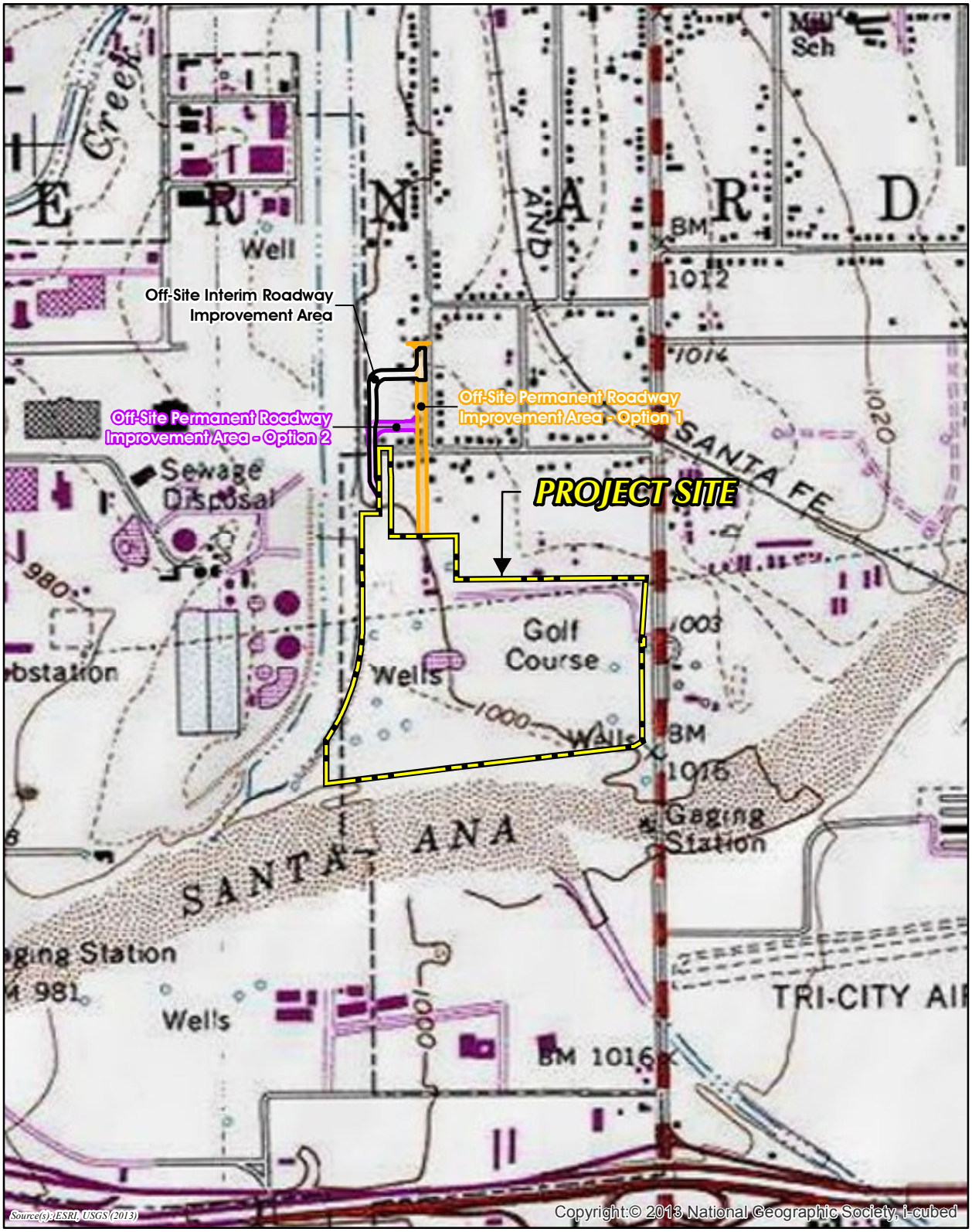
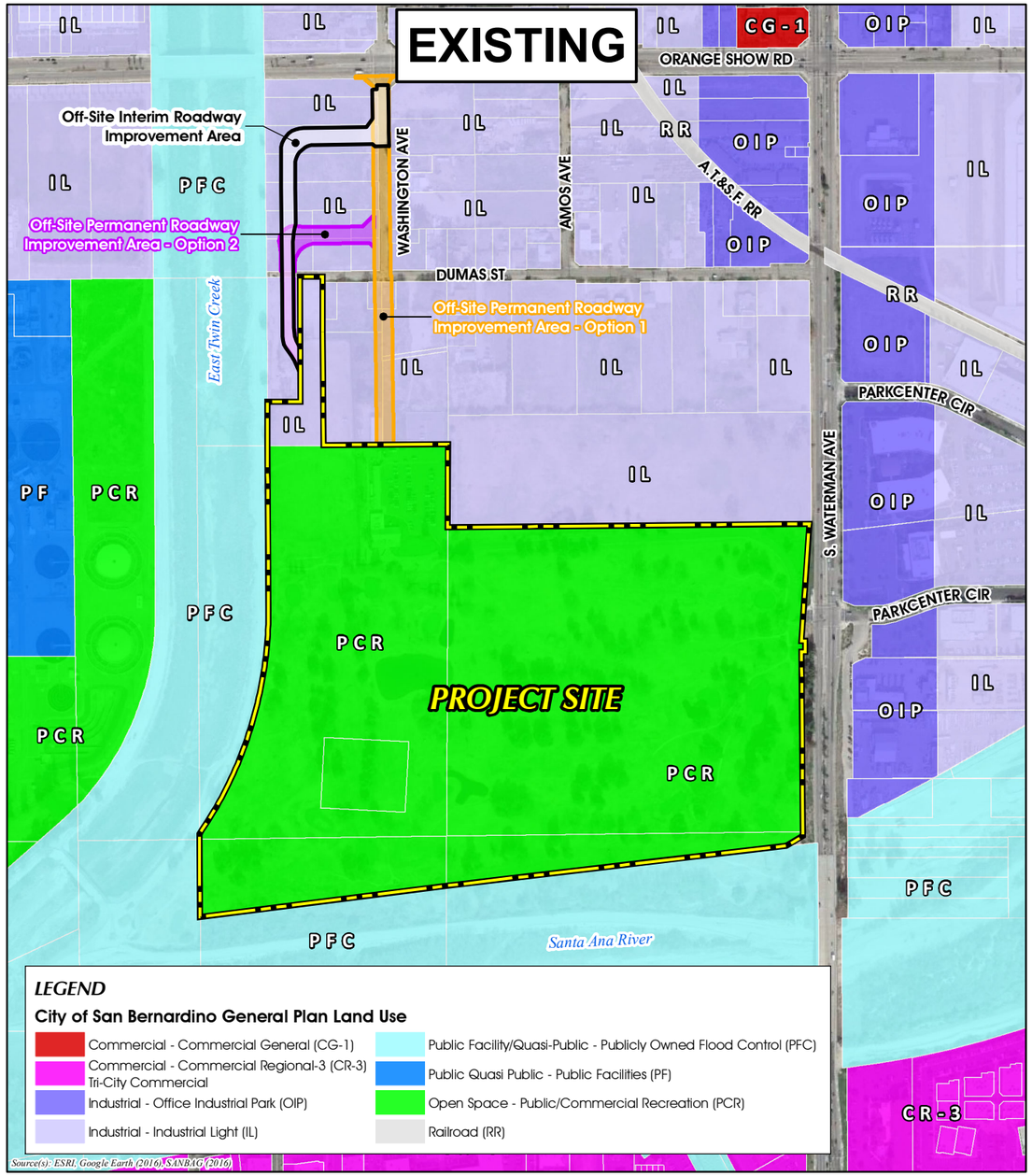


Figure 3-3

USGS TOPOGRAPHIC MAP


EXISTING
Off-Site Interim Roadway Improvement Area
Off-Site Permanent Roadway Improvement Area - Option 2
Off-Site Permanent Roadway Improvement Area - Option 1
PROJECT SITE
ORANGE SHOW RD
DUMAS ST
PARKCENTER CIR
WASHINGTON AVE
AMOS AVE
S. WATERMAN AVE
A.T.&S.F. RR
East Twin Creek
Santa Ana River
IL
PFC
PCR
PF
OIP
RR
CG-1
CR-3
LEGEND
City of San Bernardino General Plan Land Use
Commercial - Commercial General (CG-1)
Commercial - Commercial Regional-3 (CR-3) Tri-City Commercial
Industrial - Office Industrial Park (OIP)
Industrial - Industrial Light (IL)
Public Facility/Quasi-Public - Publicly Owned Flood Control (PFC)
Public Quasi Public - Public Facilities (PF)
Open Space - Public/Commercial Recreation (PCR)
Railroad (RR)
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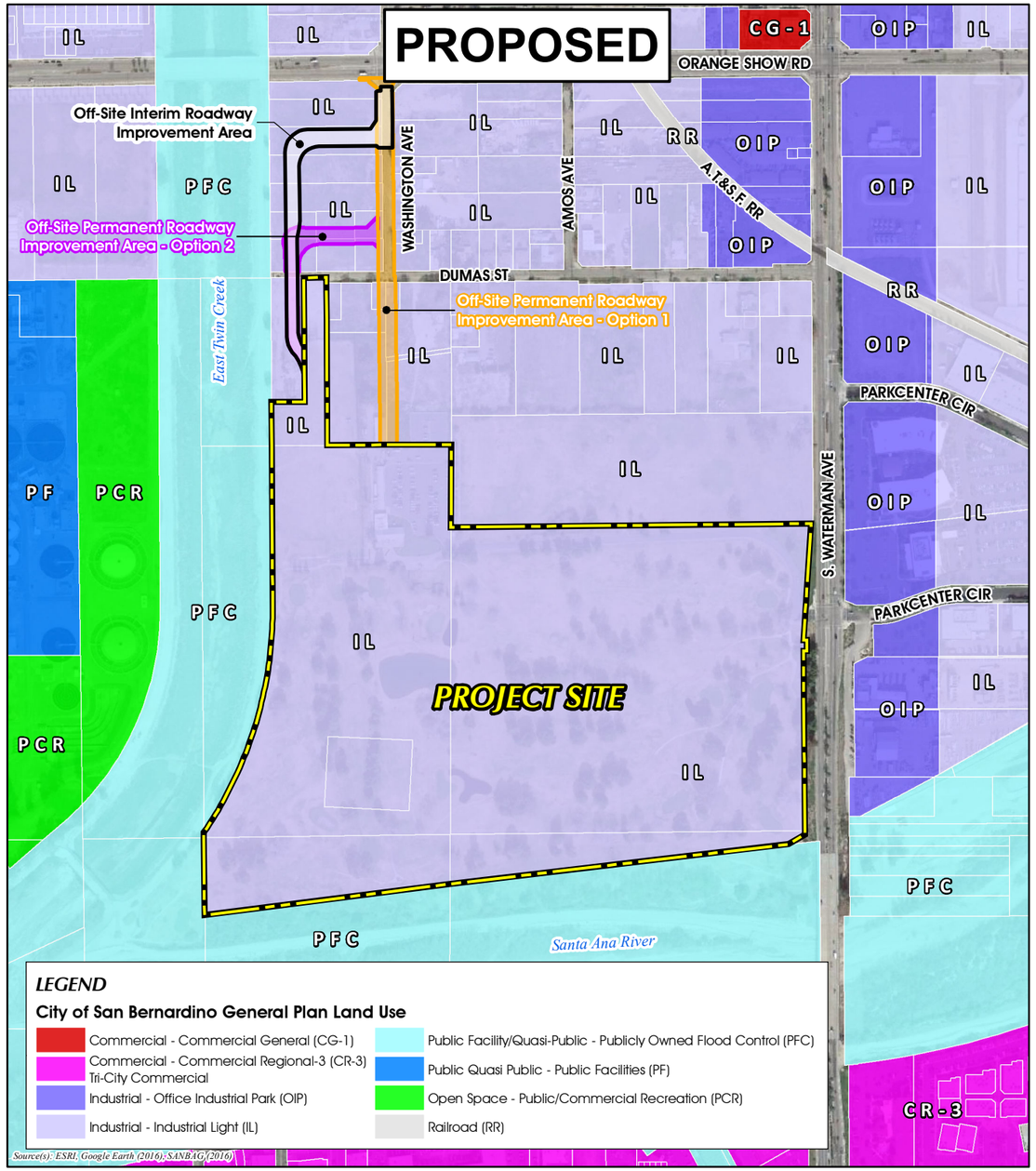
PROPOSED
Off-Site Interim Roadway Improvement Area
Off-Site Permanent Roadway Improvement Area - Option 2
Off-Site Permanent Roadway Improvement Area - Option 1
PROJECT SITE
ORANGE SHOW RD
DUMAS ST
PARKCENTER CIR
WASHINGTON AVE
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PFC
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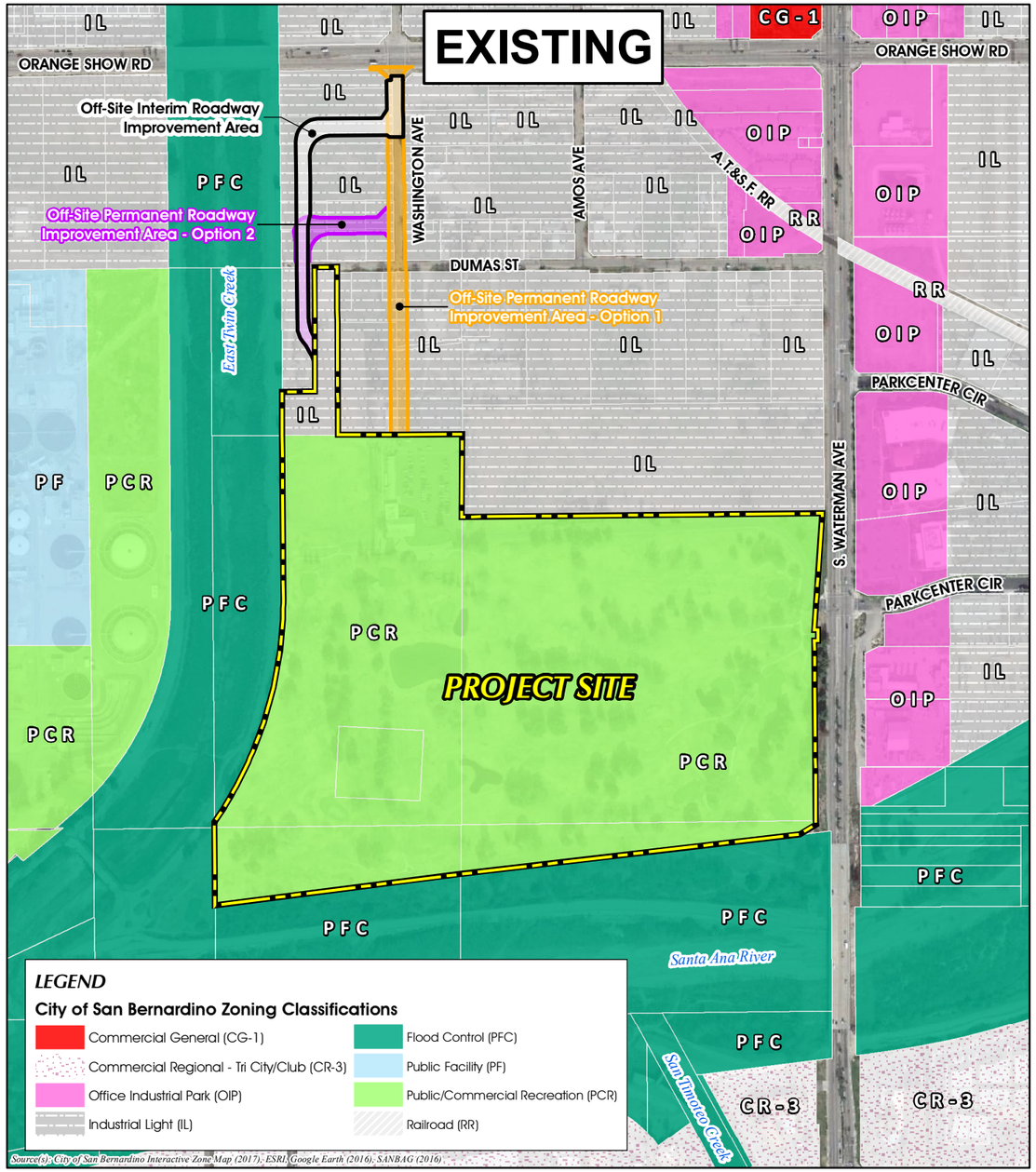
Industrial - Industrial Light (IL)
Public Facility/Quasi-Public - Publicly Owned Flood Control (PFC)
Public Quasi Public - Public Facilities (PF)
Open Space - Public/Commercial Recreation (PCR)
Railroad (RR)
Source(s): ESRI; Google Earth (2016); SANBAG (2016)

Figure 3-4


EXISTING
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Santa Ana River
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CR-3
IL
CG-1
OIP
PFC
PCR
PF
RR
LEGEND
City of San Bernardino Zoning Classifications
Commercial General (CG-1)
Commercial Regional - Tri City/Club (CR-3)
Office Industrial Park (OIP)
Industrial Light (IL)
Flood Control (PFC)
Public Facility (PF)
Public/Commercial Recreation (PCR)
Railroad (RR)
Source(s): City of San Bernardino Interactive Zone Map (2017); ESRI Google Earth (2016); SANBAG (2016)
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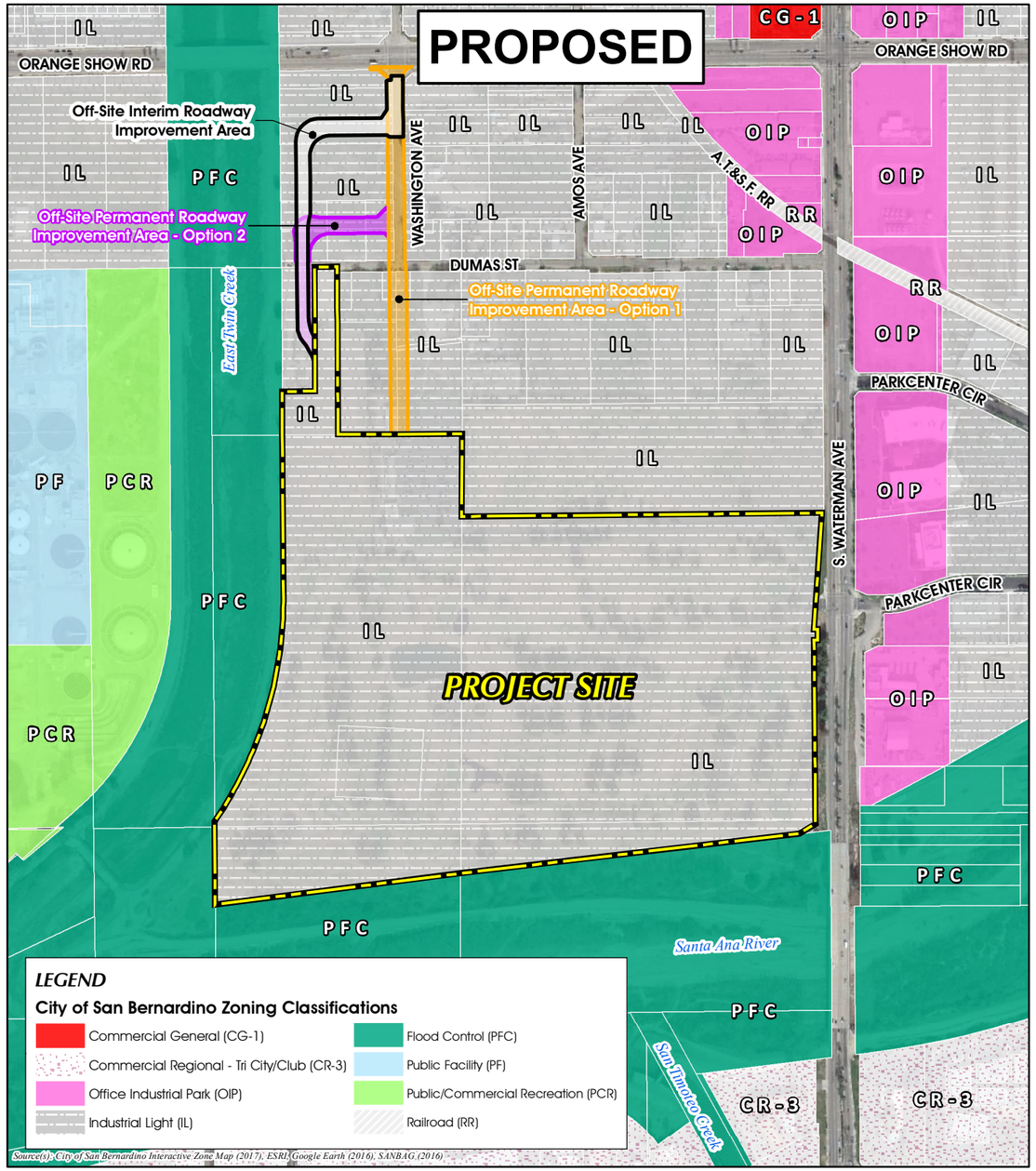
PROPOSED
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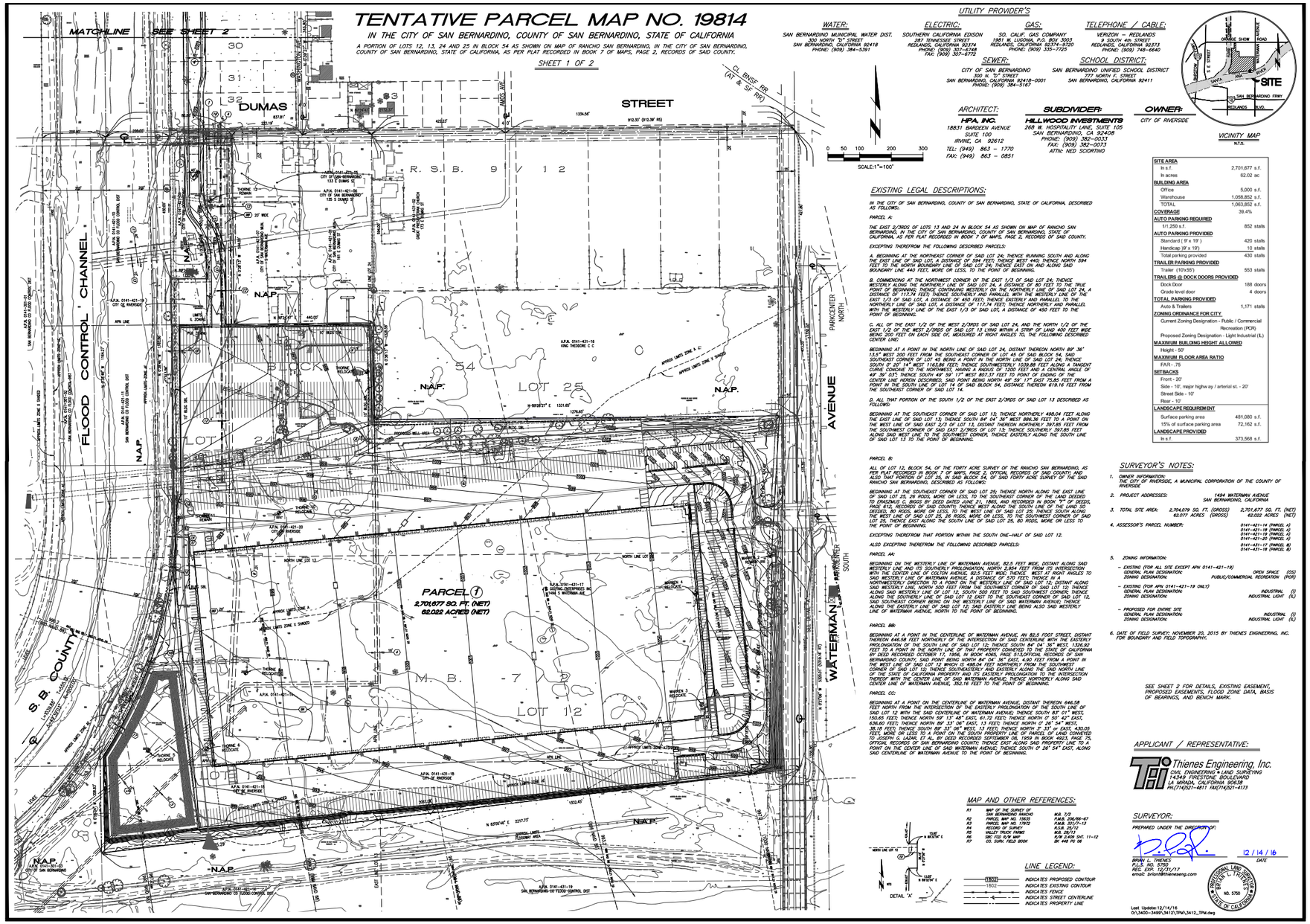
Industrial Light (IL)
Flood Control (PFC)
Public Facility (PF)
Public/Commercial Recreation (PCR)
Railroad (RR)
Source(s): City of San Bernardino Interactive Zone Map (2017); ESRI Google Earth (2016); SANBAG (2016)

Figure 3-5



Source(s): Thienes Engineering (12-2016)

Figure 3-6

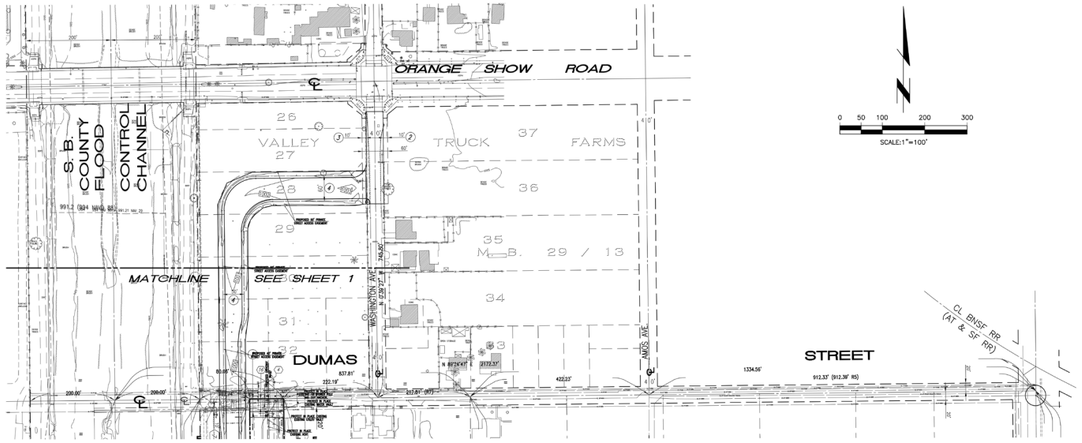
TENTATIVE PARCEL MAP NO. 19814 (SUB16-08) (SHEET 1 OF 2)

TENTATIVE PARCEL MAP NO. 19814

IN THE CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA

A PORTION OF LOTS 12, 13, 24 AND 25 IN BLOCK 54 AS SHOWN ON MAP OF RANCHO SAN BERNARDINO, IN THE CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER PLAT RECORDED IN BOOK 7 OF MAPS, PAGE 2, RECORDS OF SAID COUNTY.

SHEET 2 OF 2



ARCHITECT:
HPA, INC.
18831 BARDEEN AVENUE
SUITE 100
IRVINE, CA 92612
TEL: (949) 863 - 1770
FAX: (949) 863 - 0851

SUBDIVIDER:
HILLWOOD INVESTMENTS
268 W. HOSPITALITY LANE, SUITE 105
SAN BERNARDINO, CA 92408
PHONE: (909) 382-0033
FAX: (909) 382-0073
ATTN: NED SCIORTINO

OWNER:
CITY OF RIVERSIDE

VICINITY MAP
N.T.S.

FLOOD ZONE NOTE:

PROPERTY INDICATED HEREON IS SITUATED WITHIN TWO DIFFERENT FLOOD INSURANCE RATE MAPS (F.I.R.M.) AND TWO DIFFERENT FLOOD ZONES AS SHOWN ON SAID MAPS. A PORTION OF SAID PROPERTY IS SITUATED IN ZONE "X" (UNSHADED) PER F.I.R.M. WITH MAP NO. 06071C8685H, EFFECTIVE DATE: AUGUST 28, 2008, COMMUNITY NUMBER: 060281 FOR CITY OF SAN BERNARDINO, PANEL NUMBER: 8685, SUFFIX: "H" AND SECOND, THE FLOOD INSURANCE RATE MAP (F.I.R.M.) WITH MAP NO. 06071C8685H, EFFECTIVE DATE: AUGUST 28, 2008, COMMUNITY NUMBER: 060281 FOR CITY OF SAN BERNARDINO, PANEL NUMBER: 8685, SUFFIX: "H", THE THREE DIFFERENT FLOOD ZONES ARE AS FOLLOWS: FIRST, A PORTION OF SAID PROPERTY IS SITUATED IN ZONE "X" (SHADED) PER F.I.R.M. WITH MAP NO. 06071C8685H, EFFECTIVE DATE: AUGUST 28, 2008, AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE, AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD); SECOND, A PORTION OF SAID PROPERTY IS SITUATED IN ZONE "A" (SPECIAL FLOOD HAZARD AREAS (SFHA) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD, NO BASE FLOOD ELEVATIONS DETERMINED); AND THIRD, A PORTION OF SAID PROPERTY IS SITUATED IN ZONE "AE" (SPECIAL FLOOD HAZARD AREAS (SFHA) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD, NO BASE FLOOD ELEVATIONS DETERMINED) (A PORTION OF ZONE "AE", IS ALSO DESIGNATED AS AS A FLOODWAY AREA). (APPROXIMATE LIMITS PLOTTED HEREON).

NOTE: A SEPARATE SUBMITTAL TO FEMA WILL BE PROCESSED CONCURRENTLY WITH THIS PROJECT.

BENCH MARK:

CITY OF SAN BERNARDINO BENCH MARK DESCRIPTION #37
BRASS DISC STAMPED "H-524 RESET 1982", ESTABLISHED BY USC & GS WITH BRASS DISC STAMPED "H-524 RESET 1982", AT SAN BERNARDINO, 43.0 FEET NORTH, 43.0 FEET EAST OF CENTERLINE INTERSECTION OF WATERMAN AVENUE & NORMAN ROAD, NORTH END OF NORTHEAST CURB RETURN. ELEVATION = 1011.231' (NGVD '29 / DATE 9/15/72)

BASIS OF BEARINGS:

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CALIFORNIA STATE PLANE COORDINATE SYSTEM (CCS83), ZONE 5, NORTH AMERICAN DATUM 1983 (NAD83) BASED LOCALLY ON CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS) "SMPP" AND "SDSA" AS BEING S 82°35'10.9410" E (BASIS OF BEARINGS) AND REPRESENTED HEREON BY THE CENTERLINE OF WATERMAN AVENUE BEING NORTH 00°27'06" WEST. (2010.0 EPOCH).

EXISTING EASEMENTS:

(1) AN AGREEMENT AND SUPPLEMENTAL AGREEMENT RELATING TO WATER AND WATER RIGHTS, PIPES, DITCHES, FLUMES AND INCIDENTAL PURPOSES, RECORDED IN BOOK 460, PAGE 28, 30 AND 33, OF DEEDS.
REFERENCE IS MADE TO THE CONSENT TO GRANT OF EASEMENT FROM THE CITY OF RIVERSIDE, A MUNICIPAL CORPORATION, TO SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION, RECORDED MARCH 08, 1993, INSTRUMENT NO. 93-105801, OFFICIAL RECORDS.
(SAID DOCUMENT DESCRIBES SUBJECT PROPERTY AND OTHER LANDS)
(SAID FACILITIES ARE NOT PLOTTABLE FROM RECORD)

(2) AN EASEMENT FOR EITHER OR BOTH POLE LINES CONDUITS AND INCIDENTAL PURPOSES, RECORDED IN BOOK 495 OF DEEDS, PAGE 324,
IN FAVOR OF: SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION
(SAID DOCUMENT DESCRIBES SUBJECT PROPERTY AND OTHER LANDS)
(SAID EASEMENT PLOTTED HEREON)
(EASEMENT TO BE QUITCLAIMED)

(3) AN EASEMENT FOR PIPES AND POLES AND INCIDENTAL PURPOSES, RECORDED IN BOOK 539 OF DEEDS, PAGE 383,
IN FAVOR OF: SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION
REFERENCE IS MADE TO THE CONSENT TO GRANT OF EASEMENT FROM THE CITY OF RIVERSIDE, A MUNICIPAL CORPORATION, TO SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION, RECORDED MARCH 08, 1993, INSTRUMENT NO. 93-105801, OFFICIAL RECORDS.
(SAID DOCUMENT DESCRIBES SUBJECT PROPERTY AND OTHER LANDS)
(SAID EASEMENT IS BLANKET IN NATURE, THEREFORE NOT PLOTTED HEREON)

(4) AN EASEMENT FOR EITHER OR BOTH POLE LINES CONDUITS AND INCIDENTAL PURPOSES, RECORDED IN BOOK 622 OF DEEDS, PAGE 166,
IN FAVOR OF: SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION
(SAID EASEMENT LOCATED ON SUBJECT PROPERTY AND OTHER LANDS AND PLOTTED HEREON)
(EASEMENT TO BE QUITCLAIMED)

(5) AN EASEMENT FOR GAS PIPE LINE AND INCIDENTAL PURPOSES, RECORDED IN BOOK 741, PAGE 12 OF OFFICIAL RECORDS,
IN FAVOR OF: SOUTHERN CALIFORNIA GAS COMPANY, A CORPORATION
(SAID EASEMENT LOCATED ON SUBJECT PROPERTY AND OTHER LANDS AND PLOTTED HEREON)
(EASEMENT TO BE QUITCLAIMED)

(6) AN EASEMENT FOR GAS PIPE LINE AND INCIDENTAL PURPOSES, RECORDED IN BOOK 1278, PAGE 479 OF OFFICIAL RECORDS,
IN FAVOR OF: SOUTHERN CALIFORNIA GAS COMPANY
(SAID EASEMENT LOCATED ON SUBJECT PROPERTY AND PLOTTED HEREON)
(EASEMENT TO BE QUITCLAIMED)

(7) AN EASEMENT FOR EITHER OR BOTH POLE LINES CONDUITS AND INCIDENTAL PURPOSES, RECORDED IN BOOK 3744, PAGE 213 OF OFFICIAL RECORDS,
IN FAVOR OF: GENERAL TELEPHONE COMPANY OF CALIFORNIA
(SAID EASEMENT IS NOT LOCATED ON SUBJECT PROPERTY AND PLOTTED HEREON)

(8) AN EASEMENT FOR EXTRACTING, TAKING AND DIVERTING WATER AND INCIDENTAL PURPOSES, RECORDED IN BOOK 3819, PAGE 253 OF OFFICIAL RECORDS.
IN FAVOR OF: CALIFORNIA ELECTRIC POWER COMPANY
(SAID RIGHTS ARE A PORTION OF GRANTOR RIGHTS BEING OVER SAID LAND AND OTHER LAND AND ARE BLANKET IN NATURE, THEREFORE NOT PLOTTED HEREON)

(9) AN EASEMENT FOR PIPELINES AND INCIDENTAL PURPOSES, RECORDED IN BOOK 3819, PAGE 253 OF OFFICIAL RECORDS.
IN FAVOR OF: RIVERSIDE WATER COMPANY
(SAID WELL SITE PLOTTED HEREON AS 9A)
(SAID ACCESS EASEMENT LOCATED ON SUBJECT PROPERTY PLOTTED HEREON AS 9B)
(EASEMENT TO BE QUITCLAIMED)

(10) AN EASEMENT FOR POLE LINES AND PIPE LINES AND INCIDENTAL PURPOSES, RECORDED IN BOOK 4226, PAGE 588 OF OFFICIAL RECORDS.
IN FAVOR OF: CALIFORNIA ELECTRIC POWER COMPANY
THE INTEREST OF THE ABOVE EASEMENT HAS BEEN ASSIGNED TO MOUNTAINVIEW POWER COMPANY, A DELAWARE CORPORATION BY ASSIGNMENT OF EASEMENTS RECORDED APRIL 02, 1998 AS INSTRUMENT NO. 19980123463, OF OFFICIAL RECORDS.
(SAID EASEMENT LOCATED ON SUBJECT PROPERTY AND PLOTTED HEREON)
(EASEMENT TO REMAIN)

(11) AN EASEMENT FOR PIPELINES AND INCIDENTAL PURPOSES, RECORDED IN BOOK 4515, PAGE 183 OF OFFICIAL RECORDS.
IN FAVOR OF: CITY OF SAN BERNARDINO
(SAID EASEMENT LOCATED ON SUBJECT PROPERTY AND OTHER LANDS AND PLOTTED HEREON)
(EASEMENT TO REMAIN)

(12) AN EASEMENT FOR EITHER OR BOTH POLE LINES, CONDUITS AND INCIDENTAL PURPOSES, RECORDED IN BOOK 5449, PAGE 74 OF OFFICIAL RECORDS.
IN FAVOR OF: SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION
(SAID EASEMENT LOCATED ON SUBJECT PROPERTY AND PLOTTED HEREON)
(EASEMENT TO BE QUITCLAIMED)

(13) AN EASEMENT FOR PIPE LINES AND SEWERS AND INCIDENTAL PURPOSES, RECORDED IN BOOK 6239, PAGE 671 OF OFFICIAL RECORDS.
IN FAVOR OF: CITY OF SAN BERNARDINO
(SAID EASEMENT LOCATED ON SUBJECT PROPERTY AND OTHER LANDS AND PLOTTED HEREON)
(EASEMENT TO REMAIN)

(14) AN EASEMENT FOR EITHER OR BOTH POLE LINES, CONDUITS AND INCIDENTAL PURPOSES, RECORDED IN BOOK 6365, PAGE 510 OF OFFICIAL RECORDS.
IN FAVOR OF: SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION
(SAID EASEMENT LOCATED ON SUBJECT PROPERTY AND PLOTTED HEREON)
(EASEMENT TO REMAIN)

(15) AN EASEMENT FOR EITHER OR BOTH POLE LINES, CONDUITS AND INCIDENTAL PURPOSES, RECORDED IN BOOK 8065, PAGE 1280 OF OFFICIAL RECORDS,
IN FAVOR OF: SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION
(SAID EASEMENT LOCATED ON SUBJECT PROPERTY AND PLOTTED HEREON)
(EASEMENT TO BE QUITCLAIMED)

(16) AN EASEMENT FOR ELECTRIC LINES AND INCIDENTAL PURPOSES, RECORDED MARCH 08, 1993 AS INSTRUMENT NO. 93-105803 OF OFFICIAL RECORDS,
IN FAVOR OF: SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION
(SAID EASEMENT LOCATED ON SUBJECT PROPERTY AND PLOTTED HEREON)
(EASEMENT TO REMAIN)

(17) AN EASEMENT FOR CONSTRUCTION, RECONSTRUCTION, MAINTENANCE, OPERATION, INSPECTION, REPAIR, REPLACEMENT, RELOCATION, RENEWAL AND REMOVAL OF A WASTEWATER DISCHARGE PIPELINE AND INCIDENTAL PURPOSES, RECORDED JULY 15, 2004 AS INSTRUMENT NO. 2005-0504002 OF OFFICIAL RECORDS.
IN FAVOR OF: MOUNTAINVIEW POWER COMPANY LLC, A DELAWARE LIMITED COMPANY
(SAID EASEMENT LOCATED ON SUBJECT PROPERTY AND PLOTTED HEREON)
(EASEMENT TO REMAIN)

(18) AN EASEMENT FOR CONSTRUCTION, MAINTENANCE AND OPERATION OF TRANSMISSION LINES AND INCIDENTAL PURPOSES, RECORDED FEBRUARY 13, 1957 AS BOOK 4155, PAGE 501 OF OFFICIAL RECORDS.
IN FAVOR OF: CALIFORNIA ELECTRIC POWER COMPANY, A CORPORATION
(SAID EASEMENT LOCATED ON SUBJECT PROPERTY AND PLOTTED HEREON)
(EASEMENT TO REMAIN)

(19) AN EASEMENT FOR UNDERGROUND ELECTRICAL SUPPLY SYSTEMS AND COMMUNICATION SYSTEMS AND INCIDENTAL PURPOSES, RECORDED MARCH 13, 1991 AS INSTRUMENT NO. 91-085572 OF OFFICIAL RECORDS.
IN FAVOR OF: SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION
(SAID EASEMENT LOCATED ON SUBJECT PROPERTY AND PLOTTED HEREON)
(EASEMENT TO REMAIN)

(20) AN EASEMENT FOR EXTRACTING, TAKING AND DIVERTING WATER AND INCIDENTAL PURPOSES, RECORDED IN BOOK 3819, PAGE 253 OF OFFICIAL RECORDS.
IN FAVOR OF: CALIFORNIA ELECTRIC POWER COMPANY
(SAID RIGHTS ARE A PORTION OF GRANTOR RIGHTS BEING OVER SAID LAND AND OTHER LAND AND ARE BLANKET IN NATURE, THEREFORE NOT PLOTTED HEREON)

PROPOSED EASEMENT:

(1) 30' WIDE DEDICATION OF DUMAS STREET TO THE CITY OF SAN BERNARDINO FOR STREET AND UTILITY PURPOSES.

(2) 10' WIDE DEDICATION EAST SIDE OF WASHINGTON AVE. TO THE CITY OF SAN BERNARDINO FOR STREET AND UTILITY PURPOSES.

(3) 10' WIDE DEDICATION WEST SIDE OF WASHINGTON AVE. TO THE CITY OF SAN BERNARDINO FOR STREET AND UTILITY PURPOSES..

(4) VARYING WIDTH EASEMENT FOR PRIVATE DRIVEWAY ACCESS PURPOSES GRANTED BY CITY OF SAN BERNARDINO TO CITY OF RIVERSIDE.

SEE SHEET 1 FOR PLAN, UTILITY PROVIDERS, LEGAL DESCRIPTION, TABULATION, AND SURVEYOR'S NOTES.

LINE LEGEND:

- 1802 — INDICATES PROPOSED CONTOUR
- 1802 — INDICATES EXISTING CONTOUR
- INDICATES FENCE
- INDICATES STREET CENTERLINE
- INDICATES PROPERTY LINE

APPLICANT / REPRESENTATIVE:

Thienes Engineering, Inc.
CIVIL ENGINEERING • LAND SURVEYING
14349 FIRESTONE BOULEVARD
LA MIRADA, CALIFORNIA 90638
PH:(714)521-4811 FAX(714)521-4173

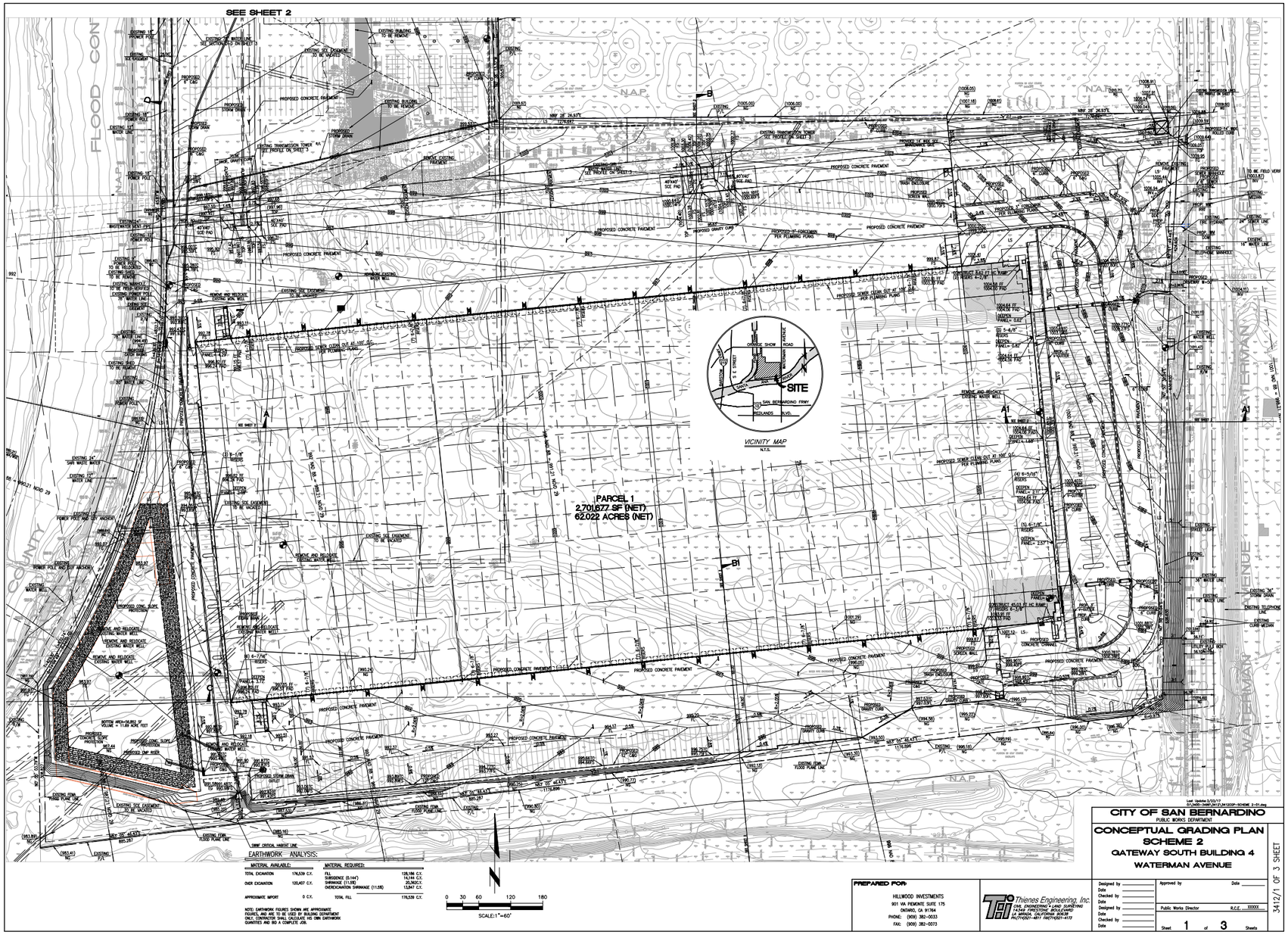
Last Update:12/14/16
O:\3400-3499\3412\TPM\3412_TPM.dwg

Source(s): Thienes Engineering (12-2016)

NOT TO SCALE

Figure 3-7

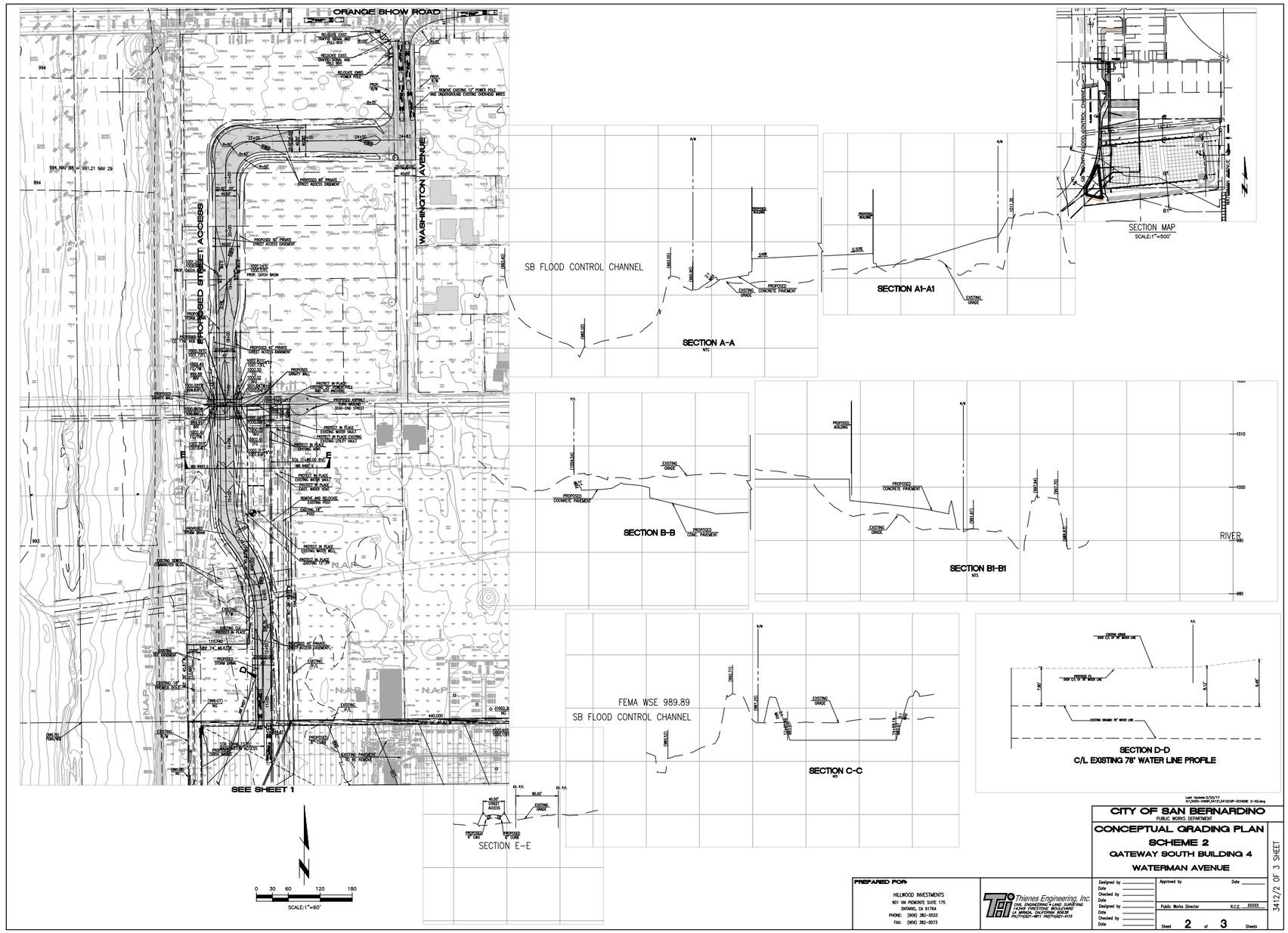
TENTATIVE PARCEL MAP NO. 19814 (SUB16-08) (SHEET 2 OF 2)



Source(s): Thienes Engineering (03-2017)

Figure 3-8

CONCEPTUAL GRADING PLAN (SHEET 1 OF 3)

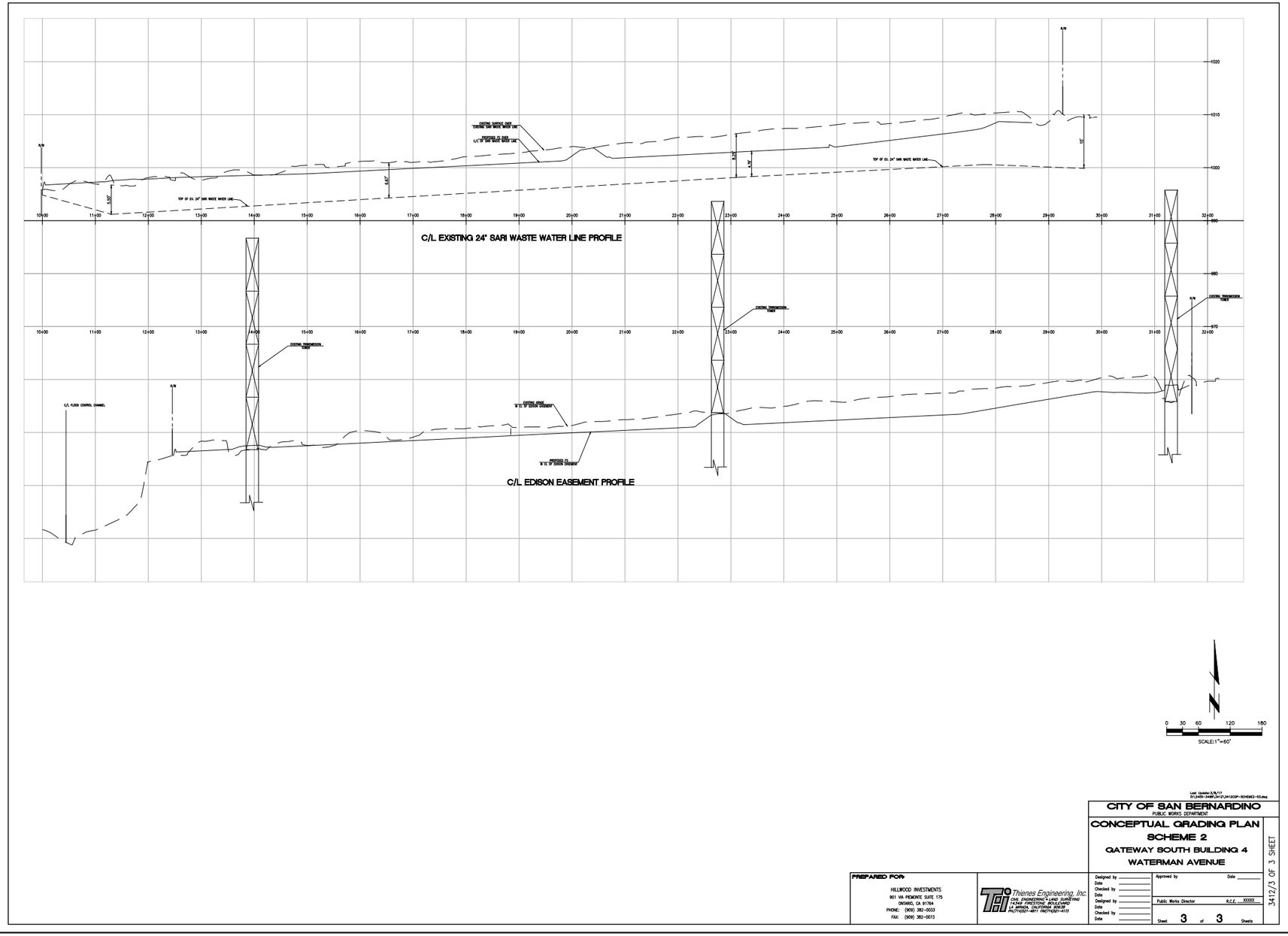


Source(s): Thienes Engineering (03-2017)

Figure 3-9

CONCEPTUAL GRADING PLAN (SHEET 2 OF 3)

NOT TO SCALE

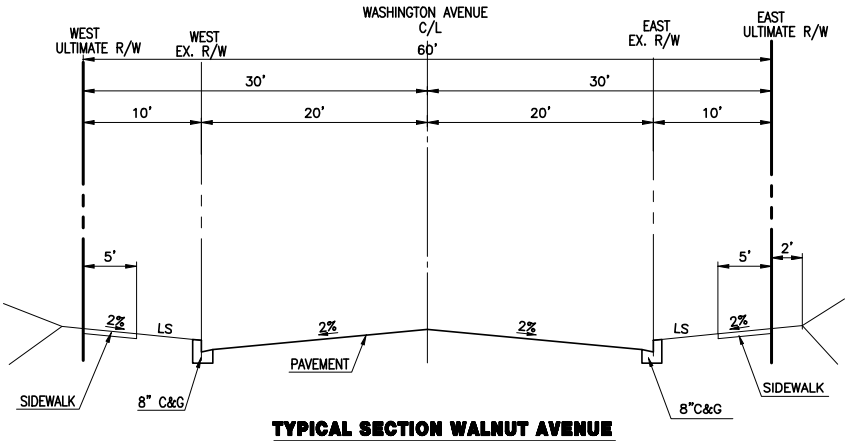


Source(s): Thienes Engineering (03-2017)

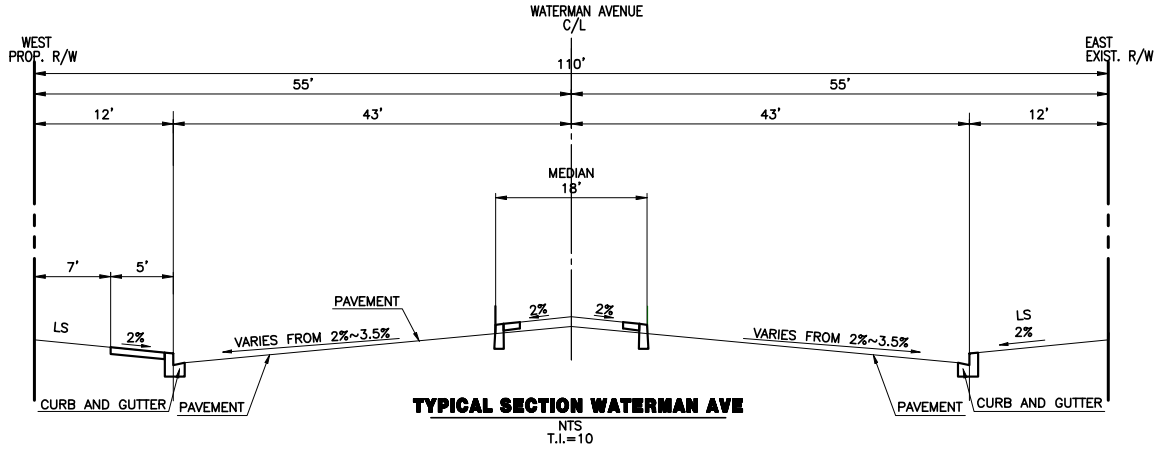
Figure 3-10

NOT TO SCALE

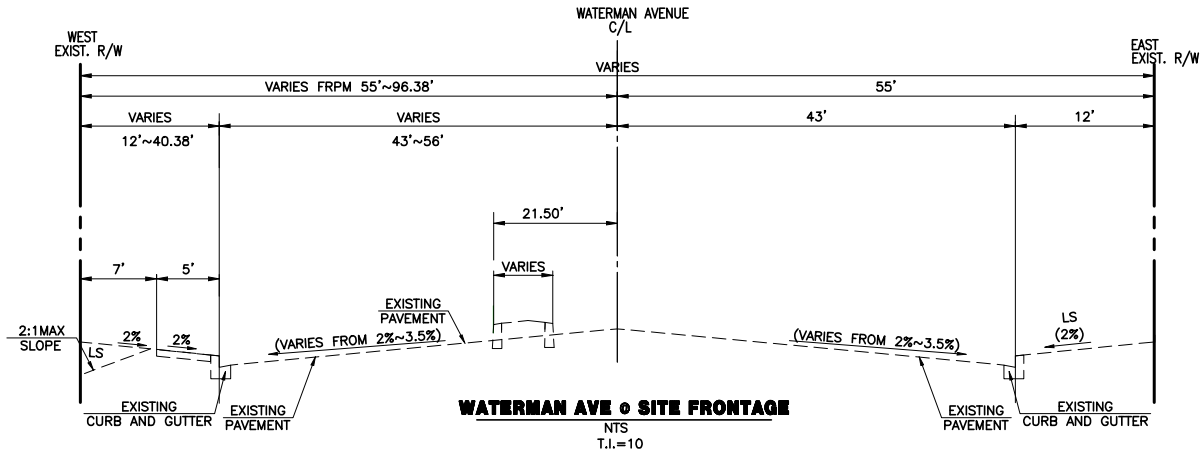
CONCEPTUAL GRADING PLAN (SHEET 3 OF 3)



TYPICAL SECTION WALNUT AVENUE
NTS
T.I.=10



TYPICAL SECTION WATERMAN AVE
NTS
T.I.=10



WATERMAN AVE @ SITE FRONTAGE
NTS
T.I.=10

Source(s): Thienes Engineering (12-2016)

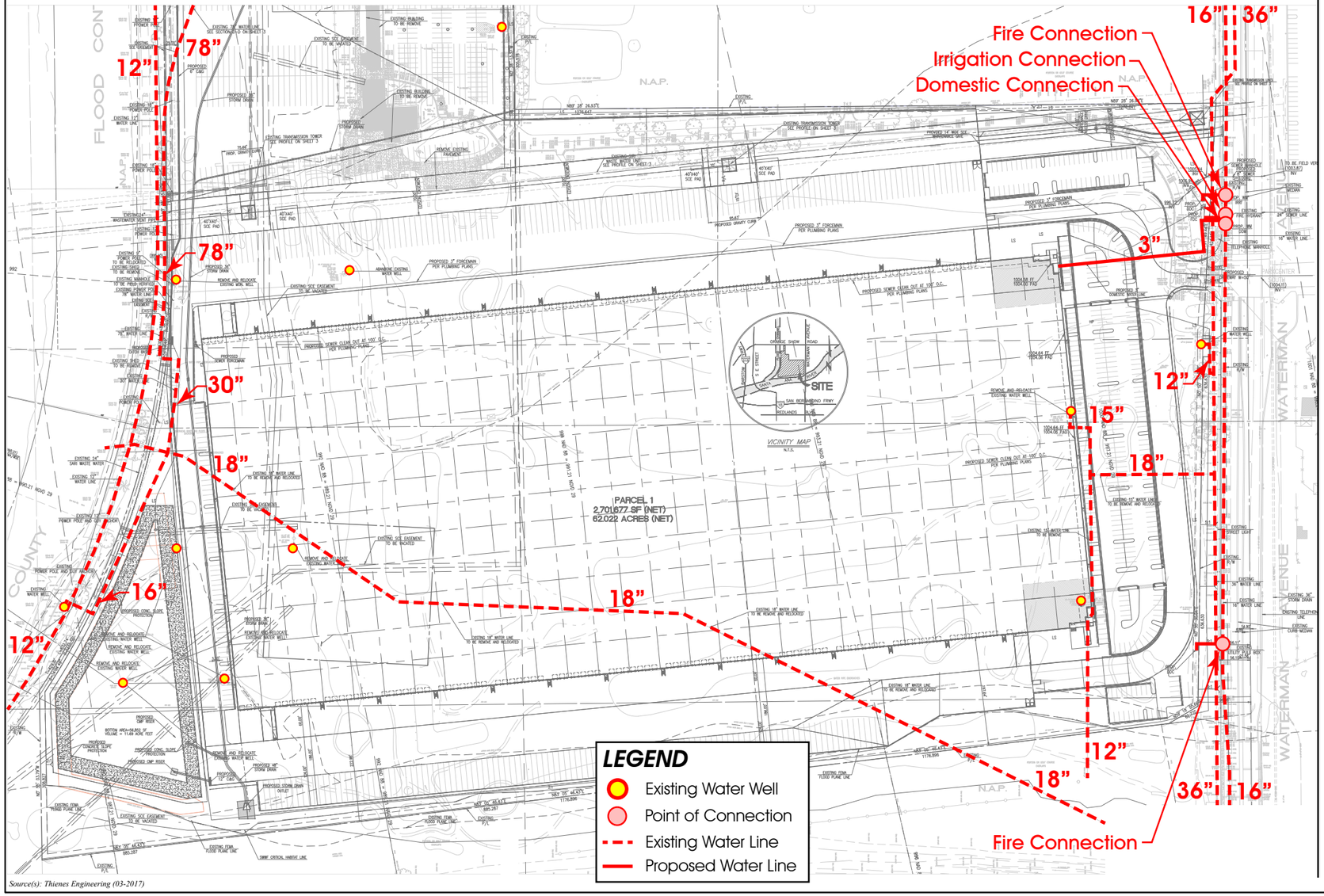
Figure 3-11

NOT TO SCALE

ROADWAY CROSS-SECTIONS

SHEET 1

SEE SHEET 2



Source(s): Thienes Engineering (03-2017)

SHEET 2

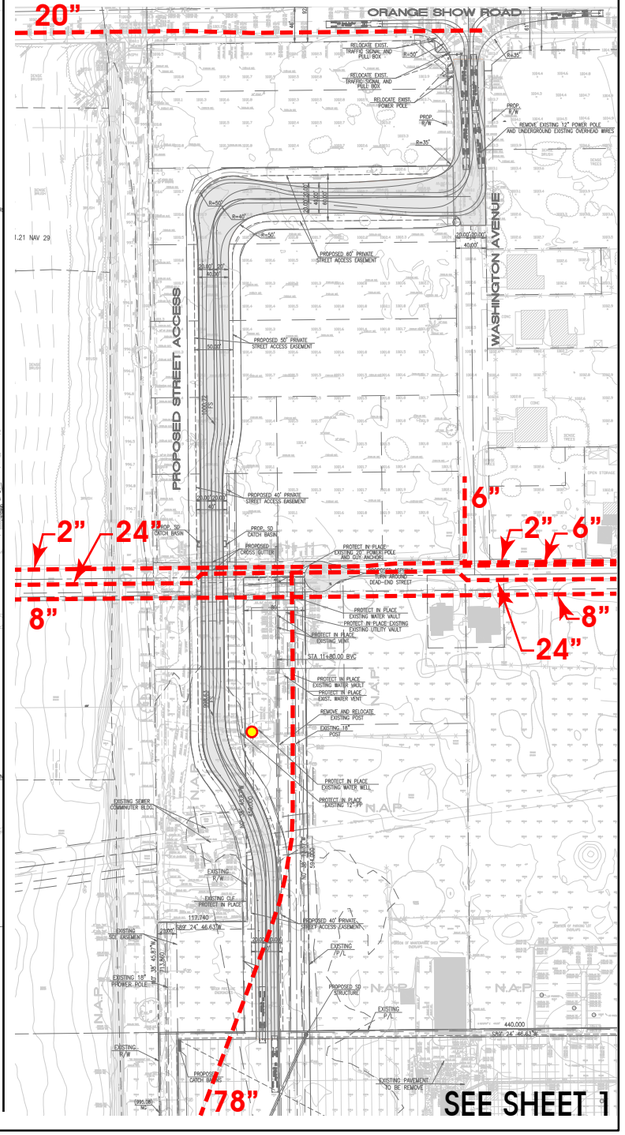
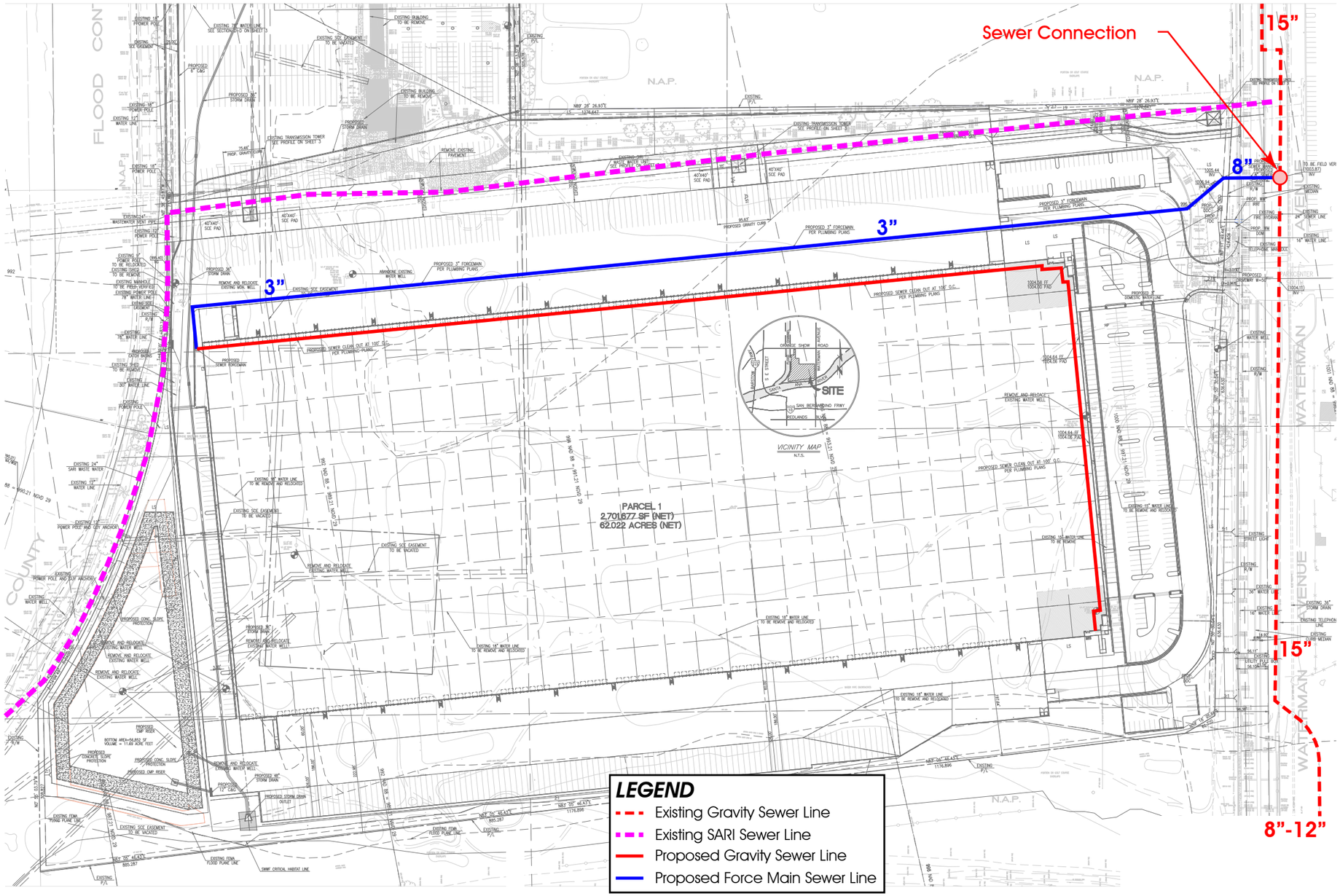


Figure 3-12

WATER PLAN



Source(s): Thienes Engineering (03-2017)

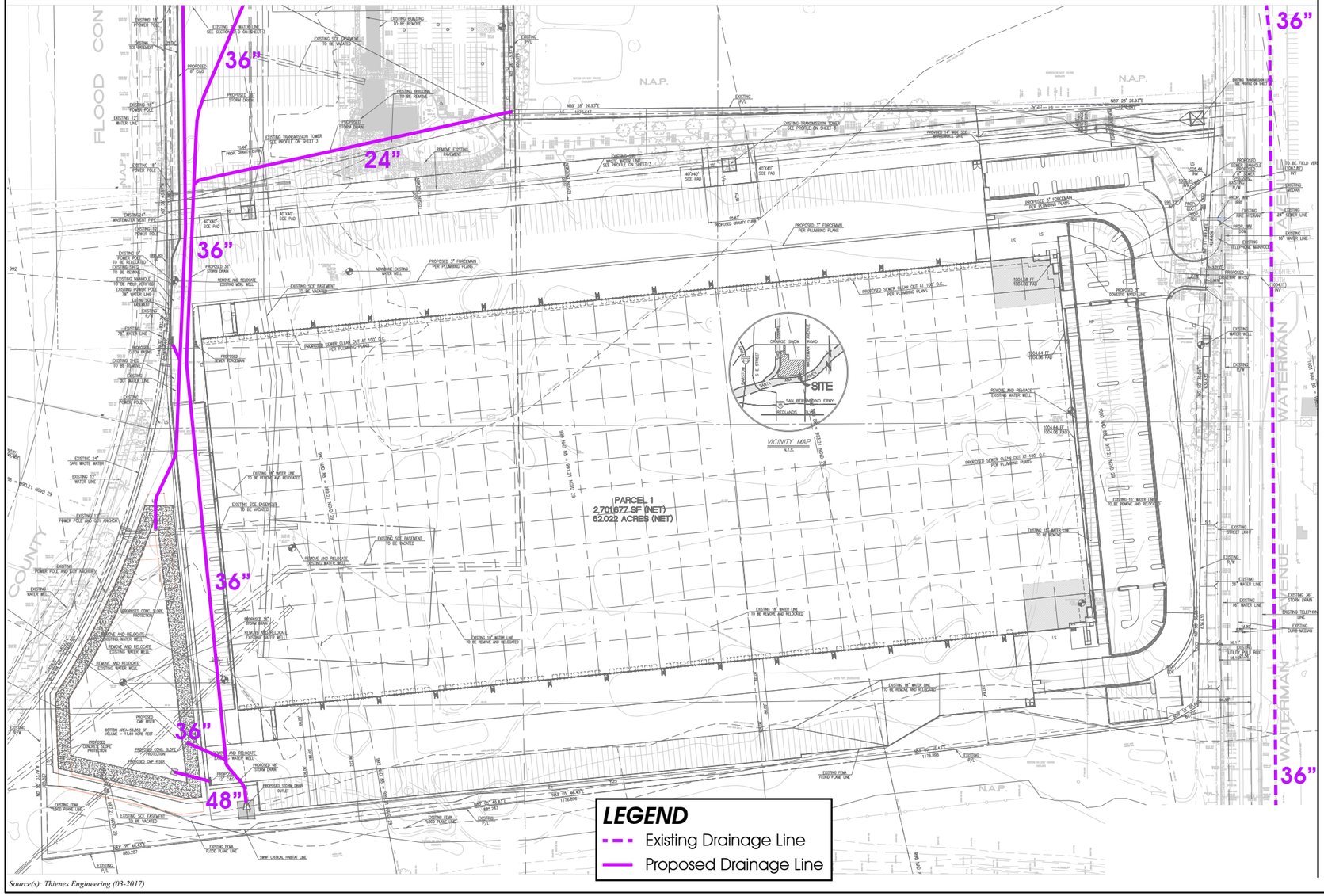
Figure 3-13

NOT TO SCALE

SEWER PLAN

SHEET 1

SEE SHEET 2



Source(s): Thienes Engineering (03-2017)

SHEET 2

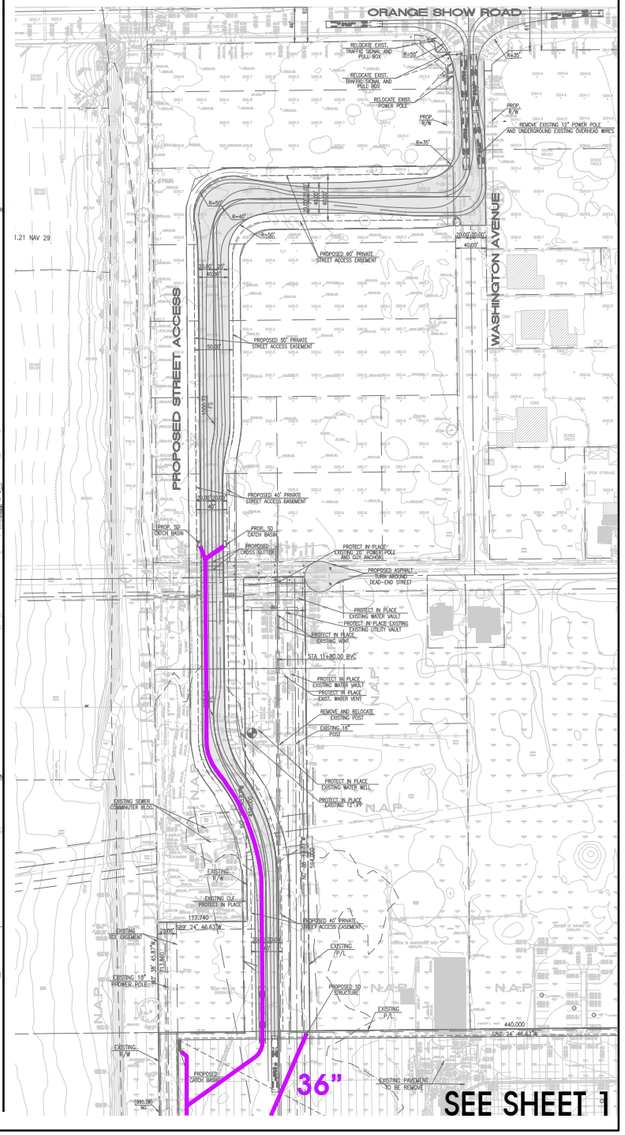
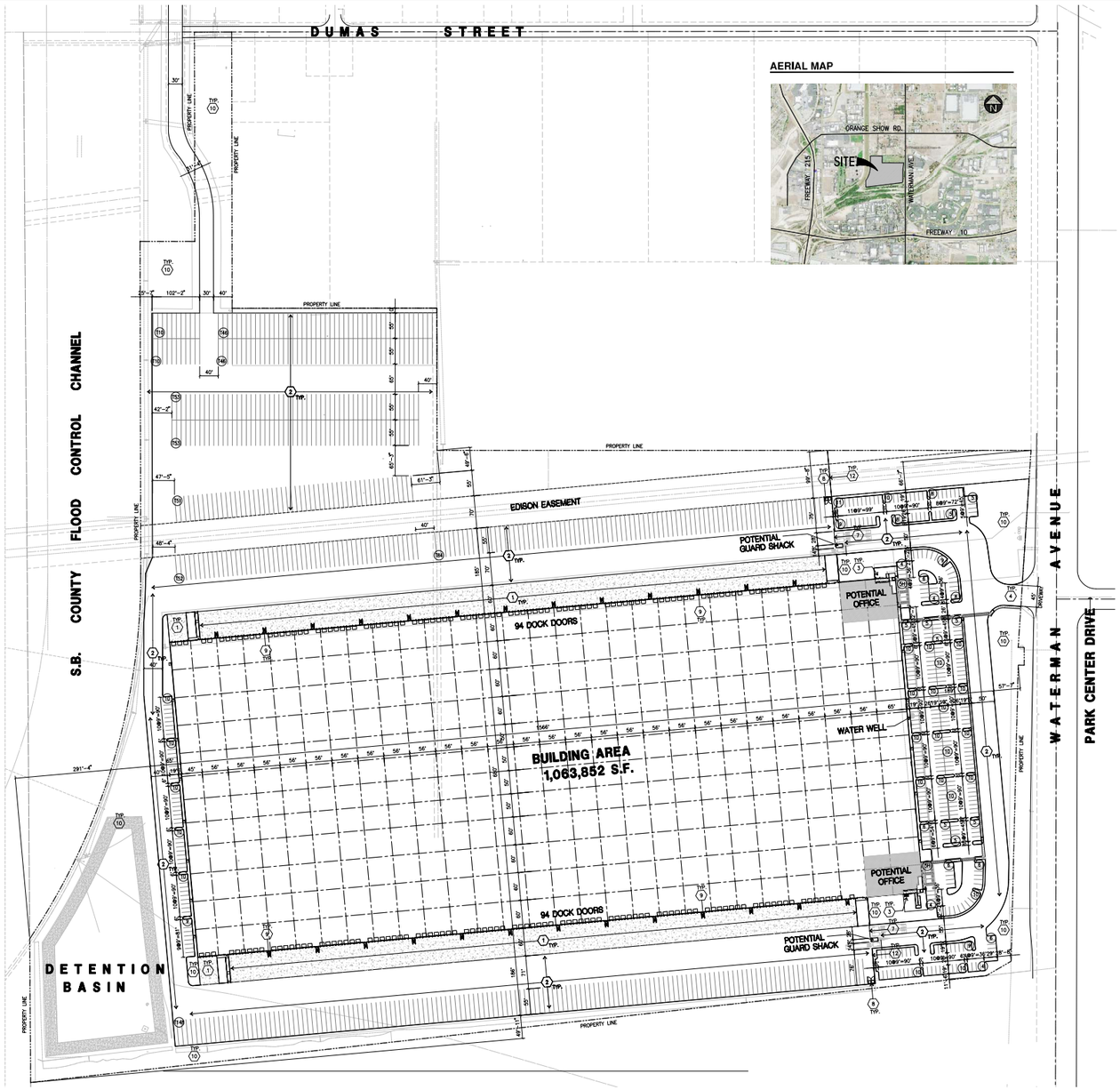


Figure 3-14

STORM DRAIN IMPROVEMENT PLAN



SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONC. PAVEMENT.
2. ASPHALT CONCRETE (AC) PAVING
3. CONCRETE WALKWAY
4. DRIVEWAY APRONS TO BE CONSTRUCTED PER "L" DRAWINGS.
5. 5'-0"X5'-6"X4" MIN. THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. SLOPE TO BE 1/4" : 12" MAX. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY W/ 1:20 MAX. AS REQ. BY CITY INSPECTOR.
6. 8' HIGH SWING GATE.
7. 8' H PROVIDE METAL, MANUAL OPERATED GATES W/ KNOX-PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
8. TRASH ENCLOSURE PER CITY STANDARD.
9. EXTERIOR CONC. STAIR.
10. LANDSCAPE. SEE "L" DWGS.
11. APPROXIMATE LOCATION OF TRANSFORMER.
12. CONCRETE TILT-UP SCREEN WALL
13. TUBULAR STEEL FENCE.
14. CHAIN LINK FENCE.

SITE LEGEND

- LANDSCAPED AREA
- AC. PAVING – SEE "C" DRWGS. FOR THICKNESS
- CONCRETE PAVING SEE "C" DRWGS. FOR THICKNESS
- STANDARD PARKING STALL (9' X 19')
- HANDICAP PARKING STALL (9' X 19')
- PROPERTY LINE

PROJECT INFORMATION

Owner
HILLWOOD INVESTMENTS
807 WA PENDNTE, SUITE 175
DALLAS, TX 75201
TEL: (909) 382-0033
FAX: (909) 382-0073
CONTACT: KATHY HOFFER

Assessors Parcel Number
0141-421-18 0141-421-14
0141-421-19 0141-431-17
0141-421-20 0141-431-18

Applicant
HPA
18831 BARDEEN AVE, STE #100
IRVINE, CA 92612
TEL: (949) 862-2122
CONTACT: RHON KIM

Project Address
1484 WATERMAN AVENUE
SAN BERNARDINO, CA

Zoning Information

EXISTING (FOR ALL SITE EXCEPT APN 0141-421-19)	
GENERAL PLAN DESIGNATION:	OPEN SPACE (OS)
ZONING DESIGNATION:	PUBLIC/COMMERCIAL RECREATION (PCR)
EXISTING (FOR APN 0141-421-19 ONLY)	
GENERAL PLAN DESIGNATION:	INDUSTRIAL (I)
ZONING DESIGNATION:	INDUSTRIAL LIGHT (IL)
PROPOSED FOR ENTIRE SITE	
GENERAL PLAN DESIGNATION:	INDUSTRIAL (I)
ZONING DESIGNATION:	INDUSTRIAL LIGHT (IL)

TABULATION

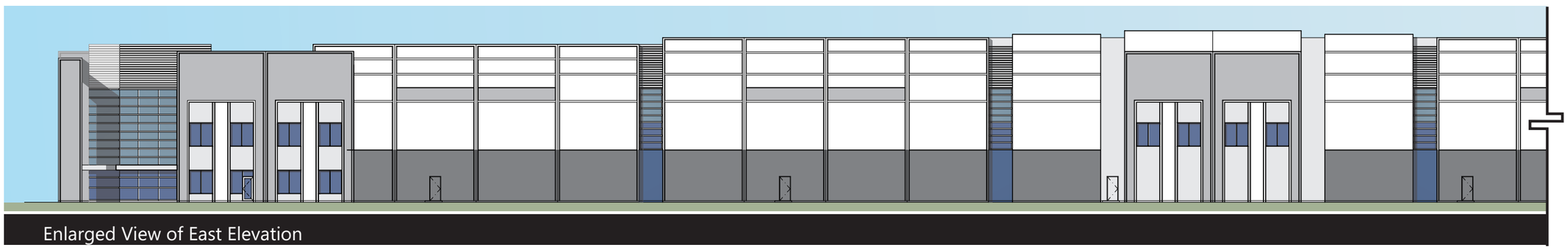
SITE AREA	
In s.f.	2,701,677 s.f.
In acres	62.02 ac
BUILDING AREA	
Office	5,000 s.f.
Warehouse	1,058,852 s.f.
TOTAL	1,063,852 s.f.
COVERAGE	39.4%
AUTO PARKING REQUIRED	
1/1,250 s.f.	852 stalls
AUTO PARKING PROVIDED	
Standard (9' x 19')	420 stalls
Handicap (9' x 19')	10 stalls
Total parking provided	430 stalls
TRAILER PARKING PROVIDED	
Trailer (10'x55')	553 stalls
TRAILERS @ DOCK DOORS PROVIDED	
Dock Door	188 doors
Grade level door	4 doors
TOTAL PARKING PROVIDED	
Auto & Trailers	1,171 stalls
ZONING ORDINANCE FOR CITY	
Current Zoning Designation - Public / Commercial Recreation (PCR)	
Proposed Zoning Designation - Light Industrial (IL)	
MAXIMUM BUILDING HEIGHT ALLOWED	
Height - 50'	
MAXIMUM FLOOR AREA RATIO	
FAR - .75	
SETBACKS	
Front - 20'	
Side - 10', major highw ay / arterial st. - 20'	
Street Side - 10'	
Rear - 10'	
LANDSCAPE REQUIREMENT	
Surface parking area	481,080 s.f.
15% of surface parking area	72,162 s.f.
LANDSCAPE PROVIDED	
In s.f.	373,568 s.f.

Source(s): HPA Architecture (12-2016)

Figure 3-15

DEVELOPMENT PERMIT SITE PLAN (DP-D16-026)

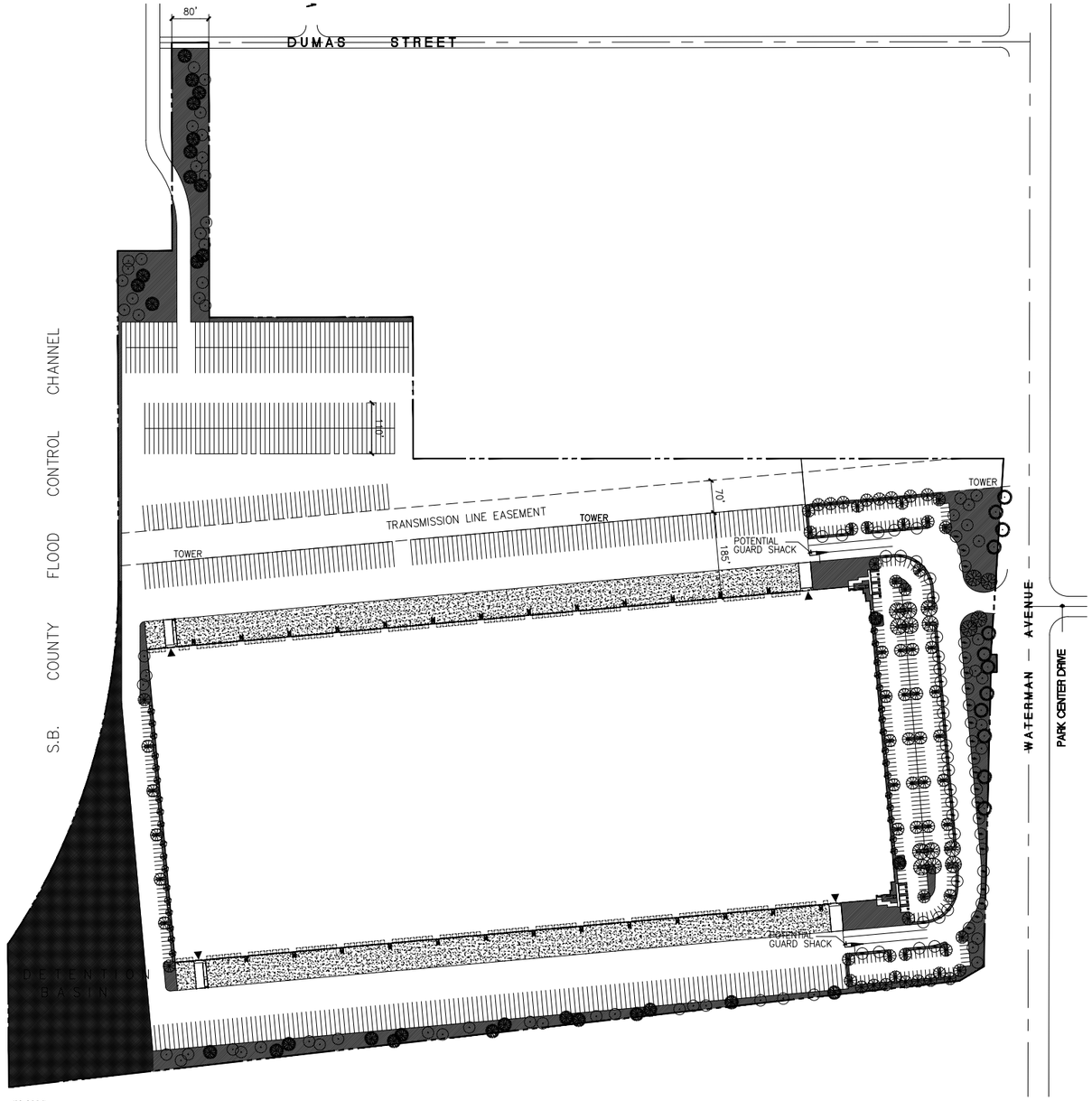
NOT TO SCALE



Source(s): HPA Architecture (12-2016)

Figure 3-16

ARCHITECTURAL ELEVATIONS



PLANTING LEGEND

TREES

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	REMARKS
	Cercidium 'Desert Museum' Blue Palo Verde	24" Box	54	L	Multi
	Chitalpa tashkentensis Chitalpa	24" Box	68	L	Standard
	Pinus canariensis Canary Island Pine	24" Box	60	M	Standard
	Platanus acerifolia London Plane	24" Box	12	M	Standard
	Platanus racemosa California Sycamore	24" Box	29	M	Multi
	Quercus agrifolia Coast Live Oak	24" Box	16	M	Multi
	Tristania conferta Brisbane Box	15 Gal	34	M	Standard

SHRUBS

SYMBOL	BOTANICAL/COMMON NAME	SIZE		WUCOLS	REMARKS
	Acca sellowiana Pineapple Gauva	5 Gal		M	
	Artemisia 'Powis Castle' Artemisia	5 Gal		L	
	Callistemon 'Little John' Dwarf Bottle Brush	5 Gal		M	
	Cistus 'Sunset Pink' Sunset Pink Rockrose	5 Gal		M	
	Dodonaea viscosa 'Purpurea' Hopseed Bush	5 Gal		M	
	Elaeagnus pungens Silverberry	5 Gal		L	
	Leucophyllum f. 'Green Cloud' Texas Ranger	5 Gal		L	
	Ligustrum j. Texanum Texas Privet	5 Gal		M	
	Rhamnus californica Coffeeberry	5 Gal		L	
	Rhamnus c. 'Mound San Bruno' Dwarf Coffeeberry	5 Gal		L	
	Rosmarinus o. 'Tuscan Blue' Rosemary	5 Gal		L	
	Salvia c. 'Allen Chickering' Allen Chickering Sage	5 Gal		L	
	Salvia greggii Autumn Sage	5 Gal		L	
	Salvia leucantha Mexican Sage	5 Gal		L	
	Senna artemisioides Feathery Cassia	5 Gal		L	
	Westringia fruticosa Coast Rosemary	5 Gal		L	

ACCENTS

SYMBOL	BOTANICAL/COMMON NAME	SIZE		WUCOLS	REMARKS
	Agave americana Century Plant	5 Gal		L	
	Agave 'Blue Flame' Blue Flame Agave	5 Gal		L	
	Agave 'Blue Glow Blue Glow Agave	5 Gal		L	
	Agave desmeniana Smooth Agave	5 Gal		L	
	Agave kissho Kan Var. Lucky Crown Agave	5 Gal		L	
	Agave victoria-reginae Agave	5 Gal		L	
	Agave villmoriniana Agave	5 Gal		L	
	Aloe maculata Soap Aloe	5 Gal		L	
	Aloe petricola Stone Aloe	1 Gal		L	
	Aloe polyphylla Spiral Aloe	1 Gal		L	
	Aloe striata Coral Aloe	1 Gal		L	
	Dasylerion wheeleri Desert Spoon	5 Gal		L	
	Echeveria 'Ruffles' Ruffles Echeveria	5 Gal		L	
	Hesperaloe parviflora Red Yucca	5 Gal		L	
	Lantana 'Gold Mound' Yellow Lantana	5 Gal		L	

GROUNDCOVER

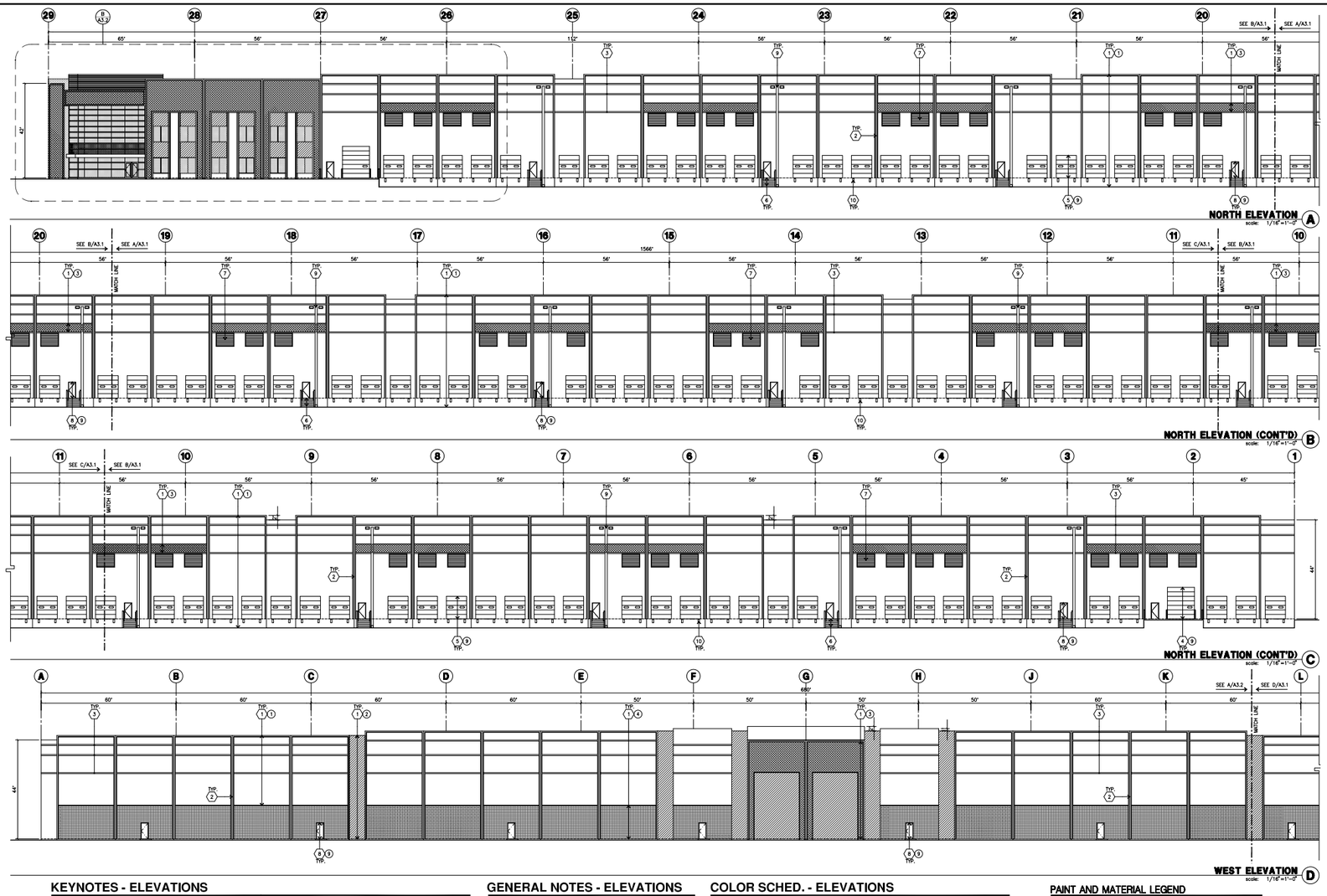
SYMBOL	BOTANICAL/COMMON NAME	SIZE	SPACING	WUCOLS	REMARKS
	Acacia redolens 'Low Boy' Dwarf Acacia	1 Gal	8' O.C.	L	
	Baccharis p. 'Pigeon Point' Dwarf Coyote Bush	1 Gal	6' O.C.	L	
	Baccharis p. 'Centenial' Coyote Bush	1 Gal	48" O.C.	L	
	Carex pansa California Meadow Sedge	4" Pots	12" O.C.	M	Grass
	Carex tumulicola Foothill Sedge	1 Gal	18" O.C.	M	Grass
	Festuca mairei Altas Fescue	1 Gal	24" O.C.	M	Grass
	Festuca o. 'Glauca' Blue Fescue	1 Gal	12" O.C.	M	Grass
	Hemerocallis hybridus-Yellow Yellow Day Lily	1 Gal	24" O.C.	M	
	Juncus patens California Rush	1 Gal	36" O.C.	M	Grass
	Lantana 'Gold Mound' Yellow Lantana	1 Gal	36" O.C.	L	
	Liriope gigantea Big Blue Lily Turf	1 Gal	24" O.C.	L	
	Lonicera j. 'Halliana' Hall's Honeysuckle	1 Gal	48" O.C.	L	
	Muhlenbergia capillaris Pink Muhly	1 Gal	36" O.C.	L	Grass
	Myoporum parvifolium Myoporum	1 Gal	36" O.C.	L	
	Nassella tenuissima Mexican Feather Grass	1 Gal	24" O.C.	VL	Grass
	Pennisetum messiacum Red Bunny Tails Fountain Grass	1 Gal	30" O.C.	L	Grass
	Pennisetum a. Little Bunny Little Bunny Fountain Grass	1 Gal	12" O.C.	L	Grass
	Pennisetum orientale Oriental Fountain Grass	1 Gal	30" O.C.	L	Grass
	Pennisetum rubrum Purple Fountain Grass	1 Gal	36" O.C.	L	Grass
	Rosa 'Flower Carpet' -Red Red Flower Carpet Rose	1 Gal	30" O.C.	L	
	Rosmarinus o. 'Huntington Carpet' Prostrate Rosemary	1 Gal	48" O.C.	L	
	Salvia 'Bee's Bliss' Bee's Bliss Sage	1 Gal	48" O.C.	L	
	Senecio mandraliscae Blue Fingers	4" Pots	12" O.C.	M	
	Sesleria autumnalis Moor Grass	1 Gal	18" O.C.	M	Grass
	Trachelopspermum jasminiodes Star Jasmine	1 Gal	24" O.C.	M	
	Tulbaghia violacea Society Garlic	1 Gal	24" O.C.	M	

Source(s): Hunter Landscape (12-2016)

NOT TO SCALE

Figure 3-17

CONCEPTUAL LANDSCAPE PLAN



KEYNOTES - ELEVATIONS

1. CONCRETE TILT-UP PANEL(PAINTED). FINISH GRADE VARIES. SEE "C" DRAWINGS. WATERPROOF ALL WALLS WHERE GRADE IS HIGHER AND EXPOSED TO THE WEATHER ONE SIDE. WATERPROOFING TO BE PROTECTED WITH PROTECTION BOARD AND A MIN. OF 6" OF GRAVEL. PROVIDE TRENCH DRAIN AT BOTTOM AND DAYLIGHT TO CURB OR TAKE TO STORM DRAIN. NOT REQUIRED AT DOCK HIGH CONDITION OR AT RAMP WALLS.
2. PANEL JOINT.
3. PANEL REVEAL. ALL REVEALS TO HAVE A MAX. OF 3/8" CHAMFER. REVEAL COLOR TO MATCH ADJACENT BUILDING FIELD COLOR. U.N.O.
4. OVERHEAD DOOR ⊕ DRIVE THRU - SEE DOOR SCHEDULE. PROVIDE COMPLETE WEATHER-STRIPPING PROTECTION ALL AROUND.
5. OVERHEAD DOOR ⊕ DOCK HIGH. SEE DOOR SCHEDULE. PROVIDE COMPLETE WEATHER-STRIPPING PROTECTION ALL AROUND.
6. CONCRETE STAIR, LANDING AND GUARDRAIL W/ METAL PIPE HANDRAIL. PROVIDE NON SKID NOSING TO MEET ADA REQUIREMENTS. PROVIDE CONTRASTING COLORED 3" WIDE WARNING STRIPE INTEGRAL TO CONCRETE AT TOP LANDING AND BOTTOM TREAD PER ADA REQUIREMENTS.
7. METAL LOUVER. PAINT TO MATCH BUILDING COLOR.
8. HOLLOW METAL DOORS. SEE DOOR SCHEDULE. PROVIDE COMPLETE WEATHER STRIPPING ALL AROUND DOOR. PROVIDE FOR RAIN DIVERTER ABOVE DOOR.
9. EXTERIOR DOWNSPOUT AND OVERFLOW SCUPPER
10. DOCK BUMPER
11. ALUMINUM STOREFRONT FRAMING WITH TEMPERED GLAZING AT ALL DOORS, SIDELITES ADJACENT TO DOORS AND GLAZING WITH BOTTOMS LESS THAN 18" ABOVE FINISH FLOOR ELEVATION.
12. METAL CANOPY.

GENERAL NOTES - ELEVATIONS

A. ALL PAINT COLOR CHANGES TO OCCUR AT INSIDE CORNERS UNLESS NOTED OTHERWISE.
B. ALL PAINT FINISHES ARE TO BE FLAT UNLESS NOTED OTHERWISE.
C. T.O.P. EL.= TOP OF PARAPET ELEVATION.
D. F.F. = FINISH FLOOR ELEVATION.
E. STOREFRONT CONSTRUCTION: GLASS, METAL ATTACHMENTS AND LINTELS SHALL BE DESIGNED TO RESIST 90 MPH. EXPOSURE "C" WINDS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO INSTALLATION.
F. CONTRACTOR SHALL FULLY PAINT ONE CONCRETE PANEL W/ SELECTED COLORS. ARCHITECT AND OWNER SHALL APPROVE PRIOR TO PAINTING REMAINDER OF BUILDING.
G. BACK SIDE OF PARAPETS TO HAVE SMOOTH FINISH AND BE PAINTED WITH ELASTOMERIC PAINT.
H. FOR SPANDREL GLAZING, ALLOW SPACE BEHIND SPANDREL TO BREATH.
J. USE ADHESIVE BACK WOOD STRIPS FOR ALL REVEAL FORMS.
K. THE FIRST COAT OF PAINT TO BE ROLLED-ON AND THE SECOND COAT TO BE SPRAYED-ON

COLOR SCHED. - ELEVATIONS

1	CONCRETE TILT-UP PANEL	PAINT BRAND_DUNN EDWARDS DEW 380 WHITE
2	CONCRETE TILT-UP PANEL	PAINT BRAND_DUNN EDWARDS DE 6352 DECEMBER SKY
3	CONCRETE TILT-UP PANEL	PAINT BRAND_DUNN EDWARDS DE 6353 SILVER LINED
4	CONCRETE TILT-UP PANEL	PAINT BRAND_DUNN EDWARDS DE 6355 TARNISHED SILVER
5	CONCRETE TILT-UP PANEL	PAINT BRAND_DUNN EDWARDS DEC 799 WHARF VIEW
6	MULLIONS	COLOR_CLEAR ANODIZED MULLIONS
7	GLAZING	COLOR_MEDIUM PERFORMANCE BLUE REFLECTIVE GLAZING
8	METAL CANOPY	PAINT BRAND_PAINTED TO MATCH DE 6352 DECEMBER SKY
9	DOORS	PAINT BRAND_MATCH TO ADJACENT BUILDING COLOR

PAINT AND MATERIAL LEGEND

1 2 3 4 5

GLAZING LEGEND

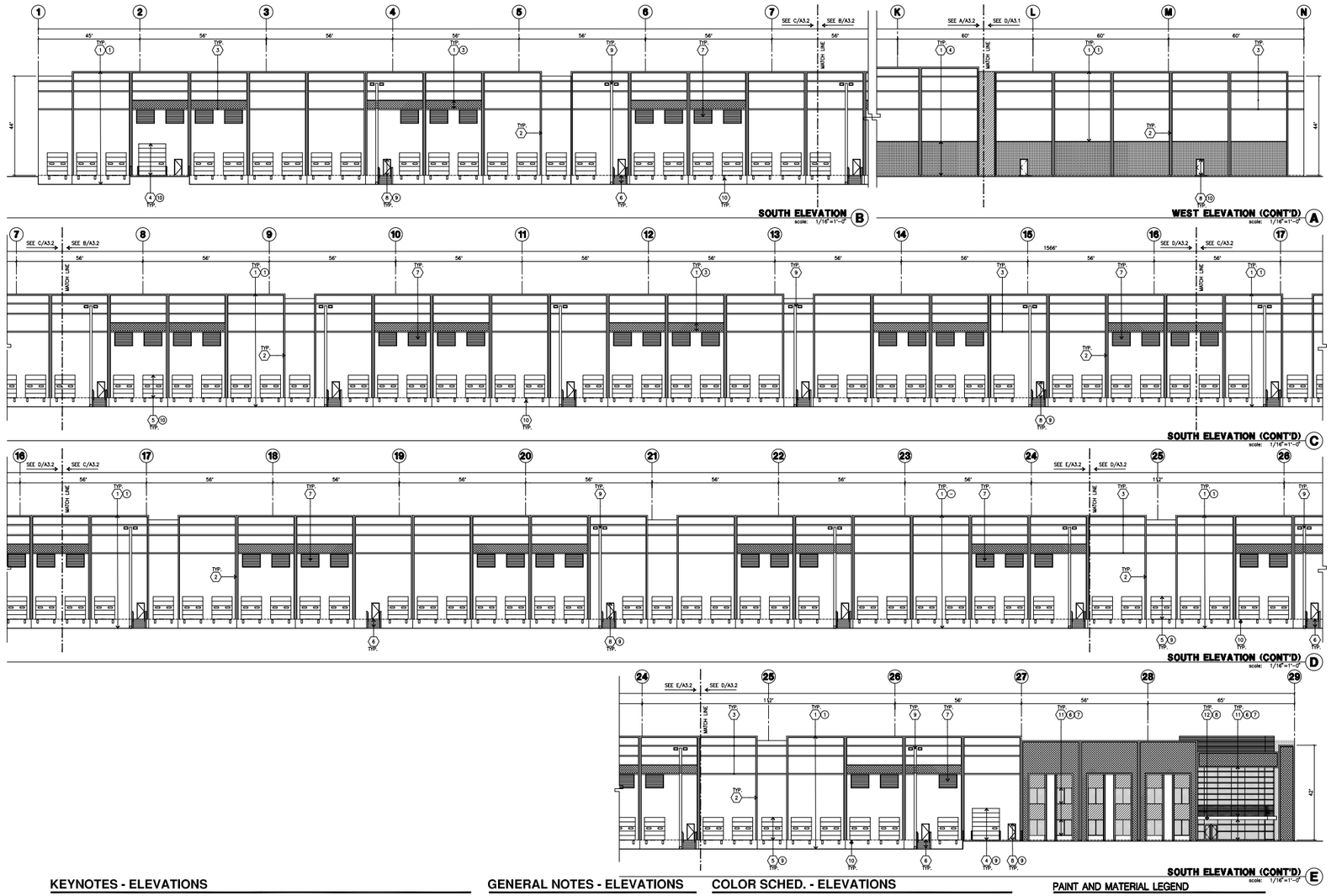
SPANDREL GLASS V VISION GLASS

ALL GLAZING TO BE TEMPERED GLASS.

Source(s): HPA Architecture (12-2016)

Figure 3-18

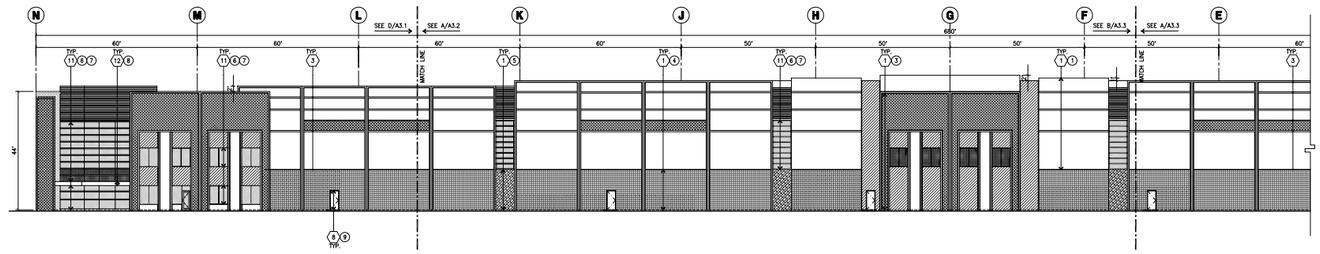
ARCHITECTURAL PROJECTIONS (SHEET 1 OF 3)



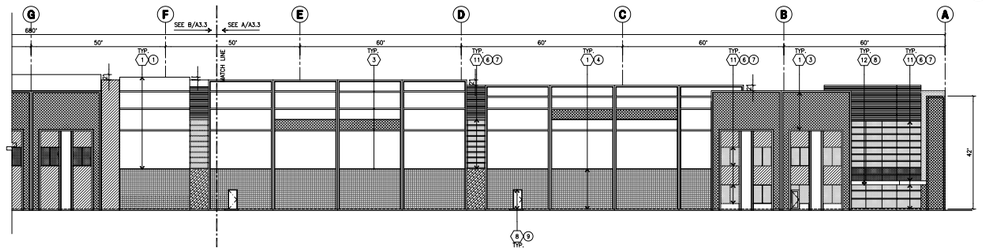
Source(s): HPA Architecture (12-2016)

Figure 3-19

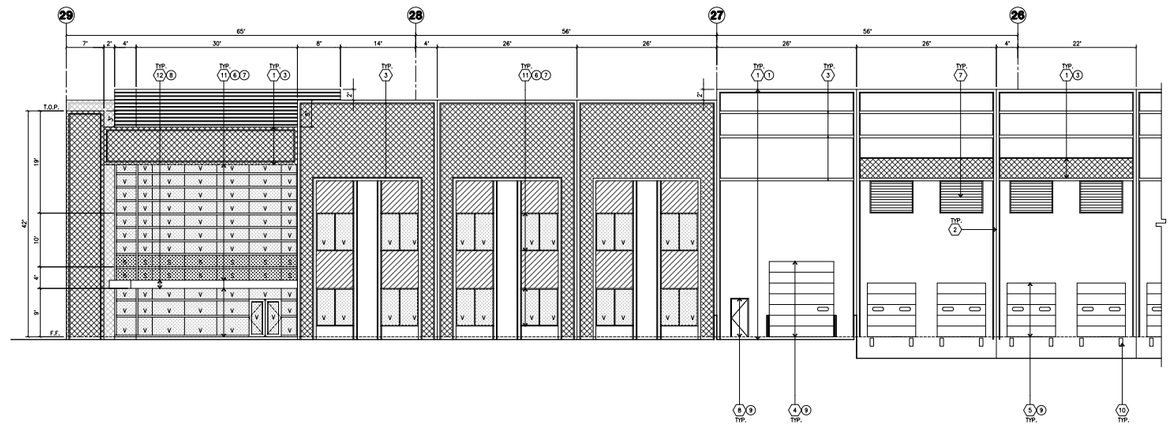
ARCHITECTURAL PROJECTIONS (SHEET 2 OF 3)



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



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



ENLARGED NORTH ELEVATION (C)
scale: 1/8"=1'-0"

KEYNOTES - ELEVATIONS

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COLOR SCHED. - ELEVATIONS

1	CONCRETE TILT-UP PANEL	PAINT BRAND: DUNN EDWARDS DEW 380 WHITE
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3	CONCRETE TILT-UP PANEL	PAINT BRAND: DUNN EDWARDS DE 6353 SILVER LINED
4	CONCRETE TILT-UP PANEL	PAINT BRAND: DUNN EDWARDS DE 6355 TARNISHED SILVER
5	CONCRETE TILT-UP PANEL	PAINT BRAND: DUNN EDWARDS DEC 799 WHARF VIEW
6	MULLIONS	COLOR: CLEAR ANODIZED MULLIONS
7	GLAZING	COLOR: MEDIUM PERFORMANCE BLUE REFLECTIVE GLAZING
8	METAL CANOPY	PAINT BRAND: PAINTED TO MATCH DE 6352 DECEMBER SKY
9	DOORS	PAINT BRAND: MATCH TO ADJACENT BUILDING COLOR

PAINT AND MATERIAL LEGEND

1 2 3 4 5

GLAZING LEGEND

SPANDREL GLASS VISION GLASS

ALL GLAZING TO BE TEMPERED GLASS.

Source(s): HPA Architecture (12-2016)

Figure 3-20

ARCHITECTURAL PROJECTIONS (SHEET 3 OF 3)

4.0 ENVIRONMENTAL ANALYSIS

4.0.1 SUMMARY OF EIR SCOPE

In accordance with CEQA Guidelines §§ 15126-15126.4, EIR Section 4.0, *Environmental Analysis*, and its associated subsections, provide an analysis of potential direct, indirect, and cumulatively considerable impacts that could occur from planning, constructing, and operating the proposed Project.

In compliance with the procedural requirements of CEQA, the City of San Bernardino completed an Initial Study to determine the scope of environmental analysis for this EIR. Public comment on the scope of this EIR consisted of written comments received by the City of San Bernardino in response to the Notice of Preparation (NOP) issued for this EIR. Although the City of San Bernardino advertised and held an EIR scoping meeting on February 28, 2017 at the City of San Bernardino Council Chambers, City Hall, Lobby Level, 300 N D Street, San Bernardino, CA, no members of the public attended to offer oral comments. The Initial Study and all NOP comments received by the City of San Bernardino are included in *Technical Appendix A*.

Taking all known information and public comments into consideration, 12 environmental factors are evaluated in the Section 4.0 subsections, as listed below. Each subsection evaluates several specific subject matters related to the environmental factor. The title of each subsection is not limiting; therefore, please refer to each subsection listed below and contained in Section 4.0 for a full analysis of the subject matters addressed therein.

4.1 Aesthetics
4.2 Air Quality
4.3 Biological Resources
4.4 Cultural Resources
4.5 Geology/Soils
4.6 Greenhouse Gas Emissions
4.7 Hazards and Hazardous Materials
4.8 Hydrology/Water Quality
4.9 Land Use/ Planning
4.10 Noise
4.11 Transportation/Circulation
4.12 Utilities/ Service Systems

As concluded by the Project's Initial Study (included in *Technical Appendix A* to this EIR) and after consideration of all comments received by the City of San Bernardino on the scope of this EIR and documented in the City's administrative record for the proposed Project, five environmental factors were determined by the City of San Bernardino to have no potential to be significantly impacted by the Project. These five environmental factors are discussed briefly in Section 5.0, *Other CEQA Considerations*, and include: 1) Agriculture and Forestry Resources; 2) Mineral Resources 3) Population / Housing; 4) Public Services; and 5) Recreation.

Public Resources Code (PRC) § 21100(b)(3) and CEQA Guidelines § 15126.4 require EIRs to describe, where relevant, the wasteful, inefficient, and unnecessary consumption of energy caused by

a project. Accordingly, in addition to the subject matters listed above, in accordance with CEQA Guidelines Appendix F, *Energy Conservation*, this EIR addresses the topic of Energy Conservation in Section 5.0, *Other CEQA Considerations*.

4.0.2 SCOPE OF CUMULATIVE EFFECTS ANALYSIS

CEQA requires that an EIR contain an assessment of the cumulative impacts that may be associated with a proposed project. As noted in CEQA Guidelines § 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "A cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects creating related impacts" (CEQA Guidelines § 15130(a)(1)). As defined in CEQA Guidelines § 15355:

> *'Cumulative Impacts' refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.*
>
> *(a) The individual effects may be changes resulting from a single project or a number of separate projects.*
>
> *(b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.*

CEQA Guidelines § 15130(b) describes two acceptable methods for identifying a study area for purposes of conducting a cumulative impact analysis. These two approaches include: "1) a list of past, present, and probable future projects producing related or cumulative impacts, including if necessary, those projects outside the control of the agency ['the list of projects approach'], or 2) a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact ['the summary of projections approach']."

The summary of projections approach is used for analysis in this EIR, except for the evaluation of cumulative traffic and vehicular-related air quality, greenhouse gas, and noise impacts. The analysis of cumulative traffic impacts uses a combined approach, utilizing the summary of projections approach with the manual addition of past, present, and reasonably foreseeable projects that were not accounted for in the projections, where appropriate. This approach was determined to be appropriate by the City of San Bernardino because long-range planning documents contain a sufficient amount of information to enable an analysis of cumulative effect for all subject areas, with expectation of traffic and vehicular-related air quality, greenhouse gas, and noise effects, which require a greater level of detailed study. The cumulative impact analyses of vehicular-related air quality, greenhouse gas, and

noise impacts, which rely on data from the Project's traffic impact analysis, inherently utilize the combined approach. With the combined approach, the cumulative impact analyses for the air quality, greenhouse gas, noise, and traffic issue areas overstate the Project's (and Project-related components') potential cumulative impacts as compared to an analysis that would rely solely on the list of projects approach or solely on the summary of projections approach; therefore, the combined approach provides a conservative, "worst-case" analysis for cumulative air quality, greenhouse gas, noise, and traffic impacts.

The list of projects used to supplement the summary of projections approach for the cumulative traffic impact analysis (as well as vehicular-related air quality, greenhouse gas, and noise impact analyses) includes approved and pending development projects in proximity to the Project site that would contribute traffic to the same roadways as the Project, as well as several large, traffic-intensive projects farther from the Project site that have the potential to affect regional transportation facilities. As such, the cumulative impact analysis of traffic and vehicular-related air quality, greenhouse gas, and noise impacts includes 77 other past, present, and reasonably foreseeable projects within this study area in addition to the summary of projections. This methodology recognizes development projects that have the potential to contribute measurable traffic to the same intersections, roadway segments, and/or state highway system facilities as the proposed Project and have the potential to be made fully operational in the foreseeable future. Specific development projects included in the traffic and vehicular-related air quality, greenhouse gas, and noise cumulative impact analyses are listed in Table 4.0-1, *Cumulative Development Land Use Summary* and identified in Figure 4.0-1, *Cumulative Development Projects Location Map*.

For the cumulative impact analyses that rely on the summary projections approach (i.e., all issue areas with the exception of traffic and vehicular-related air quality, greenhouse gas, and noise, as described in the preceding paragraphs), the cumulative study area includes the City of San Bernardino (in which the Project site is located), in addition to the City of Highland, City of Redlands, City of Loma Linda, City of Grand Terrace, and the City of Colton, and unincorporated communities in the County of San Bernardino within a 5-mile radius of the Project site. These cities and unincorporated areas cover a territory of approximately 145 square miles that has similar environmental characteristics as the Project area. The study area exhibits similar characteristics in terms of climate, geology, and hydrology, and therefore is also likely to have similar biological and cultural resources. This study area also encompasses the service areas of the Project's primary public service and utility providers. Areas outside of this study area either exhibit topographic, climatological, or other environmental circumstances that are different from those of the Project area or are simply too far from the proposed Project site to produce environmental effects that could be considered cumulatively considerable. Exceptions include cumulative air quality effects, which considers the entire South Coast Air Basin (SCAB) and greenhouse gas emissions and associated global climate change, which potentially affect all areas of Earth. Additionally, analyses regarding hydrology and water quality consider the Project's potential cumulatively considerable impacts as they relate to other developments located within the boundary of the Santa Ana Watershed.

Environmental impacts associated with buildout of the cumulative study area were evaluated in CEQA compliance documents prepared for the respective General Plan for each of the above jurisdictions. The location where each of these CEQA compliance documents is available for review is provided below and herein incorporated by reference pursuant to CEQA Guidelines § 15150.

- Final San Bernardino General Plan Update and Associated Specific Plans EIR (SCH No. 2004031135), available for review at the City of San Bernardino Community Development Services Department, Planning Division, San Bernardino City Hall, 600 North Arrowhead Avenue, 3rd Floor San Bernardino, California 92401

- County of San Bernardino County General Plan EIR (SCH No. 2005101038), available for review at the County of San Bernardino Planning Department, 385 N. Arrowhead Avenue, San Bernardino, CA 92415.

- City of Highland General Plan EIR (SCH No. 2005021046), available for review at City of Highland Community Development Department, 27215 Base Line, Highland, CA 92346.

- City of Redlands General Plan EIR, available for review at City of Redlands Development Services Department, 210 East Citrus Avenue, Redlands, CA 92346.

- City of Loma Linda General Plan EIR (SCH No. 2003101159), available for review at City of Loma Linda Community Development Department, 25541 Barton Road, Loma Linda, CA 92354.

- City of Grand Terrace General Plan EIR (SCH No. 2008011109), available for review at City of Grand Terrace Community Development Department, 22795 Barton Road, Grand Terrace, CA 92313.

- City of Colton General Plan EIR (SCH No. 2012031037), available for review at City of Colton Development Services Department, 650 N. Cadena Drive, Colton, CA 92324.

4.0.3 IDENTIFICATION OF IMPACTS

Subsections 4.1 through 4.12 of this EIR evaluate the 12 environmental factors warranting detailed analysis, as determined by this EIR's Initial Study and in consideration of public comment on this EIR's NOP. The format of discussion is standardized as much as possible in each section for ease of review. The environmental setting is discussed first, followed by a discussion of the Project's (and Project-related components') potential environmental impacts based on specified CEQA thresholds of significance used as criteria to determine whether potential environmental effects are significant.

The thresholds of significance used in this EIR are based on the thresholds presented in CEQA Guidelines Appendix G and as applied by the City of San Bernardino to create the Project's Initial Study Checklist (included in *Technical Appendix A* to this EIR). The thresholds are intended to assist the reader of this EIR in understanding how and why this EIR reaches a conclusion that an impact would or would not occur, is significant, or is less than significant.

Serving as the CEQA Lead Agency for this EIR, the City of San Bernardino is responsible for determining whether an adverse environmental effect identified in this EIR should be classified as significant or less than significant. The standards of significance used in this EIR are based on the independent judgment of the City of San Bernardino, taking into consideration CEQA Guidelines Appendix G, the City's Code of Ordinances and adopted City policies, the judgment of the technical experts that prepared this EIR's Technical Appendices, performance standards adopted, implemented, and monitored by regulatory agencies, significance standards recommended by regulatory agencies, and the standards in CEQA that trigger the preparation of an EIR.

As required by CEQA Guidelines § 15126.2(a), impacts are identified in this EIR as direct, indirect, cumulative, short-term, long-term, on-site, and/or off-site impacts of the proposed Project and/or Project-related components. A summarized "impact statement" is provided in each subsection following the analysis. Each subsection also includes a discussion or listing of the applicable regulatory criteria (laws, policies, regulations) that the Project and its implementing actions are required to comply with (if any). If impacts are identified as significant after mandatory compliance with regulatory criteria and the implementation of proposed Project design features, feasible mitigation measures are presented that would either avoid the impact or reduce the magnitude of the impact. For any impact identified as significant and unavoidable, the City of San Bernardino would be required to adopt a statement of overriding considerations pursuant to CEQA Guidelines § 15093 in order to approve the Project despite its significant impact(s) to the environment. The statement of overriding considerations would list the specific economic, legal, social, technological, and other benefits of the Project, supported by substantial evidence in the Project's administrative record, that outweigh the unavoidable impacts.

Table 4.0-1 Cumulative Development Land Use Summary

TAZ	Project Name	Land Use[1]	Quantity	Units[2]
		City of San Bernardino		
1	ADP 15-49	Urgent Care Center	12.648	TSF
2	CUP 17-02	Car Wash	6.265	TSF
3	CUP 11-13, TTM 18829 & DA12-02	Senior Housing	74	DU
		Multi-Family Housing	337	DU
		Condos	38	DU
4	CUP 12-04	Religious Facility Addition	0.714	TSF
5	CUP 12-06	Commercial Retail	9.180	TSF
		Fast Food w/ Drive Thru	2.400	TSF
6	CUP 12-12	K-6 Charter School	300	STU
7	CUP 12-13	Auditorium, Community Center	20.000	TSF
8	CUP 12-14	Discount Store	9.026	TSF
9	CUP 12-20	Discount Store	10.500	TSF
10	CUP 12-22	Auditorium, Banquet Hall	5.233	TSF
		Restaurant	0.800	TSF
11	CUP 13-01	Discount Store	26.907	TSF
12	CUP 13-07	Discount Store	12.500	TSF
13	CUP 13-14	Gas Station w/ Convenience Market	2.789	TSF
14	CUP 16-07	Car Sales	2.780	TSF
15	CUP 16-10	Used Car Sales	0.644	TSF
16	Raising Cane's (CUP 16-12)	Fast Food w/ Drive Thru	3.823	TSF
17	CUP 16-14	Used Car Sales	6.480	TSF
18	CUP 14-13	Restaurant/Night Club	6.400	TSF
19	MUP 17-02	Auto Repair	9.290	TSF
20	CUP 14-20	Holistic Learning Center	16.266	TSF
21	CUP 16-17	Gas Station w/ Convenience Market	12	VFP
		Car Wash	3.800	TSF
22	Orange Show Road Warehouse	High-Cube Warehouse	342.000	TSF
23	Waterman Industrial Center	High-Cube Warehouse	564.652	TSF
24	CUP 15-02	Gas Station w/ Convenience Market	2.800	TSF
25	CUP 15-03	Two Restaurants w/ Drive Thru	3.000	TSF
26	Alliance California Gateway South	High-Cube Warehouse	1199.360	TSF
27	CUP 16-18	Used Car Sales	7.531	TSF
28	CUP 15-10	Banquet Hall	12.000	TSF
29	CUP 15-12	Restaurant w/ Drive Thru	2.800	TSF
30	CUP 15-14	Gas Station w/ Convenience Market	5.542	TSF
31	CUP 15-17	Charter School	6.832	TSF
32	CUP 15-19	High School Expansion	26.718	TSF
33	CUP 15-20	Hotel	32.000	TSF
34	CUP 16-02	Convenience Market	3.800	TSF
		Drive Thru Car Wash	2.800	TSF
		Restaurant	2.000	TSF
		Gas Station	16	VFP
35	CUP 16-24	Religious Facility	15.340	TSF
36	National Orange Show Industrial	High-Cube Warehouse	616.000	TSF
		General Light Industrial	57.750	TSF
		Warehousing	78.960	TSF
37	CUP 16-08	Car Dealership/Auto Repair	1.37	AC

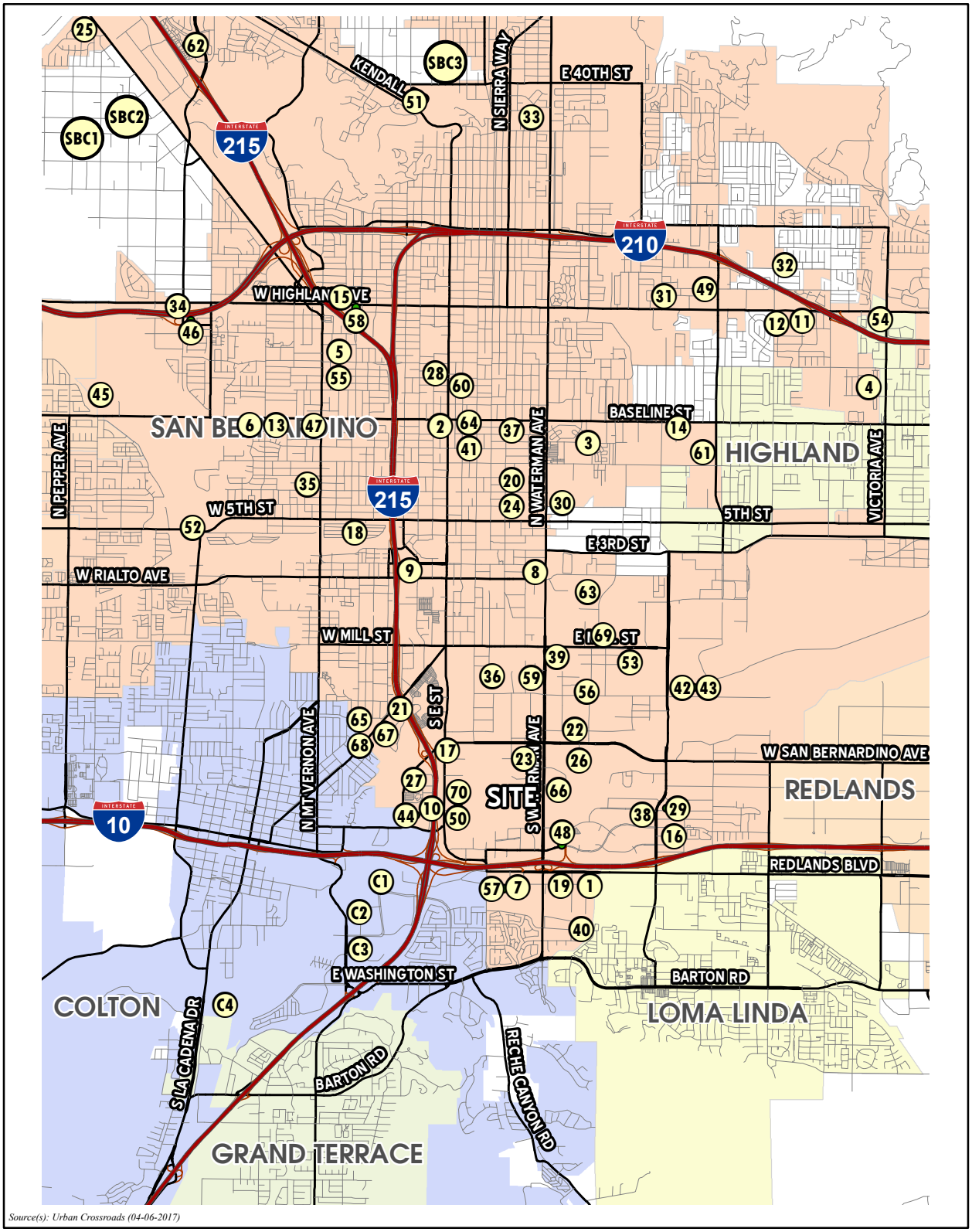
Table 4.0-1 Cumulative Development Land Use Summary

TAZ	Project Name	Land Use[1]	Quantity	Units[2]
38	CUP 17-03	Starbucks w/Drive Thru	2.260	TSF
		Gas Station w/Convenience Market and Car Wash	6	VFP
39	DP2 12-02	Warehousing	345.802	TSF
40	DP2 12-03	Automobile Parts and Service Center	24.953	TSF
41	DP-D16-23	Dental Office	2.682	TSF
42	DP2 12-10	General Light Industrial	480.570	TSF
43	DP2 12-14	General Light Industrial	871.900	TSF
44	DP2 12-18	Automobile Dealership	30.300	TSF
45	DP-D13-01	Shipping Container Storage Yard	12.0	AC
46	DP-D13-02	Discount Store	12.406	TSF
47	DP-D13-05	Commercial Retail	9.180	TSF
48	DP-D14-17	Restaurant	11.300	TSF
49	CUP 16-26	Preschool	7.680	TSF
50	DP-D15-03	Recreational Facility	33.600	TSF
51	CUP 16-29	Veterinary Hospital	7.660	TSF
52	CUP 17-04	Storage Yard w/Steel Fabrication	5.000	TSF
53	DP-D15-06	Industrial Building	202.000	TSF
		Industrial Building	177.000	TSF
54	CUP 17-08	Motel	30	RM
55	DP-D16-20	Commercial	5.164	TSF
56	DP-D15-09	Industrial Building	154.560	TSF
57	DP-D15-12	Office Building	153.077	TSF
58	CUP 17-05	Gas Station w/Convenience Market and Car Wash	8	VFP
59	DP-D15-14	Industrial Building	127.327	TSF
60	DP-P16-07	Mixed Use	1.276	TSF
		Residential	1.448	TSF
61	DP-D16-06	Commercial Building Expansion	44.190	TSF
62	DP-D16-07	Building	32.000	TSF
63	DP-P16-04	Apartment	38	DU
64	DP-P14-06	Commercial Building	5.200	TSF
65	DP-P14-07	Senior Housing	82	DU
66	DP-D16-22	Warehouse	14.202	TSF
67	DP-P15-01	Industrial Park	94.965	TSF
68	DP-P15-04	Industrial Building	14.857	TSF
69	DP-D16-24	Industrial Building	476.632	TSF
70	DP-D16-27	Office Building	43.953	TSF
City of Colton				
C1	Steel Road/Santa Ana	Industrial Park	159.276	TSF
C2	Pacific Rail - Metal Shredder	Metal Shredder	1	MS
C3	Education/Office Building	General Office	114.071	TSF
C4	Soil Safe Land Improvement Project	Soil Safe Project	19	AC
San Bernardino County				
SBC1	DP2 12-09	Industrial Park	1,789.990	TSF
SBC2	DP-D15-13	Industrial Building	337.000	TSF
SBC3	CUP 16-15	Self-Storage Facility	91.500	TSF

[1] SFDR = Single Family Detached Residential

[2] DU = Dwelling Units; TSF = Thousand Square Feet; STU = Students; VFP = Vehicle Fueling Positions; MS = Metal Shredder

(Urban Crossroads, Inc., 2017f, Table 4-3)



Source(s): Urban Crossroads (04-06-2017)

Figure 4.0-1

NOT TO SCALE

CUMULATIVE DEVELOPMENT PROJECTS LOCATION MAP

4.1 AESTHETICS

This Subsection describes the aesthetic qualities and visual resources present on the Project site, and in the Project site's vicinity, and evaluates the potential effects that the Project may have on aesthetic resources. Descriptions of existing visual characteristics, both on-site and in the vicinity of the Project site, and the analysis of potential impacts to aesthetic resources are based, in part, on field observations and site photographs collected by T&B Planning, Inc. in June 2016 (T&B Planning, Inc., 2016); analysis of aerial photography (Google Earth Pro, 2017); and Project application materials submitted to the City of San Bernardino, as described in Section 3.0, *Project Description*, of this EIR. The analysis provided in this Subsection also is based in part on information contained in the City of San Bernardino General Plan (City of San Bernardino, 2005a), City of San Bernardino General Plan Update EIR (City of San Bernardino, 2005b), and the City of San Bernardino Municipal Code (City of San Bernardino, 2017). All references used in this Subsection are included in EIR Section 7.0, *References*.

4.1.1 EXISTING CONDITIONS

The Project site is generally located in the south-central portion of the City of San Bernardino in the southwestern portion of the County of San Bernardino. Specifically, the Project site is located on an approximately 62.02-acre property located south of Dumas Street and east of S. Waterman Avenue (refer to EIR Figure 3-2, *Vicinity Map*). Topographically, the Project site is relatively flat and is situated at an elevation of approximately 1,000 feet above mean sea level (AMSL) (refer to EIR Figure 3-3, *USGS Topographic Map*).

The Project site is located in a portion of San Bernardino that is developing as a center for distribution warehousing, e-commerce, and light industrial land uses. The Project site is bordered on the northwest by property used for a golf driving range. North of the driving range and south of Dumas Street is land developed with scattered residences and the Great Presbyterian Church. North of Dumas Street is vacant land, scattered residences, truck trailer storage lots, and the ATSF railway. The Project site is bordered on the south by the Santa Ana River and Wash. The San Timoteo Wash joins the Santa Ana River and Wash southeast of the Project site. South of the Santa Ana River and Wash is the Santa Ana River Trail followed by fully developed office and commercial spaces. The Project site is bordered on the east by South Waterman Avenue, east of which are fully developed commercial and office spaces. Additionally, a portion of the Santa Ana River and Wash is located southeast of the Project site. The Project site is bordered on the west by East Twin Creek and an unpaved trail that runs along the bank of the channel. West of East Twin Creek is the San Bernardino Water Reclamation Plant (WRF). (Refer to EIR Figure 2-1, *Surrounding Land Uses and Development* and Figure 2-5, *Aerial Photograph*)

The Project site is fully developed and operating as the San Bernardino Public Golf Club, which comprises the majority of the site. The golf course is generally dominated by small hills and slopes and contains expansive grass lawns (fairways), mature trees and shrubs, paved and unpaved golf cart trails, numerous sand pits, and four water features. At the time of T&B Planning's site visit, due to drought conditions, the fairways of the golf course were brownish in color. Site improvements

associated with the golf course are located in the northern portion of the Project site and include a clubhouse/restaurant, parking lot, maintenance building, lighting features, and two driving ranges (with associated netting). The first driving range is located on-site in the northwestern portion of the Project site and the second driving range is located off-site to the north of the Project site. The entry driveway for the golf course is accessible from S. Waterman Avenue and traverses the northeastern portion of the site to the golf course's parking lot in the northwest portion of the Project site. A SCE transmission easement transects the northern portion of the site from east to west.

A. Scenic Vistas and Scenic Resources

The Project site is located within the City of San Bernardino, which contains gently sloping topography and is primarily urban in character. The low-lying valley is framed by the San Bernardino Mountains on the north and east, Blue Mountain and Box Springs Mountain to the south, and the San Gabriel Mountains and the Jurupa Hills to the northwest and southwest. The background views of the City of San Bernardino are dominated by the San Bernardino Mountains. (City of San Bernardino, 2005b, p. 5.5-1) The Project site is located in the low-lying south-central portion of the City and is not in close proximity to any of these scenic resources. The Santa Ana River is located to the south of the Project site and a segment of the Santa Ana River Trail follows the river corridor. The City's General Plan considers the Santa Ana River that meanders through the valley in the southern portion of the City to provide an aesthetically pleasing quality to the southern portions of the City (City of San Bernardino, 2005b, p. 5-1-8) (City of San Bernardino, 2005b, p. 5.1-8). As depicted on Figure 3-3, USGS *Topographic Map,* in EIR Section 3.0, *Project Description,* the Project site is situated at an elevation of approximately 1,000 feet AMSL.

The Project site also is not located within or adjacent to a scenic highway corridor and does not contain scenic resources, such as trees of scenic value, rock outcroppings, or historic buildings. There are no State-designated scenic highways within the City of San Bernardino or in the vicinity of the Project site. The nearest State-eligible scenic highway to the Project site is State Route (SR) 38 (from east of South Fork Campground to State Lane), located approximately 6.0 miles east of the Project site (Cal. DOT, 2011) (Google Earth Pro, 2017).

B. Visual Character of Project Site and Surrounding Area

A photographic inventory was prepared to illustrate the existing aesthetic conditions of the Project site. Figure 4.1-1, *Site Photograph Key Map,* depicts the location of six public viewing areas. Figure 4.1-2, *Site Photographs 1-3,* and Figure 4.1-3, *Site Photographs 4-6,* depict the existing aesthetic conditions as seen from six public viewing areas. The site photographs presented on the following pages were stitched together from multiple photos in order to provide wider panoramic views. Because of this, portions of the photographs may appear slightly distorted.

1. Site Photograph 1

As shown on Figure 4.1-2, Site Photograph 1 provides a 180-degree view from the northwest corner of the Project site, looking southeast to west. The photograph provides a view along the site's northern

frontage on Dumas Street. The left-hand side of the photograph provides a view of Dumas Street and an off-site lot, looking southeast. The center of the photograph provides a view across the Project site, looking south. The right-hand side of the photograph provides a view along the site's northern frontage to Dumas Street, looking west. At this location, Dumas Street, a fenced utility enclosure, and a wooden utility pole are visible in the center foreground of the photograph. Neighboring, vacant lots located off-site are shown in the right- and left-hand midground of the photograph. An existing netting enclosure associated with the golf course driving range is visible in the background center of the photograph. Electricity poles and the San Bernardino WRF are visible in the right-hand background of the photograph. Blue Mountain and its associated foothills (located approximately 3.1 miles south of the Project site) are faintly visible on the horizon in the background center of the photograph, albeit obscured by the atmospheric haze typical of the region.

2. Site Photograph 2

As shown on Figure 4.1-2, Site Photograph 2 provides a 90-degree view from the northeast corner of the Project site, looking south to west. The left-hand side of the photograph provides a view along the site's eastern boundary, looking south. The center of the photograph provides a view across the Project site, looking southwest. The right-hand side of the photograph provides a view along the site's northern boundary, looking west. The base of a SCE utility structure is visible in the center foreground of the photograph. Ornamental trees and lawns (fairways) are visible spanning the center and left background of the photograph. S. Waterman Avenue and the entry monument to the golf course are visible in the left-hand midground of the photograph. The chain-link fence that encloses the off-site driving range (located north of the Project site) is visible in the right-hand side of the photograph. Blue Mountain and its associated foothills (located approximately 3.1 miles south of the Project site) are faintly visible on the horizon in the left-hand background of the photograph, albeit obscured by the atmospheric haze typical of the region.

3. Site Photograph 3

As shown on Figure 4.1-2, Site Photograph 3 provides a 180-degree view from the eastern boundary of the Project site, looking south to north. The left-hand side of the photograph provides a view along the site's eastern boundary, looking south. The center of the photograph provides a view across the Project site, looking west. The right-hand side of the photograph provides a view along the site's eastern boundary, looking north. S. Waterman Avenue is visible in the foreground of the photograph. The intersection of S. Waterman Avenue and Park Center Drive (which functions as the entry point to the golf course) and a bus stop are visible in the center midground of the photograph. The entry monument to the golf course and the SCE utility structure are visible in the right-hand midground of the photograph. Large ornamental trees dominate the left-hand midground and center horizon of the photograph. Blue Mountain and its associated foothills (located approximately 3.1 miles south of the Project site) are faintly visible on the horizon in the left-hand background of the photograph, albeit obscured by the atmospheric haze typical of the region.

4. Site Photograph 4

As shown on Figure 4.1-3, Site Photograph 4 provides a 90-degree view from the southeast corner of the Project site, looking west to north. The left-hand side of the photograph provides a view along the site's southern boundary, looking west. The center of the photograph provides a view across the Project site, looking northwest. The right-hand side of the photograph provides a view along the site's eastern boundary, looking north. A hill covered with scattered shrubs and a paved golf cart pathway, which runs along the perimeter of the golf course, are visible in the foreground of the photograph. Two electricity poles are visible in the left-hand side and right-hand side of the photograph. Sand pits, ornamental lawns/trees, and fairways are visible in the center midground of the photograph. Large ornamental trees dominate the background of the photograph. The San Bernardino Mountains (located approximately 8.0 miles north of the Project site) are faintly visible on the horizon in the right-hand horizon of photograph and the Jurupa Hills (located approximately 8.1 miles southwest of the Project site) are faintly visible on the horizon in the left-hand background of the photograph, albeit obscured by the atmospheric haze typical of the region.

5. Site Photograph 5

As shown on Figure 4.1-3, Site Photograph 5 provides a 90-degree view taken from approximately 0.15-mile south of the southeast corner of the Project site, looking west to north. The left-hand side of the photograph provides a view along the Santa Ana River Trail, looking west. The center of the photograph provides a northwestern view across the Santa Ana River, looking northeast toward the Project site. The right-hand side of the photograph provides a northern view across the Santa Ana River, looking toward the Project site's southeastern corner. A collection of large trees and shrubs, located along the southern bank of the Santa Ana River, is visible in the center foreground of the photograph. S. Waterman Avenue, which crosses over the Santa Ana River, is visible on the right-hand side of the photograph. The right-hand background of the photograph looks toward the southeastern boundary of the Project site; however, views of the Project site are fully obscured by large trees and shrubs located along the northern bank of the Santa Ana River. The fully paved Santa Ana River Trail extends along the left-hand side of the photograph toward the horizon. The San Bernardino Mountains (located approximately 8.0 miles north of the Project site) are faintly visible on the horizon in the right-hand horizon of the photograph, albeit obscured by the atmospheric haze typical of the region.

6. Site Photograph 6

As shown on Figure 4.1-3, Site Photograph 6 provides a single-shot view taken from approximately 0.15-mile south of the southern boundary of the Project site, looking west to northwest. The left-hand side of the photograph provides a view along the Santa Ana River Trail, looking west. The center of the photograph provides a northwestern view across the Santa Ana River, looking toward the southwestern boundary of the Project site. The right-hand side of the photograph provides a northwestern view across the Santa Ana River, looking toward the Project site. The intersection of the San Timoteo Wash and the Santa Ana River is visible in the center foreground and midground of the photograph, where running water, grasses, rocks, and shrubs can be seen. The fully paved Santa Ana

River Trail and associated chain-linked fence is visible the left-hand midground and background of the photograph. The center and right-hand background of the photograph looks toward the southwestern boundary of the Project site; however, views of the Project site are fully obscured by large trees and shrubs located along the northern bank of the Santa Ana River.

C. Light and Glare

Under existing conditions, the Project site is fully developed and operating as a public golf course. As such, there are various artificial sources of light located throughout the Project site, including light poles associated with the parking lot, clubhouse, and maintenance area, and small lighting fixtures adjacent to golf cart pathways. The golf course does not operate during nighttime hours; therefore, the Project site does not contain large flood light fixtures.

Artificial light sources occur in the immediate vicinity of the Project site, with the most notable sources of light emanating from the intersection of Park Center Drive and S. Waterman Avenue at the eastern boundary of the Project site, the parking lot associated with the office buildings northeast of the Project site, and the commercial/business developments east of the Project site.

4.1.2 APPLICABLE REGULATORY REQUIREMENTS

A. City of San Bernardino Development Code

The City of San Bernardino Development Code § 19.20.030 includes the following standards for lighting, which apply to all new developments within the City:

> *Exterior lighting shall be energy-efficient and shielded or recessed so that direct glare and reflections are contained within the boundaries of the parcel, and shall be directed downward and away from adjoining properties and public rights-of-way. No lighting shall blink, flash, or be of unusually high intensity or brightness. All lighting fixtures shall be appropriate in scale, intensity, and height to the use it is serving. Security lighting shall be provided at all entrances/exits.*

4.1.3 BASIS FOR DETERMINING SIGNIFICANCE

The Project would result in a significant impact to aesthetics if the Project or any Project-related component would:

a. *Have a substantial adverse effect on a scenic vista;*
b. *Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway;*
c. *Substantially degrade the existing visual character of the site and its surroundings; or*
d. *Create a new source of substantial light or glare, which would adversely affect daytime or nighttime view of the area.*

4.1.4 IMPACT ANALYSIS

Threshold a) Would the Project have a substantial adverse effect on a scenic vista?

As shown in Figure 4.1-2 and Figure 4.1-3, the Project site is fully developed and operating as a public golf course and does not contribute to any scenic vistas. The City of San Bernardino General Plan does not identify any scenic vistas or scenic corridors within the vicinity of the Project site (City of San Bernardino, 2005a, pp. 12-22 - 12-23).

Scenic vistas within the City of San Bernardino are defined by the San Bernardino Mountains to the north and east, the Blue Mountains and Box Springs Mountains to the south, the San Gabriel Mountains to the northwest, and the Jurupa Hills to the southwest. The Project site is located in the low-lying, south-central portion of the City and is not in close proximity to these major scenic resources. Also, these distant landforms are only faintly visible from the Project's vicinity under typical conditions due to the atmospheric haze characteristic of the region (as shown on Figure 4.1-2 and Figure 4.1-3). On clear days when the San Bernardino Mountains, Blue Mountains, Box Springs Mountains, San Gabriel Mountains, and/or Jurupa Hills are visible, the proposed high cube warehouse building – which would reach a height up to 44 feet above finished grade – would not block views from public viewing areas (i.e., public roads or trails) because these landforms would still be visible beyond the building and along the horizon. The Project Applicant applied for a Variance (VAR 16-03) to account for a possible increase in the height of the building, including architectural projections, to a maximum height of 50 to 55 feet. If the variance were granted for the Project, and the height of the building was increased, the Project would still not block views from public viewing areas (i.e., public roads or trails) because these landforms would still be visible beyond the building and along the horizon. The height of the building will be determined and approved by the City of San Bernardino upon final Project design.

The Santa Ana River is located south of the Project site. The Santa Ana River which is identified in the City of San Bernardino General Plan as having scenic qualities; however, the River channel's elevation sits below the existing grade of the Project site and is not visible from public viewing areas along the Project site's frontage with S. Waterman Avenue or Dumas Street under existing conditions. (City of San Bernardino, 2005a, p. 12-22). Accordingly, development of the Project would not adversely affect any existing scenic view of the Santa Ana River from public viewing areas.

Based on the foregoing analysis, the Project would have a less than significant effect on scenic vistas.

Threshold b) Would the Project substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

The Project site is not located within or adjacent to a scenic highway corridor and does not contain scenic resources such as trees of scenic value, rock outcroppings, or historic buildings that are visible from a state scenic highway. Furthermore, there are no State-designated scenic highways within the City of San Bernardino or in the vicinity of the Project site under existing conditions (Caltrans "Eligible (E) and Officially Designated (OD) Routes"). There are no State-designated scenic highways within

the City of San Bernardino or in the vicinity of the Project site. The nearest State-eligible scenic highway to the Project site is SR 38 (from east of South Fork Campground to State Lane), located approximately 6.0 miles east of the Project site (Cal. DOT, 2011) (Google Earth Pro, 2017).

Due to distance and intervening development, the Project's proposed physical features (one high cube logistics warehouse building with loading docks, auto and truck parking stalls truck courts and drive aisles, landscaping, a detention basin, utility infrastructure, a SCE transmission line easement (existing), lighting, signage, on- and off-site roadways, and other associated improvements) would not be visible from SR 38. Therefore, because the Project site is not visible from a state scenic highway and contains no scenic resources visible from a scenic highway under existing conditions, the Project would not adversely impact the view shed within a scenic highway corridor and would not damage important scenic resources within a scenic highway corridor, including trees, rock outcroppings, and historic buildings. Thus, no impact would occur.

Threshold c) Would the Project substantially degrade the existing visual character of the site and its surroundings?

A. Temporary Construction-Related Activities

As described in EIR Section 3.0, *Project Description*, the Project would be constructed in a single phase with an opening year of 2018. During construction activities, heavy equipment would be used, which would be visible to the immediately surrounding areas during the temporary construction period. Construction activities are a common occurrence in the developing Inland Empire region of Southern California and are not considered to substantially degrade the visual quality of an area. Furthermore, except for the short-term use of cranes during building construction and lifts during the architectural coating phase, the construction equipment is expected to be low in height and not visible to the surrounding area beyond immediately surrounding properties. All Project-related construction activities would be temporary in nature and all construction equipment would be removed from the Project site following completion of the Project's construction activities.

B. Project Buildout

Upon buildout of the proposed Project, views of the site from the surrounding area would change from that of a public golf course with associated structures and improvements to a redeveloped site containing one high cube logistics warehouse building. As part of this Project, and as more fully described in EIR Section 3.0, the proposed building would consist of conventional concrete tilt-up construction (refer to EIR Section 3.0, *Project Description* for a depiction of the building's architectural elevations). As discussed above, site improvements would include auto and truck parking stalls truck courts and drive aisles, landscaping, a detention basin, utility infrastructure, a SCE transmission line easement (existing), lighting, signage, and other associated improvements.

In order to determine if the Project would substantially degrade the existing visual character or quality of the site and its surrounding area, an analysis of the representative site photo locations is included

below. Refer also to the Section 3.0, *Project Description* for illustrations of the Project's proposed design.

1. Site Photograph 1

As shown on Figure 4.1-2, Site Photograph 1 provides a 180-degree view from the northwest corner of the Project site, looking southeast to west. The Project site's landscaped frontage with Dumas Street and the Project's northern entry driveway would be visible from this location. Upon buildout of the Project, ornamental landscaping, including deciduous and evergreen trees, shrubs, and groundcover would be visible in the center and right-hand foreground of the photograph. From this vantage point, the Project's northern entry driveway would be visible in the background center of the photograph extending to the right-hand side of the photograph. The tractor-trailer parking lot north of the building would be visible in the center midground of the photograph. The northern façade of the building would be visible in the background of the photograph (center and left-hand side) extending toward the horizon. From this viewpoint, the visual prominence of the building would be reduced by existing and proposed trees (as well as colorful shrubs and groundcovers) located in the center and left-hand midground of the photograph. The Project would not block or substantially obscure the visual prominence of Blue Mountain and its associated foothills from this vantage point; the mountains would be visible above the Project and along the horizon, albeit obscured by the atmospheric haze typical of the region.

2. Site Photograph 2

As shown on Figure 4.1-2, Site Photograph 2 provides a 90-degree view from the northeast corner of the Project site, looking south to west. From this location, the SCE utility structure would remain in the same position and the northeastern corner of the building would be partially visible in the center mid-ground, although mostly screened by densely planted ornamental landscaping in the foreground (trees, shrubs, and groundcover). The northeast corner of the building would house an office area featuring enhanced architectural treatments. The automobile parking lot in the northeast corner of the Project site would be visible in the center and left-hand midground of the photograph, although mostly screened by densely planted ornamental landscaping. Landscaping also would be provided along the perimeter of the parking lot and interior to the parking lot (via finger islands). The eastern and northern façades of the building would be partially visible from the center mid-ground of the photograph, extending to the horizon. Views of the eastern and northern façades of the building from this viewpoint would be obscured by an ornamental landscape buffer planted adjacent to S. Waterman Avenue. A concrete tilt-up screen wall would be visible in the right-hand background of the photograph, obscuring views toward the right-hand horizon. The Project would not block or substantially obscure the visual prominence of Blue Mountain and its associated foothills from this vantage point; the mountains would be visible above the Project and along the horizon, albeit obscured by the atmospheric haze typical of the region.

3. *Site Photograph 3*

As shown on Figure 4.1-2, Site Photograph 3 provides a 180-degree view from the eastern boundary of the Project site, looking south to north. At this location, parkways planted with trees and groundcovers would be visible in the midground (adjacent to S. Waterman Avenue) beyond which would be the eastern façade of the building. In the center midground of the photograph, the eastern entryway to the Project site would be visible. An approximately 60-foot-wide landscape buffer (planted with flowering accent trees and large-canopied evergreen and deciduous trees) would be visible in the left-hand and right-hand midground of the photograph, beyond which would be an automobile parking lot. Landscaping also would be provided along the perimeter of the parking lot and interior to the parking lot (via finger islands). The plant material within the landscape buffer would minimize the perceived scale of the building's eastern façade from S. Waterman Avenue. The northeastern corner of the building would be visible behind proposed landscaping in the center midground of the photograph. The northeastern corner of the building would house an office area and its exterior would feature enhanced architectural treatments. In the right-hand side of the photograph (in the mid-ground extending toward the horizon), the SCE utility structure would be visible.

4. *Site Photograph 4*

As shown on Figure 4.1-3, Site Photograph 4 provides a 90-degree view from the southeast corner of the Project site, looking west to north. From this location, the southeastern corner of the building would be partially visible in the center mid-ground, although mostly screened by densely planted ornamental landscaping in the foreground (trees, shrubs, and groundcover). The corner of the building would house an office area featuring enhanced architectural treatments. The automobile parking lot in the southeast corner of the Project site would be visible in the center and right-hand midground of the photograph, although mostly screened by densely planted ornamental landscaping. Landscaping also would be provided along the perimeter of the parking lot and interior to the parking lot (via finger islands). The eastern and southern façades of the building would be partially visible from the center mid-ground of the photograph, extending to the horizon. Views of the eastern and southern façades of the building from this viewpoint would be obscured by an ornamental landscape buffer planted adjacent to S. Waterman Avenue and the Santa Ana River. A drive aisle and guard shack would be visible in left-hand background of the photograph. The Project would not block or substantially obscure the visual prominence of the San Bernardino Mountains or the Jurupa Hills from this vantage point; the San Bernardino Mountains and the Jurupa Hills would be visible above the Project and along the horizon, albeit obscured by the atmospheric haze typical of the region.

5. *Site Photograph 5*

As shown on Figure 4.1-3, Site Photograph 5 provides a 90-degree view taken from approximately 0.15-mile south of the southeast corner of the Project site, looking west to north. Despite the distance from the Project site, views of the building may potentially be visible in the right-hand background of the photograph, but views would most likely be obstructed by intervening foliage located along the northern banks of the Santa Ana River. Upon buildout of the Project all other visual characteristics from this location along the Santa Ana River Trail would remain unchanged.

6. *Site Photograph 6*

As shown on Figure 4.1-3, Site Photograph 6 provides a single-shot view taken from approximately 0.15-mile south of the southern boundary of the Project site, looking west to northwest. Despite the distance from the Project site, views of the warehouse facility may potentially be visible in the center and right-hand background of the photograph, but views would most likely be obstructed by intervening foliage located along the northern banks of the Santa Ana River. Upon buildout of the Project, all other visual characteristics from this location along the Santa Ana River Trail would remain unchanged.

The Project would remove the existing buildings and associated improvements, including golf cart paths, clubhouse/restaurant, parking lot, maintenance building, lighting features, and driving range (with associated netting). Although the aesthetic conditions of the Project site would change compared to existing conditions (change from a public golf course with associated improvements to a high cube logistics warehouse building), the Project incorporates a number of design features that would enhance the aesthetic quality of the Project. The Project's architecture incorporates a classic color palette that would not be visually offensive and also incorporates accent elements, such as colored glass and decorative building elements at entries to enhance visual interest. The landscaping theme incorporates attractive plant species that would maintain vibrancy during drought conditions. Additionally, the Project incorporates walls to screen views of loading docks from public viewing areas along abutting S. Waterman Avenue.

With respect to the visual character and quality of the surrounding area, the Project's proposed design features would ensure a high-quality aesthetic for the site that complements existing development to the southeast and east and planned light industrial developments north of the Project site. The Project would be similar in character to the long-term vision for the area, as planned by the City of San Bernardino General Plan, and would not substantially degrade the existing visual character of the Project site's surroundings. Because the Project would not substantially degrade the existing visual character of the site and its surroundings, impacts would be less than significant and no mitigation is required.

Threshold d) Would the Project create a new source of substantial light or glare, which would adversely affect daytime or nighttime view of the area?

The Project and its future implementing permits and approvals (i.e., building permits) would be required to demonstrate compliance with the lighting requirements of City Municipal Code § 19.20.030. Mandatory compliance with the City's Municipal Code would ensure that the Project does not produce substantial amounts of light or glare from artificial lighting sources that would adversely affect the day or nighttime views of adjacent properties.

The majority of the building's exterior building surfaces would consist of tilt-up concrete construction which does not involve any properties that would produce substantial amounts of glare. At the northeast and southeast corners of the building (the locations of the proposed office spaces), enhanced

architecture would be provided, including the use of blue-reflective glazed glass. While window glazing has the potential to result in minor glare effects, such effects would be minimal because the glass proposed for use by the Project contains a low reflectivity and would not be mirrored. Furthermore, unobstructed views of on-site building surfaces utilizing glass would be rare due to the extensive use of landscaping, screen walls, and fences on the Project site.

Based on the foregoing analysis, because the Project would not introduce substantial sources of artificial lighting and glare, impacts would be less than significant and no mitigation is required.

4.1.5 CUMULATIVE IMPACT ANALYSIS

A. Scenic Vistas and Scenic Resources

As noted under the discussion of Threshold a), the Project site does not offer any prominent scenic vistas under existing conditions. Views of the San Bernardino Mountains, Blue Mountains, Box Springs Mountains, San Gabriel Mountains, and Jurupa Hills are available in the Project area; however, such views are available throughout the City of San Bernardino. The Project site is adjacent to the Santa Ana River, which is identified by the City of San Bernardino General Plan as a potential scenic resource; however, due to the elevation of the River channel at this location, the Santa Ana River is not visible from public viewing areas adjacent to the Project site, along S. Waterman Avenue or Dumas Street. With buildout of the Project, in conjunction with other developments within the Project's view shed, there would be no significant adverse impact to any existing scenic vistas. Accordingly, the Project has no potential to result in cumulatively considerable impacts to scenic vistas.

As noted under the analysis of Threshold b), the Project site is not located within close proximity to any designated Scenic Routes and does not contain any scenic resources visible from scenic routes under existing conditions, including, but not limited to, trees, rock outcroppings, and historic buildings. Therefore, with buildout of the Project in conjunction with other developments within the Project's view shed, the Project has no potential to result in cumulatively considerable impacts to scenic resources.

B. Visual Character of the Site and its Surroundings

Considering existing and planned cumulative conditions, the geographic area within the Project's view shed is primarily characterized by land uses intended for distribution warehousing, e-commerce, and other light industrial uses. As with the proposed Project, other development projects would be subject to the development regulations and design standards contained in the City's Development Code. Mandatory compliance with these standards would ensure consistency and quality regarding building materials and efficient land uses that would minimize the potential for any adverse effects. The building that would be constructed as part of the Project would be designed with aesthetically pleasing qualities as detailed in Section 3.0, *Project Description*. As such, the Project would not result in cumulatively considerable impacts to the existing visual character or quality of the Project site or its surroundings.

C. Light and Glare

City of San Bernardino Development Code § 19.20.030 sets standards for development to ensure minimal impact upon surrounding development relating to light pollution and glare. Although the Project would introduce artificial lighting and materials to the Project site, the Project would be required to comply with the City's Development Code to preclude significant lighting impacts. All development projects within the City of San Bernardino are required to comply with these standards; therefore, the Project would not result in cumulatively considerable impacts that would result from substantial light or glare.

4.1.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a): Less-than-Significant Impact. The Project would not significantly impact a scenic vista. The Project site does not contain any scenic vistas, nor does it offer unique views of any visually prominent features.

Threshold b): No Impact. The Project site is not visible from a state scenic highway and contains no scenic resources visible from a scenic highway under existing conditions; therefore, the Project would not adversely impact the view shed within a scenic highway corridor and would not damage important scenic resources within a scenic highway corridor, including trees, rock outcroppings, and historic buildings.

Threshold c): Less-than-Significant Impact. Although the proposed Project would result in a change to the existing visual character of the site (a public golf course to a high cube logistics warehouse building with associated improvements), the Project incorporates a number of site design, architectural, and landscaping elements that would ensure the provision of a high-quality development as seen from public viewing areas. The visual character of the site would not be substantially degraded.

Threshold d): Less-than-Significant Impact. Mandatory compliance with the City's Municipal Code would ensure that the Project does not produce substantial amounts of light or glare from artificial lighting sources that would adversely affect the day or nighttime views of adjacent properties.

4.1.7 MITIGATION

No potentially significant impacts associated with aesthetics would occur as a result of the proposed Project; therefore, no mitigation is required.

Figure 4.1-1

SITE PHOTOGRAPH KEY MAP

SOUTHEAST

WEST

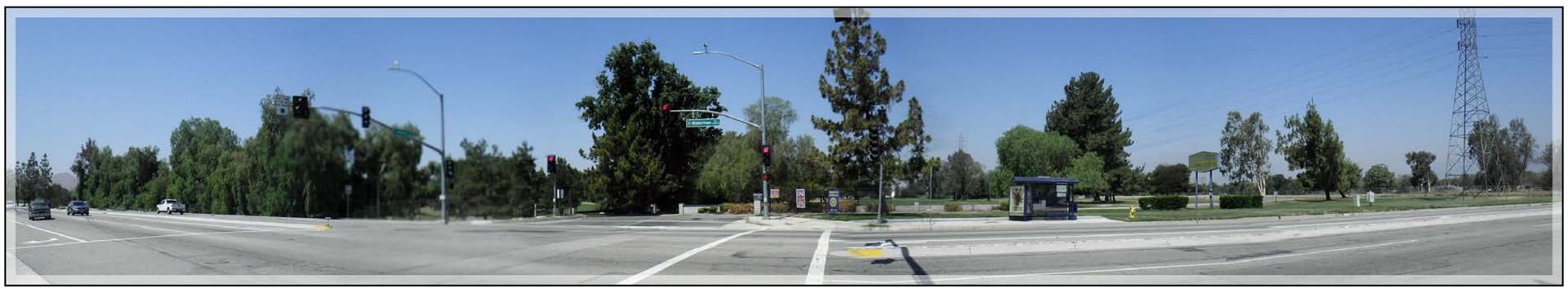
Site Photograph #1: From northern edge of Project Site along Dumas Street, looking southeast to west.

SOUTH

WEST

Site Photograph #2: From northeast corner of Project Site along S. Waterman Avenue, looking south to west.

SOUTH



NORTH

Site Photograph #3: From eastern edge of Project Site along S. Waterman Avenue, looking south to north.

Figure 4.1-2

SITE PHOTOGRAPHS 1-3

WEST  NORTH

Site Photograph #4: From southeast corner of Project Site along S. Waterman Avenue, looking west to north.

WEST  NORTH

Site Photograph #5: From Santa Ana River Trail at S. Waterman Avenue, looking west to north.

WEST  NORTHWEST

Site Photograph #6: From eastern edge of Project Site along S. Waterman Avenue, looking south to north.

Figure 4.1-3

SITE PHOTOGRAPHS 4-6

4.2 AIR QUALITY

The analysis in this Subsection is based, in part, on the following technical studies prepared by Urban Crossroads, Inc. The Air Quality Impact Analysis (AQIA), is titled, *Gateway South Building 4 Air Quality Impact Analysis, City of San Bernardino*, dated April 17, 2017, and is appended to this EIR as *Technical Appendix B1* (Urban Crossroads, 2017a). The Mobile Source Diesel Health Risk Assessment (HRA) is titled, *Gateway South Building 4 Mobile Source Diesel Health Risk Assessment, City of San Bernardino*", dated April 17, 2017, and is appended to this EIR as *Technical Appendix B2* (Urban Crossroads, 2017b).

As discussed in EIR Section 3.0, *Project Description*, as a reasonable consequence of the Project, the City of San Bernardino is likely to require that the interim off-site roadway access be replaced in the future with a permanent roadway in a different alignment. As such, two options for a future permanent alignment are also evaluated in this EIR. Therefore, in addition to the AQIA and HRA, Urban Crossroads prepared a memo titled, *Gateway South Building 4 Site Access Alternatives Health Risk Assessment Memorandum*, dated June 5, 2017 and appended to this EIR as *Technical Appendix B3*. The memorandum assesses the mobile source diesel health risks associated with the potential options for a future off-site permanent roadway alignment between the northern boundary of the Project site and Orange Show Road. (Urban Crossroads, Inc., 2017h)

4.2.1 EXISTING CONDITIONS

A. Air Basin

The Project site is located in the South Coast Air Basin (SCAB, or "Basin"), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAB encompasses approximately 6,745 square miles and includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The SCAB is bound by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and the Jacinto Mountains to the north and east, respectively; and the San Diego County line to the south. (Urban Crossroads, 2017a, p. 10)

B. Regional Climate and Meteorology

The regional climate – temperature, wind, humidity, precipitation, and the amount of sunshine – has a substantial influence on air quality. The SCAB's distinctive climate is determined by its terrain and geographical location, which comprises a coastal plain connected to broad valleys and low hills bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter. The SCAB is semi-arid, with average annual temperatures varying from the low -to-middle 60s, measured in degrees Fahrenheit (F); however, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of the SCAB's climate. Humidity restricts visibility in the SCAB and the relative high humidity heightens the conversion of sulfur dioxide to sulfates. The marine layer provides an environment for that conversion process, especially during the spring and summer months. Inland areas of the SCAB, including where the Project site is located, show more variability in annual

minimum/maximum temperatures and lower average humidity than coastal areas within the SCAB due to decreased marine influence. (Urban Crossroads, 2017a, p. 10)

More than 90 percent of the SCAB's rainfall occurs between November and April. The annual average rainfall varies from approximately nine inches in Riverside to 14 inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB. Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB; the remaining one-quarter is absorbed by clouds. The abundant amount of sunshine (and its associated ultraviolet radiation) is a key factor to the photochemical reactions of air pollutants in the SCAB. (Urban Crossroads, 2017a, p. 11)

Dominant airflow direction and speed are the driving mechanisms for transport and dispersion of air pollution. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with storms moving through the region from the northwest. This period also brings five to 10 periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. During the nighttime, heavy, cool air descends mountain slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. (Urban Crossroads, 2017a, p. 11)

In the SCAB, there are two distinct temperature inversion structures that control the vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level. A second inversion-type forms in conjunction with the drainage of cool air off of the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as nitrogen oxides and carbon monoxide, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline. (Urban Crossroads, 2017a, p. 11)

C. Air Quality Pollutants and Effects on Human Health

The federal government and State of California have established maximum permissible concentrations for common air pollutants that may pose a risk to human health or would otherwise degrade air quality and adversely affect the environment. These regulated air pollutants are referred to as "criteria

pollutants." An overview of the common criteria air pollutants in the SCAB, their sources, and associated effects to human health are summarized on the following pages (refer also to Section 2.6 of *Technical Appendix B1*).

- **Carbon Monoxide (CO)** is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest in the winter during the morning, when there is little to no wind and surface-based inversions trap the pollutant at ground levels. CO is emitted directly from internal combustion engines; therefore, motor vehicles operating at slow speeds are the primary source of CO and the highest ambient CO concentrations in the SCAB are generally found near congested transportation corridors and intersections.

  Inhaled CO does not directly affect the lungs, but affects tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Therefore, health conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. The most common symptoms associated with CO exposure include headache, nausea, vomiting, dizziness, fatigue, and muscle weakness. Individuals most at risk to the effects of CO include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic oxygen deficiency.

- **Sulfur Dioxide (SO_2)** is a colorless gas or liquid. SO_2 enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms sulfates (SO_4). Collectively, these pollutants are referred to as sulfur oxides (SO_X).

  SO_2 is a respiratory irritant to people afflicted with asthma. After a few minutes' exposure to low levels of SO_2, asthma sufferers can experience breathing difficulties, including airway constriction and reduction in breathing capacity. Although healthy individuals do not exhibit similar acute breathing difficulties in response to SO_2 exposure at low levels, animal studies suggest that very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract.

- **Nitrogen Oxides (NO_X)** consist of nitric oxide (NO), nitrogen dioxide (NO_2) and nitrous oxide (N_2O) and are formed when nitrogen (N_2) combines with oxygen (O_2). Nitrogen oxides are typically created during combustion processes, and are major contributors to smog formation and acid deposition. Of the nitrogen oxide compounds, NO_2 is the most abundant in the atmosphere. As ambient concentrations of NO_2 are related to traffic density, commuters in heavy traffic along busy transportation corridors may be exposed to higher concentrations of NO_2 than those recorded at regional air quality monitoring stations.

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO_2. Short-term exposure to NO_2 can result in resistance to air flow and airway contraction in healthy subjects. Exposure to NO_2 can result decreases in lung functions in individuals with asthma or chronic obstructive pulmonary diseases (e.g., chronic bronchitis, emphysema), as these individuals are more susceptible to the effects of NO_X than healthy individuals.

- **Ozone (O_3)** is a highly reactive and unstable gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO_X), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, warm temperatures, and light wind conditions are favorable to the formation of this pollutant.

  Short-term exposure (lasting for a few hours) to ozone at levels typically observed in southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Individuals exercising outdoors, children, and people with pre-existing lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for ozone effects. Children who participate in multiple outdoor sports and live in communities with high ozone levels have been found to have an increased risk for asthma.

- **Particulate Matter less than 10 microns (PM_{10})** and **Particulate Matter less than 2.5 microns ($PM_{2.5}$)** are air pollutants consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols that are 10 microns or smaller or 2.5 microns or smaller, respectively. These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO_2 release from power plants and industrial facilities and nitrates that are formed from NO_X release from power plants, automobiles and other types of combustion sources. The chemical composition of fine particles is highly dependent on location, time of year, and weather conditions.

  The small size of PM_{10} and $PM_{2.5}$ allows them to enter the lungs where they may be deposited, resulting in adverse health effects. Elevated ambient concentrations of fine particulate matter (PM_{10} and $PM_{2.5}$) have been linked to an increase in respiratory infections, number, and severity of asthma attacks, and increased hospital admissions. Some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in life-span, and an increased mortality from lung cancer. Daily fluctuations in $PM_{2.5}$ concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children

is reduced with long-term exposure to particulate matter. The elderly, people with pre-existing respiratory or cardiovascular disease, and children, appear to be the most susceptible to the effects of high levels of PM_{10} and $PM_{2.5}$.

- **Volatile Organic Compounds (VOCs)** and **Reactive Organic Gasses (ROGs)** are a family of hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. Both VOCs and ROGs are precursors to ozone and contribute to the formation of smog through atmospheric photochemical reactions. Individual VOCs and ROGs have different levels of reactivity; that is, they do not react at the same speed or do not form ozone to the same extent when exposed to photochemical processes.

  VOCs often have an odor, including such common VOCs as gasoline, alcohol, and the solvents used in paints. Odors generated by VOCs can irritate the eye, nose, and throat, which can reduce respiratory volume. In addition, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system.

- **Lead (Pb)** is a heavy metal that is highly persistent in the environment. Historically, the primary source of lead in the air was emissions from vehicles burning leaded gasoline. As a result of the removal of lead from gasoline, ambient levels of lead have not exceeded applicable air quality standards at any of the SCAQMD's regular air quality monitoring stations since 1982. Currently, emissions of lead are largely limited to stationary sources such as lead smelters.

  Exposure to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased lead levels are associated with increased blood pressure. Lead poisoning can cause anemia, lethargy, seizures, and death. Fetuses, infants, and children are more sensitive than others to the adverse effects of lead exposure.

D. Existing Air Quality

Air quality is evaluated in the context of ambient air quality standards published by the federal and State governments. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. The National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are detailed in Table 4.2-1, *Ambient Air Quality Standards*. A region's air quality is determined to be healthful or unhealthful by comparing contaminant levels in ambient air samples to the State and federal standards presented in Table 4.2-1.

Table 4.2-1 Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[10]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[10]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes in *Technical Appendix B1.*
Source: (Urban Crossroads, 2017a, Table 2-1)

1. Regional Air Quality

❑ Criteria Pollutants

The federal government designated seven "criteria pollutants" that are pervasive enough across the nation to warrant national health standards: Ozone, NO_2, PM_{10}, $PM_{2.5}$, CO, Pb, and SO_2. The SCAQMD monitors criteria pollutant levels at 43 monitoring stations located throughout the SCAB. In 2015, the most recent year for which detailed data was available at the time the NOP for this EIR was released for public review, the SCAB exceeded the applicable NAAQS and/or CAAQS on one or more days for Ozone, PM_{10}, and $PM_{2.5}$, while the SCAB did not exceed federal or state standards for NO_2, SO_2, CO, SO_2, or Pb[1]. (Urban Crossroads, 2017a, p. 14)

The status of NAAQS and CAAQS attainment within the SCAB is summarized in Table 4.2-2, *SCAB Criteria Pollutant Attainment Status*.

Table 4.2-2 SCAB Criteria Pollutant Attainment Status

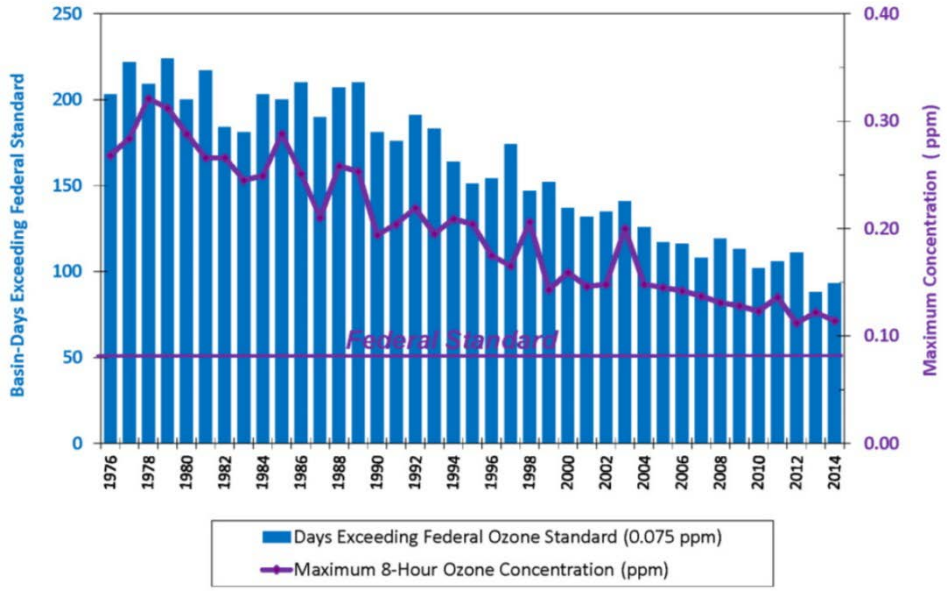
Criteria Pollutant	State Designation	Federal Designation
Ozone – 1 hour standard	Nonattainment	No Standard
Ozone - 8-hour standard	Nonattainment	Nonattainment (Extreme)
PM_{10}	Nonattainment	Attainment (Maintenance)
$PM_{2.5}$	Nonattainment	Nonattainment (Serious)
Carbon Monoxide	Attainment	Attainment (Maintenance)
Nitrogen Dioxide	Attainment	Attainment (Maintenance)
Sulfur Dioxide	Attainment	Attainment
Lead[1]	Attainment	Nonattainment (Partial)

Source: (Urban Crossroads, 2017a, Table 2-2)

The SCAB has experienced unhealthful air since World War II and historically has been one of the most unhealthful air basins in the United States; however, as a result of the region's air pollution control efforts over the last 60+ years, expedited since the creation of the SCAQMD in 1976, criteria pollutant concentrations in the SCAB have reduced dramatically and are expected to continue to improve in the future as government regulations become more stringent (Urban Crossroads, 2017a, pp. 21-25). Criteria pollutant trends within the SCAB are illustrated on the graphs presented on the following pages and described in detail in Section 2.8 of *Technical Appendix B1*.

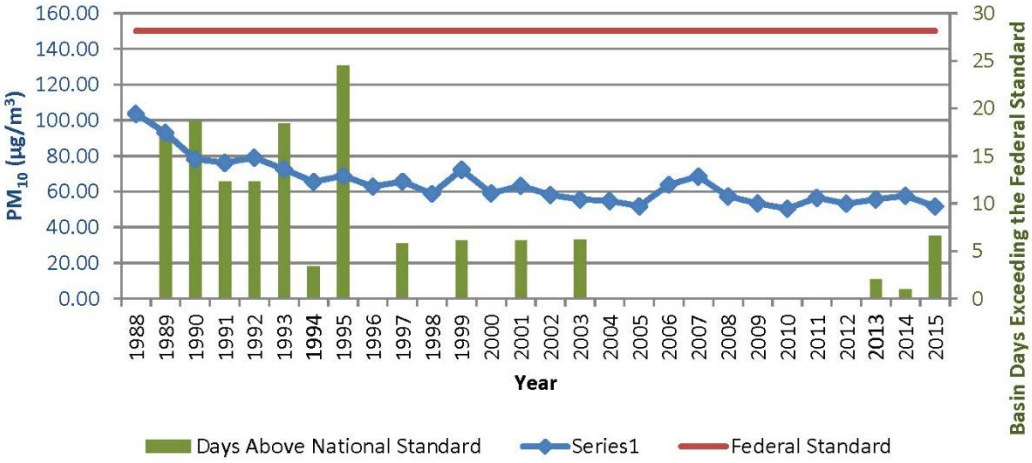
[1] In 2015, the Los Angeles County portion of the SCAB exceeded applicable Federal lead standards; however, all other portions of the SCAB – including the portion of the SCAB where the Project site is located – did not exceed Federal lead standards.

South Coast Air Basin Ozone Trend

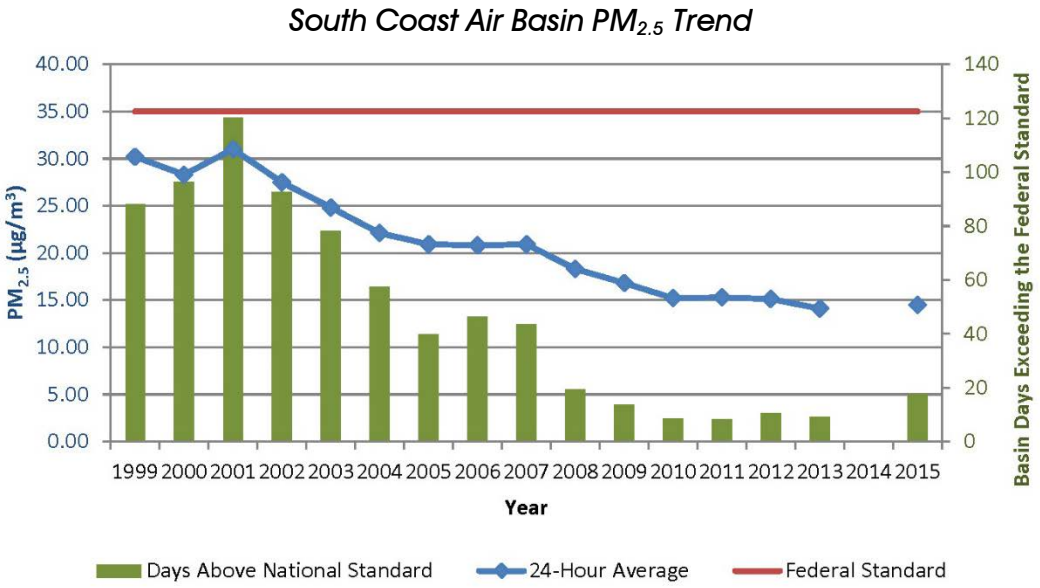


Source: (Urban Crossroads, 2017a, Table 2-4)

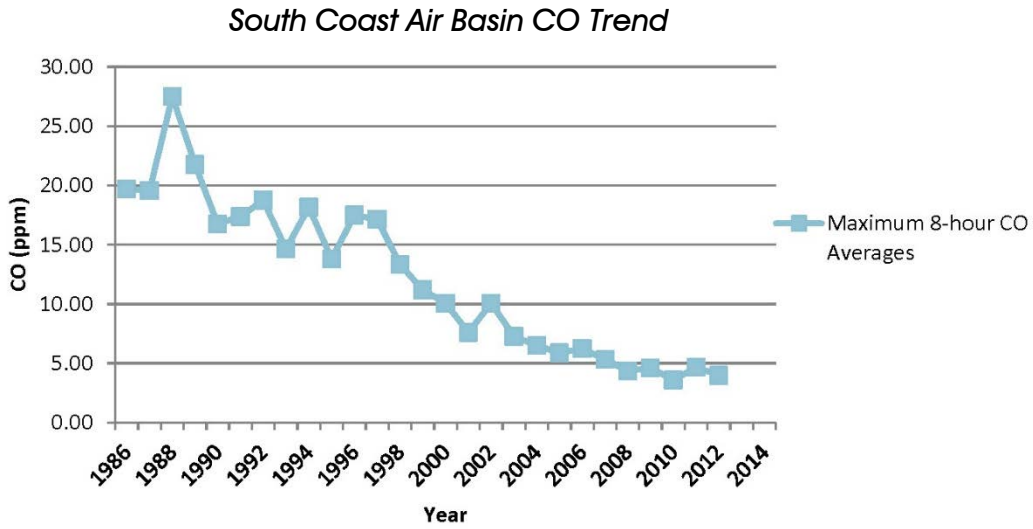
South Coast Air Basin PM_{10} Trend



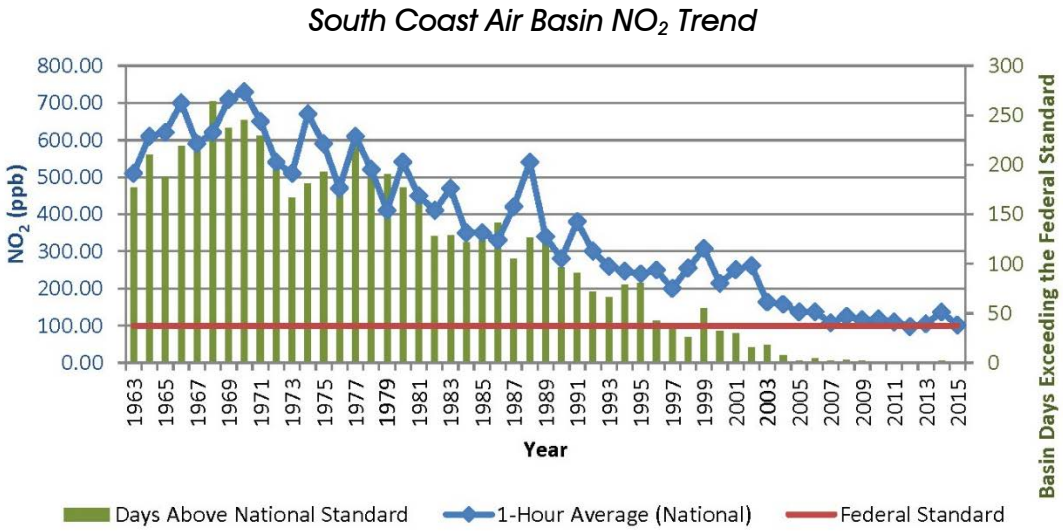
Source: (Urban Crossroads, 2017a, Table 2-5)



Source: (Urban Crossroads, 2017a, Table 2-6)



Source: (Urban Crossroads, 2017a, Table 2-7)



Source: (Urban Crossroads, 2017a, Table 2-8)

❑ Toxic Air Contaminants

Toxic air contaminants (TACs) are a classification of air pollutants that have been attributed to carcinogenic and non-carcinogenic health risks. Beginning in the mid-1980s, the California Air Resources Board (CARB) adopted a series of regulations to reduce the amount of air toxic contaminant emissions resulting from mobile and stationary sources, such as cars, trucks, stationary sources, and consumer products. As a result of CARB's regulatory efforts, ambient concentrations of TACs have declined substantially across the state. (Urban Crossroads, 2017a, p. 26)

To reduce TAC emissions from mobile sources, CARB has required that all light- and medium-duty vehicles sold in California since 1996 be equipped with an on-board diagnostic system to alert drivers of potential engine problems (as approximately half of all tailpipe emissions result from malfunctioning emissions control devices). Also, since 1996, CARB has required the use of cleaner burning, reformulated gasoline in all light- and medium-duty vehicles. These two regulations resulted in an over 80 percent reduction in TAC emissions from light- and medium-duty vehicles in the State between 1990 and 2012 despite an approximately 30 percent increase in the State's population over that same time period. The CARB also implemented programs to retrofit diesel-fueled engines and facilitate the use of diesel fuels with ultra-low sulfur content to minimize the amount diesel emissions and their associated TACs. As a result of CARB's programs, diesel emissions and their associated TACs have fallen by approximately 68 percent between 1990 and 2012 despite an approximately 81 percent increase in miles traveled by diesel vehicles during that same time period. (Urban Crossroads, 2017a, p. 27) CARB's efforts at reducing stationary source TACs have been focused mainly on the dry cleaning and paint/architectural coating industries, which have resulted in a greater than 85 percent reduction of stationary source TACs across the State between 1990 and 2012. (Urban Crossroads, 2017a, p. 28)

In 2000, the SCAQMD prepared a comprehensive urban toxic air pollution study to evaluate the TAC concentration levels in the SCAB and their associated health risks, called *MATES-II* (*Multiple Air Toxics Exposure Study in the South Coast Air Basin*). *MATES-II* showed the average excess cancer risk within the SCAB ranging from 1,100 in one million persons to 1,750 in one million persons, with an average excess regional risk of about 1,400 in one million. As part of the *MATES-II* study, the SCAQMD concluded that diesel particulate matter (DPM) accounted for more than 70 percent of the identified cancer risk. (Urban Crossroads, 2017a, p. 29) The SCAQMD has updated their urban toxic air pollution survey twice since 2000, with the 2008 (*MATES-III*) and 2014 updates (*MATES-IV*) showing reductions in the average excess cancer risk within the SCAB as compared to *MATES-II*. The current version of the urban toxic air pollution survey, *MATES-IV*, is the most comprehensive dataset of ambient air toxic levels and health risks within the SCAB. The *MATES-IV* report estimates the average Basin-wide excess cancer risk level within the SCAB to be 418 million, an approximately 70 percent improvement from the findings of *MATES-II* report just 14 years earlier. According to SCAQMD, DPM accounts for approximately 68 percent of the total risk shown in *MATES-IV*. (SCAQMD, 2015a, ES-1 through ES-2)

Refer to Section 2.8 of *Technical Appendix B1* for a more detailed account of Statewide and regional trends in TAC emissions.

2. Local Air Quality

❑ Criteria Pollutants

Local air quality data was collected from the SCAQMD air quality monitoring station located nearest to the Project site: The Central San Bernardino Valley 2 monitoring station (located approximately 2.2 miles northeast of the Project site). The Central San Bernardino Valley 2 monitoring station records ambient concentrations of ozone, CO, NO_2, and particulate matter (PM_{10} and $PM_{2.5}$). The Central San Bernardino Valley 2 monitoring station does not collect ambient concentrations of SO_2, as the SCAB regularly attains federal and State standards for SO_2 levels and few monitoring stations in the SCAB collect SO_2 data. (Urban Crossroads, 2017a, p. 14) Ambient air pollutant concentrations in the Project area are summarized in Table 4.2-3, *Project Area Air Quality Monitoring Summary*. Table 4.2-3 provides a summary of ambient air quality conditions in the vicinity of the Project site over the most recent three-year period for which air quality data is available (2013-2015).

❑ Toxic Air Contaminants

As part of preparation of the *MATES-IV* study, the SCAQMD collected toxic air contaminant data at ten fixed sites within the SCAB. None of the fixed monitoring sites are located within the vicinity of the Project site; however, *MATES-IV* extrapolates the excess cancer risk levels throughout the SCAB by modeling specific geographic grids. *MATES-IV* predicts an estimated excess carcinogenic risk of 826.01 in one million for the Project area. (Urban Crossroads, 2017a, p. 29)

Table 4.2-3 Project Area Air Quality Monitoring Summary

POLLUTANT	STANDARD	YEAR		
		2013	2014	2015
Ozone (O_3)				
Maximum 1-Hour Concentration (ppm)		0.139	0.121	0.133
Maximum 8-Hour Concentration (ppm)		0.112	0.099	0.111
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	22	38	36
Number of Days Exceeding State 8-Hour Standard	> 0.07 ppm	53	76	59
Number of Days Exceeding Federal 1-Hour Standard	> 0.12 ppm	2	0	3
Number of Days Exceeding Federal 8-Hour Standard	> 0.075 ppm	36	51	39
Number of Days Exceeding Health Advisory	≥ 0.15 ppm	0	0	0
Carbon Monoxide (CO)				
Maximum 1-Hour Concentration (ppm)		--	4.0	--
Maximum 8-Hour Concentration (ppm)		1.7	2.4	--
Number of Days Exceeding State 1-Hour Standard	> 20 ppm	0	0	--
Number of Days Exceeding Federal / State 8- Hour Standard	> 9.0 ppm	0	0	--
Number of Days Exceeding Federal 1-Hour Standard	> 35 ppm	0	0	--
Nitrogen Dioxide (NO_2)				
Maximum 1-Hour Concentration (ppm)		0.072	0.073	0.071
Annual Arithmetic Mean Concentration (ppm)		0.018	0.018	0.015
Number of Days Exceeding State 1-Hour Standard	> 0.18 ppm	0	0	0
Particulate Matter ≤ 10 Microns (PM_{10})				
Maximum 24-Hour Concentration (µg/m^3)		102	136	56
Number of Samples		60	60	--
Number of Samples Exceeding State Standard	> 50 µg/m^3	3	4	2
Number of Samples Exceeding Federal Standard	> 150 µg/m^3	0	0	0
Particulate Matter ≤ 2.5 Microns ($PM_{2.5}$)				
Maximum 24-Hour Concentration (µg/m^3)		55.3	32.2	53.5
Annual Arithmetic Mean (µg/m^3)		11.41	--	10.7
Number of Samples Exceeding Federal 24-Hour Standard	> 35 µg/m^3	1	0	2

-- = data not available from SCAQMD or ARB
Source: (Urban Crossroads, 2017a, Table 2-3)

E. Applicable Environmental Regulations

1. Federal Regulations

The U.S. Environmental Protection Agency (EPA) is responsible for setting and enforcing the federal air quality standards (the NAAQS) for ozone, CO, NO_X, SO_2, PM_{10}, and Pb. The EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB. (Urban Crossroads, 2017a, pp. 19-20)

The federal Clean Air Act (CAA) was first enacted in 1955 and was amended numerous times in subsequent years. The federal CAA establishes the NAAQS and specifies dates for achieving compliance. The federal CAA also mandates that states submit and implement State Implementation Plans (SIPs) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met. (Urban Crossroads, 2017a, p. 20)

The 1990 amendments to the federal CAA identify specific emission reduction goals for areas that do not attain the NAAQS and incorporate sanctions for failure to attain or to meet interim milestones and require a demonstration of reasonable further progress toward attainment. The sections of the federal CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants: ozone, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and Pb. The NAAQS within the SCAB were previously summarized in Table 4.2-1. Mobile source emissions are regulated in accordance with the CAA Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NO_X, which is a collective term that includes all forms of nitrogen oxides (NO, NO_2, NO_3) which are emitted as byproducts of the combustion process. (Urban Crossroads, 2017a, p. 20)

2. State Regulations

The CARB, which became part of the California EPA in 1991, is responsible for implementing the California CAA (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. The California CAA mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the State's ambient air quality standards, the CAAQS, by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, established standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. At this time, however, hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS. Serious non-attainment areas are required to prepare air quality

management plans that include specified emission reduction strategies in an effort to meet clean air goals. The CAAQS were previously summarized in Table 4.2-1. (Urban Crossroads, 2017a, p. 20)

3. Regional Air Quality Management Planning

Under existing conditions, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, and in conformance with California Health & Safety Code § 40702 *et seq.* and the California CAA, the SCAQMD adopted an Air Quality Management Plan (AQMP) to plan for the improvement of regional air quality. AQMPs are updated regularly in order to more effectively reduce emissions and accommodate growth. Each version of the plan is an update of the previous plan and has a 20-year horizon with a revised baseline. The SCAQMD's most recent iteration of the AQMP was adopted in March 2017. The *Final 2016 Air Quality Management Plan (AQMP)* incorporates the latest scientific and technological information and planning assumptions, including the Southern California Association of Governments (SCAG) *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (*RTP/SCS*) and updated emission inventory methodologies for various source categories. The *Final 2016 AQMP* is based on current emissions modeling data, recent motor vehicle emissions information, and demographic data/projections provided by SCAG. The air quality pollutant levels projected in the *Final 2016 AQMP* are based on the assumption that buildout of the region will occur in accordance with local general plans and specific plans, and in accordance with growth projections identified by SCAG in its *2016 RTP/SCS*. (Urban Crossroads, 2017a, pp. 49-50)

4.2.2 METHODOLOGY FOR CALCULATING PROJECT-RELATED AIR QUALITY IMPACTS

The California Emissions Estimator Model (CalEEMod), version 2016.3.1, was used to calculate all Project-related air pollutant emissions (with the exception of the Project operational-related localized emissions and diesel particulate matter emissions, refer to Subsections 4.1.1A.2 and 4.1.1A.3, respectively). The CalEEMod is a statewide land use emission computer model designed to provide a uniform platform to quantify potential criteria pollutant emissions associated with construction and operation of land development projects. The CalEEMod was developed for the California Air Pollution Officers Association (CAPCOA) in collaboration with the California Air Districts, including the SCAQMD. (Urban Crossroads, 2017a, p. 31)

A. Methodology for Calculating Project Construction Emissions

1. Regional Pollutant Emissions

As disclosed in EIR Section 3.0, *Project Description* and for the purposes of analyses herein, the Project's construction activities are expected to begin in 2017 and would occur over six phases before ending in December 2018. The six phases of conduction are: 1) demolition; 2) site preparation; 3) grading; 4) building construction; 5) architectural coating; and 6) paving. EIR Table 3-1, *Construction Duration*, lists the expected duration of each phase of Project construction. A June 2017 construction start date represents a "worst-case" analysis scenario because construction equipment emissions are expected to reduce over time as more stringent emissions control regulations take effect and older, more polluting pieces of equipment are replaced with newer, "cleaner" equipment (Urban Crossroads,

2017a, p. 31). EIR Table 3-2, *Construction Equipment to be Used*, lists the pieces of heavy equipment expected to be used during each phase of Project construction. The information presented in EIR Tables 3-1 and 3-2 is based on information provided by the Project Applicant and the experience and technical expertise of the Project air quality consultant (Urban Crossroads). The assumptions listed in EIR Tables 3-1 and 3-2 were input into the CalEEMod to calculate Project-related construction emissions. (Urban Crossroads, 2017a, pp. 31-33)

Refer to Section 3.4 of *Technical Appendix B1* for more detail on the methodology utilized to estimate Project construction-related regional pollutant emissions.

2. Localized Pollutant Emissions

Project-related localized pollutant emissions were calculated in accordance with the SCAQMD's *Final Localized Significance Threshold Methodology*. The localized pollutant emissions analysis relies on the same assumptions used to calculate construction-related regional pollutant emissions, as described above. Pursuant to the SCAQMD's *Final Localized Significance Threshold Methodology*, the analysis of Project construction-related localized pollutant emissions included the following process (Urban Crossroads, 2017a, p. 41):

- The CalEEMod was utilized to determine the maximum daily on-site emissions that would occur during construction activity.

- The SCAQMD's *Fact Sheet for Applying CalEEMod to LSTs* was used to determine the maximum Project site acreage that would be actively disturbed based on the construction equipment fleet and equipment hours as estimated in the CalEEMod. (Based on the SCAQMD's methodology, the Project is estimated to disturb 9.5 acres per day during peak construction activities.)

- Because the Project is expected to disturb more than five acres per day during peak construction activities, SCAQMD-approved dispersion modeling (i.e., AERMOD) was used to determine the localized pollutant concentration levels at sensitive receptor locations – defined as a place where an individual who might have respiratory difficulties could remain for 24 hours – near the Project site.

The SCAQMD's *Final Localized Significance Threshold Methodology* indicates that off-site mobile emissions from development projects should be excluded from localized emissions analyses. Therefore, for purposes of calculating the Project's construction-related localized pollutant emissions, only emissions included in the CalEEMod on-site emissions outputs were considered. (Urban Crossroads, 2017a, pp. 41-42)

Refer to Section 3.6 of *Technical Appendix B1* for more detail on the methodology utilized to calculate Project construction-related localized pollutant emissions.

B. Methodology for Calculating Project Operational Emissions

1. Regional Pollutant Emissions

The Project operational-related regional pollutant emissions analysis quantifies air pollutant emissions from mobile sources, on-site equipment sources, area sources, and energy sources.

Mobile source emissions account for approximately 94 percent, by weight, of the Project's operational emissions. Mobile source emissions are the product of the number of vehicle trips generated by the Project, the composition of the Project's vehicle fleet (percentage of passenger cars, light-heavy-duty trucks, medium-heavy-duty trucks, and heavy-heavy duty trucks), and the number of miles driven by Project vehicles. The Project's average number of vehicle trips and vehicle fleet mix were calculated using the SCAQMD's recommended methodology, as described in detail in EIR Subsection 4.11, *Transportation / Traffic*. The SCAQMD's recommended one-way vehicle trip length – 16.6 miles for passenger cars and 40 miles for all classifications of trucks – was used for the mobile source operational emissions analysis. (Urban Crossroads, 2017a, pp. 35-38)

It is common for a high-cube warehouse project to require cargo handling equipment to move empty containers and empty chassis to different locations on the site. The most common type of cargo handling equipment is the yard truck that is designed for moving cargo containers. Yard trucks are also known as yard goats, utility tractors (UTRs), hustlers, yard hostlers, and yard tractors. Yard trucks have a horsepower (hp) range of approximately 175 hp to 200 hp. Because the Project tenant is not yet known and operating characteristics cannot be known with certainty, this analysis relies on average on-site equipment usage for industrial warehouses in southern California. Based on the latest available information from the SCAQMD, high-cube warehouse projects typically have 3.6 yard trucks per one million square feet of building space. For the proposed Project, this correlates to four yard tractors operating on the Project site. The on-site equipment emissions analysis assumes each yard tractor would be powered by non-diesel fueled engines and would operate on the Project site for four (4) hours per day, 365 days per year. (Urban Crossroads, 2017a, p. 38)

The area source emissions (i.e., architectural coatings, consumer products, landscape maintenance equipment) and energy source emissions analyses rely on default inputs within the CalEEMod.

Refer to Section 3.5 of *Technical Appendix B1* for detailed information on the methodology utilized to estimate Project operational-related regional pollutant emissions.

2. Localized Pollutant Emissions

Project operational-related localized pollutant emissions were calculated in a SCAQMD-approved air dispersion modeling program, AERMOD, using emission factors from the 2014 version of CARB's Emission Factor model (EMFAC). EMFAC 2014 is a mathematical model that was developed by CARB to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California. For the Project, localized pollutant emission factors were generated by running EMFAC 2014 in EMFAC Mode for vehicles in the SCAQMD. The EMFAC Mode generates emission

factors in terms of grams of pollutant emitted per vehicle activity and can calculate a matrix of emission factors at specific values of temperature, relative humidity, and vehicle speed. Passenger cars and trucks on the Project site were assumed to idle for 15 minutes in accordance with SCAQMD recommendations; on-site vehicle maneuvering (parking, traveling along drive aisles) was assumed to occur at five miles per hour. (Urban Crossroads, 2017a, p. 46)

Refer to Section 3.7 of *Technical Appendix B1* for more detail on the methodology utilized to estimate Project operational-related localized pollutant emissions.

3. Diesel Particulate Matter Emissions

Project-related vehicle diesel particulate matter (DPM) emissions were calculated using emission factors for PM_{10} generated with EMFAC 2014. Refer to Section 2.2 of *Technical Appendix B2* for a detailed description of the model inputs and equations used in the estimation of the Project-related DPM emissions. (Urban Crossroads, 2017b, pp. 13-17)

The potential health risks of Project-related DPM emissions were quantified in accordance with the guidelines in the SCAQMD's *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*. Pursuant to SCAQMD's recommendations, emissions were modeled using the AERMOD software program. Refer to Section 2.3 of *Technical Appendix B2* for a detailed description of the model inputs and equations used in the calculation of average particulate concentrations associated with operations at the Project site. (Urban Crossroads, 2017b, pp. 18-20)

Excessive health risks associated with exposure to DPM emissions are defined in terms of the probability of developing cancer or adverse, chronic non-cancer health effects as a result of exposure to DPM emissions at a given concentration. The cancer and non-cancer risk probabilities are determined through a series of equations to calculate unit risk factor, cancer potency factor, and chronic daily intake. The equations and input factors utilized in the Project analysis were obtained from OEHHA. Refer to Section 2.4 of *Technical Appendix B2* for a detailed description of the variable inputs and equations used in the estimation of receptor population health risks associated with Project operations. (Urban Crossroads, 2017b, pp. 20-21)

In the analysis of potential DPM effects, potential cancer and non-cancer risks were calculated for the maximally exposed residential (MEIR) and maximally exposed worker (MEIW) receptors located within a 1,320-foot radius of the Project site and the Project's primary truck route. CARB and SCAQMD emissions models indicate that 80 percent of DPM particles settle out of the air within 1,000 feet from the emissions source. Accordingly, the 1,320-foot distance used in the Project's analysis provides a conservative study area that captures the geographic area subject to the maximum potential effect from Project-related DPM emissions. (Urban Crossroads, 2017b, p. 27)

The MEIR is located approximately 104 feet southeast of the Project's proposed driveway connection to Washington Avenue. The MEIW is located immediately adjacent to the northeast corner of the

Project site, at the site of an approved but not yet constructed warehouse building. There are no schools located within a 1,320-foot radius of the Project site or its primary truck route; therefore, the DPM analysis does not quantify potential cancer and non-cancer risks to school child receptors as Project-related DPM effects to school children would be negligible. (Urban Crossroads, 2017b, p. 1)

4.2.3 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to air quality if the Project or any Project-related component would:

a. *Conflict with or obstruct implementation of the applicable air quality plan;*
b. *Violate any air quality standard or contribute substantially to an existing projected air quality violation;*
c. *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 (including releasing emissions that exceed quantitative thresholds for ozone precursors);*
d. *Expose sensitive receptors to substantial pollutant concentrations; or*
e. *Create objectionable odors affecting a substantial number of people*

The above-listed thresholds are derived directly from Section III of Appendix G to the CEQA Guidelines and address typical adverse project effects on regional air pollution and nearby sensitive receptors.

In accordance with the SCAQMD *CEQA Air Quality Handbook*, the Project would result in a significant impact pursuant to Threshold a) if either of the following conditions were to occur (Urban Crossroads, 2017a, pp. 49-52):

- The Project would increase the frequency or severity of existing NAAQS and/or CAAQS violations, cause or contribute to new air quality violations, or delay the attainment of interim air quality standards; or

- The Project would exceed the *Final 2016 AQMP*'s future year buildout assumptions.

Within the context of the above threshold considerations, the SCAQMD has established numerical significance thresholds for regional criteria pollutant emissions. Accordingly, a significant impact would occur under Thresholds b) and/or c) if the Project's emissions exceed one or more of the "Regional Thresholds" listed in Table 4.2-4, *SCAQMD Maximum Daily Emissions Thresholds*. (Urban Crossroads, 2017a, p. 30)

Table 4.2-4 SCAQMD Maximum Daily Emissions Thresholds

Pollutant	Construction	Operations
Regional Thresholds		
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
Sox	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Localized Thresholds		
CO (1-Hour)	20.0 ppm	20.0 ppm
CO (8-Hour)	9.0 ppm	9.0 ppm
NO2	0.18 ppm	0.18 ppm
PM_{10}	10.4 µg/m^3	2.5 µg/m^3
$PM_{2.5}$	10.4 µg/m^3	2.5 µg/m^3

Source: (Urban Crossroads, 2017a, Table 3-1)

The SCAQMD also has established numerical thresholds regarding localized criteria pollutant emissions and toxic air contaminant emissions. A significant impact would occur under Threshold d) if the following were to occur (Urban Crossroads, 2017a, p. 30; Urban Crossroads, 2017b, pp. 4-5):

- The Project's localized criteria pollutant emissions would exceed one or more of the "Localized Thresholds" listed in Table 4.2-4; and/or

- The Project's toxic air contaminant emissions, like DPM, would expose sensitive receptor populations to an incremental cancer risk of greater than 10 in one million; and/or result in a non-carcinogenic health risk rating ("Acute Hazard Index") greater than 1.0.

  The SCAQMD's cancer risk threshold (10 in one million), corresponds to the potential that up to 10 persons, out of one million equally exposed people, would develop cancer if exposed continuously to a project's levels of toxic air contaminants over a specified duration of time. This risk would be an excess cancer that is in addition to any cancer risk borne by a person not exposed to these air toxics. To put this risk in perspective, the risk of dying from accidental drowning is 1,000 in a million which is 100 times more likely than the SCAQMD's carcinogenic risk threshold. (Urban Crossroads, 2017b, pp. 4-5)

For Threshold e), a significant impact would occur if the Project's construction and/or operational activities generate an odor nuisance pursuant to SCAQMD Rule 402 (SCAQMD, 2015b).

4.2.4 IMPACT ANALYSIS

Threshold a) Would the Project conflict with or obstruct implementation of the applicable air quality plan?

The SCAQMD *Final 2016 AQMP*, which is the applicable air quality plan for the Project area, estimates long-term air quality conditions for the SCAB. The SCAQMD has established criteria for determining consistency with the *Final 2016 AQMP*. These criteria are defined in Chapter 12, Sections 12.2 and 12.3 of the SCAQMD's *CEQA Air Quality Handbook* and are discussed below.

- *Consistency Criterion No. 1: The proposed project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.*

Consistency Criterion No. 1 refers to violations of the NAAQS and CAAQS. Violations of the NAAQS and/or CAAQS would occur if the SCAQMD localized emissions thresholds were exceeded. As disclosed under the analysis for Threshold d), below, the Project would not exceed the SCAQMD localized emissions thresholds during construction or long-term operation and, by extension, would not result in violations of the NAAQS or CAAQS. Accordingly, localized criteria pollutant emissions resulting from the Project's construction and operation would neither contribute substantially to an existing or potential future violation nor delay the attainment of applicable air quality standards. (Urban Crossroads, 2017a, p. 50)

- *Consistency Criterion No. 2: The proposed project will not exceed the assumptions in the AQMP based on the years of project buildout phase.*

The air quality conditions presented in the *Final 2016 AQMP* are based in part on the growth forecasts identified by SCAG in its *2016-2040 RTP/SCS*. The *2016-2040 RTP/SCS* anticipates that development in the various incorporated and unincorporated areas within the SCAB will occur in accordance with the adopted general plans for these areas. Development projects that propose to increase the intensity and/or use on an individual property may result in increased stationary area source emissions and/or vehicle source emissions when compared to the *Final 2016 AQMP* assumptions. If a project does not exceed the growth projections in the applicable local general plan, then the project is considered to be consistent with the growth assumptions in the *AQMP*.

Under existing conditions, a majority of the Project site designated for "Open Space-Public/Commercial Recreation" land uses by the City of San Bernardino General Plan; a small portion of the site is designated for "Industrial-Industrial Light" land uses. The General Plan Amendment proposed by the Project would designate the entire Project site for "Industrial-Industrial Light" land uses. Accordingly, the Project would develop the site with more intense land uses than anticipated by the *Final 2016 AQMP*. However, under CEQA, an inconsistency with the *AQMP* is only significant if the inconsistency results in a significant environmental impact, such as an exceedance of operational-

source emissions thresholds established by the local air district. As disclosed under the responses to Thresholds b) and c), below, the Project's construction and operational regional criteria pollutant emissions would exceed the applicable the SCAQMD thresholds. Accordingly, the Project would be inconsistent with the growth projections contained in the *Final 2016 AQMP*, and the inconsistency would result in a significant environmental impact due to long-term criteria pollutant emissions.

Threshold b) Would the Project violate any air quality standard or contribute substantially to an existing projected air quality violation?

Threshold c) Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

A. Construction Emissions Impact Analysis

The Project's peak construction-related emissions are summarized in Table 4.2-5, *Peak Construction Emissions Summary*. Detailed air model outputs are presented in Appendix 3.1 of *Technical Appendix B1*.

Table 4.2-5 Peak Construction Emissions Summary

Year	Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2017	15.87	187.77	107.23	0.24	16.61	10.40
2018	35.35	82.32	80.08	0.24	13.90	5.47
Maximum Daily Emissions	**35.35**	**187.77**	**107.23**	**0.24**	**16.61**	**10.40**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**

Source: (Urban Crossroads, 2017a, pp. Table 3-4)

As shown in Table 4.2-5, the Project's peak construction-related emissions of VOCs, CO, SO_X, and particulate matter (PM_{10} and $PM_{2.5}$) would not exceed the applicable SCAQMD regional thresholds. Accordingly, the Project would not emit substantial concentrations of these pollutants during construction and would not contribute to an existing or projected air quality violation, on a direct or cumulatively considerable basis. Impacts associated with construction-related emissions of VOCs, CO, SO_X, PM_{10} and $PM_{2.5}$ would be less than significant and mitigation is not required.

Notwithstanding the conclusions above, the Project's construction-related emissions of NO_X would exceed the applicable SCAQMD regional threshold. NO_X is a precursor for ozone, a pollutant for which the SCAB does not attain federal (NAAQS) or State (CAAQS) standards. Accordingly, the Project's daily NO_X emissions during construction would violate the SCAQMD regional threshold for this pollutant and would result in a considerable net increase of a criteria pollutant for which the Project region is in nonattainment. This impact is significant and mitigation is required.

B. Operational Emissions Impact Analysis

The Project's operational emissions are presented in Table 4.2-6, *Peak Operational Emissions Summary*. Detailed air model outputs are presented in Appendix 3.1 of *Technical Appendix B1*.

Table 4.2-6 Peak Operational Emissions Summary

Operational Activities – Summer Scenario	Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Source	22.03	3.24E-03	0.35	3.00E-05	1.25E-03	1.25E-03
Energy Source	0.06	0.56	0.47	3.35E-03	0.04	0.04
Mobile (Trucks)	8.46	246.82	66.96	0.80	26.19	8.65
Mobile (Passenger Cars)	2.23	3.16	44.01	0.13	14.04	3.77
On-Site Equipment	0.67	8.99	3.23	0.01	0.29	0.27
Total Maximum Daily Emissions	**33.45**	**259.53**	**115.02**	**0.93**	**40.27**	**12.46**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**

Operational Activities – Winter Scenario	Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Source	22.03	3.24E-03	0.35	3.00E-05	1.25E-03	1.25E-03
Energy Source	0.06	0.56	0.05	3.35E-03	4.00E-02	4.00E-02
Mobile (Trucks)	8.54	253.73	67.64	0.79	26.2	8.66
Mobile (Passenger Cars)	1.84	3.3	35.57	0.12	14.04	3.77
On-Site Equipment	0.67	8.99	3.23	0.01	0.29	0.27
Total Maximum Daily Emissions	**33.14**	**257.59**	**106.84**	**0.91**	**40.28**	**12.47**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**

Source: (Urban Crossroads, 2017a, Table 3-6)

As shown in Table 4.2-6, the Project's peak operational-related emissions of VOCs, CO, SO_X, and particulate matter (PM_{10} and $PM_{2.5}$) would not exceed the applicable SCAQMD regional thresholds. Accordingly, the Project would not emit substantial concentrations of these pollutants during long-term operational activities and would not contribute to an existing or projected air quality violation, on a direct or cumulatively considerable basis. Impacts associated with operational-related emissions of VOCs, CO, SO_X, PM_{10} and $PM_{2.5}$ would be less than significant and mitigation is not required.

However, as shown in Table 4.2-6, the Project's operational NO_X emissions would exceed the applicable SCAQMD regional threshold. NO_X is a precursor for ozone, a pollutant for which the SCAB does not attain federal (NAAQS) or State (CAAQS) standards. Accordingly, the Project's daily NO_X emissions during long-term operation would violate the SCAQMD regional threshold for this pollutant

and would result in a considerable net increase of a criteria pollutant for which the Project region is in nonattainment. This impact is significant and mitigation is required.

Threshold d) Would the Project expose sensitive receptors to substantial pollutant concentrations?

A. Localized Criteria Pollutant Analysis

1. Construction Analysis

Table 4.2-7, *Peak Construction Localized Emissions Summary*, summarizes the Project's localized criteria pollutant emissions during peak construction activities. Detailed air model outputs are presented in Appendices 3.1 and 3.3, respectively of *Technical Appendix B1*.

Table 4.2-7 Peak Construction Localized Emissions Summary

Peak Construction	CO		NO_2	PM_{10}	$PM_{2.5}$
	Averaging Time				
	1-Hour	8-Hour	1-Hour	24-Hours	24-Hours
Peak Day Localized Emissions	0.10	0.08	0.09	4.9	2.31
Background Concentration[A]	4.0	2.4	0.07		
Total Concentration	**4.10**	**2.48**	**0.16**	**4.9**	**2.31**
SCAQMD Localized Significance Threshold	20	9	0.18	10.4	10.4
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**

[A]Highest concentration from the last three years of available data
Note: PM_{10} and $PM_{2.5}$ concentrations are expressed in µg/m^3. All others are expressed in ppm
Source: (Urban Crossroads, 2017a, Table 3-9)

As shown in Table 4.2-7, the Project's localized CO, NO_2, and particulate matter (PM_{10} and $PM_{2.5}$) emissions would not exceed applicable SCAQMD thresholds during construction. Accordingly, Project construction would not expose any sensitive receptors to substantial criteria pollutant concentrations. Impacts would be less than significant and no mitigation would be required.

2. Operational Analysis

Table 4.2-8, *Peak Operational Localized Emissions Summary*, summarizes the Project's localized criteria emissions during peak operational activities. Detailed air model outputs are presented in Appendices 3.1 and 3.3, respectively of *Technical Appendix B1*.

As shown in Table 4.2-8, the Project would not exceed the applicable SCAQMD thresholds for localized CO, NO_2, and particulate matter (PM_{10} and $PM_{2.5}$) emissions during long-term operation. Accordingly, Project operation would not expose any sensitive receptors to substantial criteria pollutant concentrations. Impacts would be less than significant and no mitigation is required.

Table 4.2-8 Peak Operational Localized Emissions Summary

Operation	CO		NO_2		PM_{10}		$PM_{2.5}$
	Averaging Time						
	1-Hour	8-Hour	1-Hour	Annual	24-Hours	Annual	24-Hours
Peak Day Localized Emissions	0.016	0.011	0.022	0.004	0.68	0.22	0.62
Background Concentration[A]	4.0	2.4	0.07	0.021			
Total Concentration	**4.02**	**2.41**	**0.09**	**0.025**	**0.68**	**0.22**	**0.62**
SCAQMD Localized Significance Threshold	20	9	0.18	0.03	2.5	1	2.5
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

[A]Highest concentration from the last three years of available data
Note: PM_{10} and $PM_{2.5}$ concentrations are expressed in µg/m^3. All others are expressed in ppm
Source: (Urban Crossroads, 2017a, Table 3-11)

B. CO Hot Spot Impact Analysis

A CO "hot spot" is an isolated geographic area where localized concentrations of CO exceeds the CAAQS (i.e., one-hour standard of 20 parts per million or the eight-hour standard of 9 parts per million). A Project-specific CO "hot spot" analysis was not performed because CO attainment was thoroughly analyzed as part of SCAQMD's *2003 AQMP* and the *1992 Federal Attainment for Carbon Monoxide* (*1992 CO Plan*). As identified in the SCAQMD's *2003 AQMP* and the *1992 CO Plan*, peak CO concentrations in the SCAB were the byproduct of unusual meteorological and topographical conditions and were not the result of traffic congestion. For example, the CO "hot spot" analysis performed for the *2003 AQMP* recorded a CO concentration of 9.3 parts per million (8-hour) at the Long Beach Boulevard / Imperial Highway intersection in Los Angeles County; however, only a small portion of the recorded CO concentrations (0.7 parts per million) were attributable to traffic congestion at the intersection. The vast majority of the recorded CO concentrations at the Long Beach Boulevard / Imperial Highway intersection (8.6 parts per million) were attributable to ambient air concentrations. With the addition of Project traffic, the busiest intersections in the Project site vicinity would experience peak congestion levels comparable to the Long Beach Boulevard / Imperial Highway intersection; however, ambient CO concentrations in the Project site vicinity range between 1.4 and 1.6 parts per million. Based on existing ambient CO concentrations and the lack of any unusual meteorological and/or topographical conditions in the Project site vicinity, the Project is not expected to cause or contribute to a CO "hot spot." (Urban Crossroads, 2017a, pp. 47-48)

Furthermore, a study prepared by the Bay Area Air Quality Management District (BAAQMD) determined that under existing and future vehicle emission rates, a given 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 "hot spot" impact. The proposed Project would only generate 1,789 total vehicle trips (actual vehicles) over an entire day and would not remotely approach the volume of hourly traffic required to generate a CO "hot spot." (Urban Crossroads, 2017a, p. 48)

Based on the foregoing analysis, Project-related vehicular emissions would not create a CO "hot spot" and would not substantially contribute to an existing or projected CO "hot spot." Impacts would be less than significant and mitigation is not required.

C. Toxic Air Contaminant Emissions Impact Analysis

Based on the typical operations of high-cube warehouse buildings, operation of a warehouse building on the Project site would not generate stationary sources of toxic air contaminants. However, the Project's operational activities would generate/attract diesel-fueled trucks. Diesel-fueled trucks produce DPM, which is a toxic air contaminant and is known to be associated with health hazards – including cancer. Project-related DPM health risks are summarized below. Detailed air dispersion model outputs and risk calculations are presented in Appendices 2.1, 2.2, and 2.4 of *Technical Appendix B2*.

At the maximally exposed individual receptor (MEIR), the maximum cancer risk attributable to the Project's DPM emissions is calculated to be 1.45 in one million (presuming the resident(s) at this property would stay at their home 24 hours per day, seven (7) days per week, 365 days per year, for 70 years). A cancer risk of 1.45 in one million attributable to the Project would not exceed the SCAQMD cancer risk threshold of 10 in one million. At this same location, the non-cancer health risk index attributable to the proposed Project would be 0.0009, which would not exceed the SCAQMD non-cancer health risk index of 1.0. (Urban Crossroads, 2017b, p. 2) Accordingly, long-term operations at the Project site would not directly cause or contribute in a cumulatively considerable manner to the exposure of residential receptors to substantial DPM emissions. Therefore, the Project would result in a less-than-significant impact and no mitigation is required.

At the maximally exposed individual worker (MEIW), the maximum cancer risk attributable to the proposed Project's DPM emissions is calculated to be 0.93 in one million, which would not exceed the SCAQMD cancer risk threshold of 10 in one million. The MEIW analysis presumes the employees would work in the Project area for 40 years. At this same location, the non-cancer health risk index attributable to the proposed Project would be 0.003, which would not exceed the SCAQMD non-cancer health risk index of 1.0. (Urban Crossroads, 2017b, p. 2) Accordingly, long-term operations at the Project site would not directly cause or contribute in a cumulatively considerable manner to the exposure of nearby workers to substantial DPM emissions. Therefore, the Project would result in a less-than-significant impact and no mitigation is required.

Urban Crossroads, Inc. also assessed the risk attributable to vehicle travel on possible off-site road alignments to the north of the Project site, identified as future access Option 1 and Option 2 (as described in EIR Section 3.0). Detailed air dispersion model outputs and risk calculations for the possible future access road alignments is presented in Attachment A of *Technical Appendix B3*.

For the Option 1 Future Access Alternative, at the maximally exposed individual receptor (MEIR), the maximum cancer risk attributable to the Project's DPM emissions is calculated to be 4.07 in one million

(presuming the resident(s) at this property would stay at their home 24 hours per day, seven (7) days per week, 365 days per year, for 70 years). A cancer risk of 4.07 in one million attributable to the Project would not exceed the SCAQMD cancer risk threshold of 10 in one million. At this same location, the non-cancer health risk index attributable to the proposed Project would be 0.0003, which would not exceed the SCAQMD non-cancer health risk index of 1.0. Accordingly, long-term operations at the Project site would not directly cause or contribute in a cumulatively considerable manner to the exposure of residential receptors to substantial DPM emissions. Therefore, the Project would result in a less-than-significant impact and no mitigation is required. At the maximally exposed individual worker (MEIW), the maximum cancer risk attributable to the proposed Project's DPM emissions is calculated to be 0.84 in one million, which would not exceed the SCAQMD cancer risk threshold of 10 in one million. The MEIW analysis presumes the employees would work in the Project area for 40 years. At this same location, the non-cancer health risk index attributable to the proposed Project would be 0.003, which would not exceed the SCAQMD non-cancer health risk index of 1.0. (Urban Crossroads, Inc., 2017h, Table 1) Accordingly, long-term operations at the Project site would not directly cause or contribute in a cumulatively considerable manner to the exposure of nearby workers to substantial DPM emissions. Therefore, the Project would result in a less-than-significant impact and no mitigation is required.

For the Option 2 Future Access Alternative, at the maximally exposed individual receptor (MEIR), the maximum cancer risk attributable to the Project's DPM emissions is calculated to be 4.63 in one million (presuming the resident(s) at this property would stay at their home 24 hours per day, seven (7) days per week, 365 days per year, for 70 years). A cancer risk of 4.63 in one million attributable to the Project would not exceed the SCAQMD cancer risk threshold of 10 in one million. At this same location, the non-cancer health risk index attributable to the proposed Project would be 0.0003, which would not exceed the SCAQMD non-cancer health risk index of 1.0. (Urban Crossroads, Inc., 2017h, Table 2) Accordingly, long-term operations at the Project site would not directly cause or contribute in a cumulatively considerable manner to the exposure of residential receptors to substantial DPM emissions. Therefore, the Project would result in a less-than-significant impact and no mitigation is required. At the maximally exposed individual worker (MEIW), the maximum cancer risk attributable to the proposed Project's DPM emissions is calculated to be 0.91 in one million, which would not exceed the SCAQMD cancer risk threshold of 10 in one million. The MEIW analysis presumes the employees would work in the Project area for 40 years. At this same location, the non-cancer health risk index attributable to the proposed Project would be 0.003, which would not exceed the SCAQMD non-cancer health risk index of 1.0. Accordingly, long-term operations at the Project site would not directly cause or contribute in a cumulatively considerable manner to the exposure of nearby workers to substantial DPM emissions. Therefore, the Project would result in a less-than-significant impact and no mitigation is required.

Threshold e) Would the Project create objectionable odors affecting a substantial number of people?

The Project could produce odors during proposed construction activities resulting from construction equipment exhaust, application of asphalt, and/or the application of architectural coatings; however, standard construction practices would minimize the odor emissions and their associated impacts. Furthermore, any odors emitted during construction would be temporary, short-term, and intermittent in nature, and would cease upon the completion of the respective phase of construction. In addition, construction activities on the Project site would be required to comply with SCAQMD Rule 402, which prohibits the discharge of odorous emissions that would create a public nuisance. Accordingly, the proposed Project would not create objectionable odors affecting a substantial number of people during construction, and short-term impacts would be less than significant.

During long-term operation, the proposed Project would include warehouse distribution land uses, which are not typically associated with objectionable odors. The temporary storage of refuse associated with the proposed Project's long-term operational use could be a potential source of odor; however, Project-generated refuse is required to be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations, thereby precluding any significant odor impact. Furthermore, the proposed Project would be required to comply with SCAQMD Rule 402, which prohibits the discharge of odorous emissions that would create a public nuisance, during long-term operation. As such, long-term operation of the proposed Project would not create objectionable odors affecting a substantial number of people.

4.2.5 CUMULATIVE IMPACT ANALYSIS

As described under the analysis for Threshold a), the Project site would be developed with land uses that are more intense than the land uses assumed for the Project site in SCAQMD's *Final 2016 AQMP*. However, the Project's conflict with the *Final 2016 AQMP* is inherently site-specific; therefore, there is no potential for the Project to contribute to a cumulatively considerable impact under this Threshold.

Based on SCAQMD guidance, any direct exceedance of a regional or localized threshold also is considered to be a cumulatively considerable effect, while air pollutant emissions below applicable regional and/or localized thresholds are not considered cumulatively considerable. As discussed in the preceding analysis, the Project would exceed the SCAQMD regional threshold for NO_X emissions during construction and operation. Therefore, the Project's regional emissions of NO_X would be cumulatively considerable and mitigation would be required. All other Project construction- and operational-related regional and localized emissions, including DPM emissions, would not exceed the applicable SCAQMD thresholds and, therefore, are not considered cumulatively considerable.

As indicated in the analysis of Threshold e), above, there are no Project components that would expose a substantial number of sensitive receptors to objectionable odors. The areas surrounding the Project site are developed with non-conforming residential land uses and commercial land uses, which are not sources of offensive odors. Because the Project would not create objectionable odors and there are no

sources of objectionable odors in the areas immediately surrounding the Project site, there is no potential for odors from the Project site to commingle with odors from nearby development projects and expose nearby sensitive receptors to substantial, offensive odors. Accordingly, the Project would have a less-than-significant cumulative impact.

4.2.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a): Significant Direct Impact. The Project would be inconsistent with the growth projections contained in the *Final 2016 AQMP*, and the inconsistency would result in a significant environmental impact due to long-term criteria pollutant emissions

Thresholds b) and c): Significant Direct and Cumulatively Considerable Impact. The Project would exceed the applicable SCAQMD regional thresholds for NO_X emissions during construction and operation. Short- and long-term emissions of NO_X also would contribute to an existing air quality violation in the SCAB (i.e., ozone – NO_X is a precursor for ozone). As such, Project-related emissions would violate SCAQMD air quality standards and contribute to the non-attainment of a criteria pollutant (i.e., NO_X and ozone), which is a significant direct and cumulatively considerable impact.

Threshold d): Less-than-Significant Impact. The Project's localized criteria pollution emissions during construction and operation would not exceed the applicable SCAQMD thresholds. The Project also would not expose sensitive receptors to toxic air contaminants (i.e., DPM) that exceed the applicable SCAQMD carcinogenic and non-carcinogenic risk thresholds. Lastly, the Project would not cause or contribute to the formation of a CO "hot spot."

Threshold e): Less-than-Significant Impact. The Project would not produce unusual or substantial construction-related odors. Odors associated with long-term operation of the Project would be minimal and less than significant. The Project would comply with SCAQMD Rule 402, which prohibits the discharge of odorous emissions that would create a public nuisance.

4.2.7 MITIGATION

The following mitigation measure would reduce the Project's construction-related NO_X emissions and the contributions of this pollutant to the SCAB's non-attainment status for ozone.

MM 4.2-1 Prior to grading permit and building permit issuance, the City shall verify that the following note is specified on all grading and building plans. Project contractors shall be required to comply with this note and permit periodic inspection of the construction site by City of San Bernardino staff to confirm compliance. This note shall also be specified in bid documents issued to prospective construction contractors.

a) All graders, scrapers, and rubber tired dozers shall be California Air Resources Board (CARB) Tier 3 Certified or better

The following mitigation measures would reduce the Project's operational-related NO_X emissions and the contributions of this pollutant to the SCAB's non-attainment status for ozone.

MM 4.2-2 Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations. At a minimum, each sign shall include: 1) instructions for truck drivers to shut off engines when not in use; 2) instructions for drivers of diesel trucks to restrict idling to no more than five (5) minutes once the vehicle is stopped, the transmission is set to "neutral" or "park," and the parking brake is engaged; and 3) telephone numbers of the building facilities manager and the CARB to report violations. Prior to occupancy permit issuance, the City of San Bernardino shall conduct a site inspection to ensure that the signs are in place.

MM 4.2-3 Prior to the issuance of a building permit, the Project Applicant shall provide documentation to the City of San Bernardino demonstrating that the Project is designed to meet the mandatory California Energy Code Title 24, Part 6 standards in effect at the time of building permit application submittal and includes the energy efficiency design features listed below at a minimum.

a) Up to three (3) electric vehicle charging stations shall be provided;

b) Solar or light-emitting diodes (LEDs) lights shall be installed for outdoor lighting;

c) Any yard trucks used on-site shall be powered by natural gas or electricity;

d) Service equipment used on the Project site, such as forklifts, shall be electric;

e) Bicycle racks shall be provided at convenient locations on the Project site;

f) The building's roof shall be designed and constructed to accommodate maximally-sized photovoltaic (PV) solar arrays taking into consideration limitations imposed by other rooftop equipment, roof warranties, building and fire code requirements, and other physical or legal limitations. Applicant must develop the building with the necessary electrical system and other infrastructure to accommodate maximally-sized PV arrays in the future. The electrical system and infrastructure must be clearly labeled with noticeable and permanent signage which informs future occupants/owners of the existence of this infrastructure.

g) The building shall be designed and constructed to achieve the equivalent of the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) "Certified" rating. The Project Applicant shall provide the City with documentation demonstrating that the Project has achieved LEED "Certified" equivalency; but, the Project shall not be required to obtain the U.S. Green Building Council's official LEED certification.

MM 4.2-4 The building plans for each building shall specify that all fixtures installed in restrooms and employee break areas shall be U.S. EPA Certified WaterSense or equivalent. The City of San Bernardino shall verify this information is provided on the Project's building plans prior to issuance of building permits and inspect for adherence during building construction.

MM 4.2-5 Prior to the issuance of permits that would allow the installation of landscaping, the City of San Bernardino shall review and approve landscaping plans for the site that requires: 1) a plant palette emphasizing drought-tolerant plants; and 2) use of water-efficient irrigation techniques. The City of San Bernardino shall inspect for adherence to these requirements after landscaping installation.

4.2.8 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold a): Significant and Unavoidable Impact. Because the SCAQMD's daily significance thresholds for air pollutants would be exceeded during the Project's operation even after the implementation of feasible mitigation measures (see below), the Project would not fully mitigate its significant conflict with the *Final 2016 AQMP*.

Thresholds b) and c): Less-than-Significant Impact (Construction), Significant and Unavoidable Direct and Cumulative Impact (Operation). Mitigation Measure (MM) 4.2-1 would require the Project to utilize construction equipment that meets a minimum of tailpipe emission standards. As summarized in Table 4.2-9, *Peak Construction Emissions Summary (With Mitigation)*, implementation of this mitigation measure would reduce the Project's construction NO_X emissions below the SCAQMD significance threshold. Accordingly, with implementation of MM 4.2-1, the Project's construction activities would not violate or contribute substantially to an existing or projected air quality violation, and construction-related impacts associated with NO_X emissions would be reduced to less than significant.

Table 4.2-9 Peak Construction Emissions Summary (With Mitigation)

Year	Emissions (pounds per day)					
	VOC	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
2017	12.82	91.27	90.27	0.24	14.40	6.69
2018	35.35	82.32	80.08	0.24	13.90	5.47
Maximum Daily Emissions	**35.35**	**91.27**	**90.27**	**0.24**	**14.4**	**6.69**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: (Urban Crossroads, 2017a, Table 3-5)

MM 4.2-2 through MM 4.2-5 would require the Project to incorporate design features that will reduce the Project's overall demand for energy resources and would reduce the Project's operational NO_X emissions (NO_X is created during the generation of certain types of energy resources). However, mobile source emissions account for approximately 94 percent, by weight, of the Project's total

operational emissions. Mobile source emissions are regulated by standards imposed by federal and State agencies, not local governments. The types of vehicle engines and the types of fuel used by trucking companies and vehicle operators that may access the Project site are well beyond the direct control of the City of San Bernardino. No other mitigation measures are available that are feasible for the Project Applicant to implement and the City of San Bernardino to enforce that have a proportional nexus to the Project's level of impact. As such, it is concluded that the Project's long-term emissions of NOx would exceed SCAQMD air quality standards on a daily basis. In addition, the Project's long-term emissions of and NOx would cumulatively contribute to an existing air quality violation in the SCAB (i.e., ozone concentrations), as well as cumulatively contribute to the net increase of a criteria pollutant for which the SCAB is non-attainment (i.e., federal and state ozone concentrations). Accordingly, the Project's long-term emissions of NO_X are concluded to result in a significant and unavoidable impact on both a direct and cumulatively considerable basis. The effects to human health from NOx exposure in the SCAB are decreases in lung function, such as asthma and pulmonary diseases.

4.3 BIOLOGICAL RESOURCES

This Subsection assesses the proposed Project's potential to impact sensitive biological resources. Sensitive biological resources are habitats and individual plant and wildlife species that have special recognition by federal, state, and/or local conservation agencies as being endangered, threatened, or rare, and/or fall under the jurisdiction of the United States Fish and Wildlife Service (USFWS), United States Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Board (RWQCB), and/or are afforded protections under applicable Habitat Conservation Plans (HCPs). For purposes of discussion and analyses in this Subsection 4.3, the term "Project site" refers collectively to the 62.02-acre Project site as well as the interim roadway improvement disturbance area that is proposed as part of the Project and potential permanent roadway improvement disturbance areas in order to connect the Project site to Orange Show Road. Refer to Figure 2-4, *Aerial Photograph*, for the location of the off-site roadway improvement areas.

The information and analysis presented in this Subsection is based on the following technical report:

- *Gateway South Building 4 Project, City of San Bernardino, San Bernardino County, California, Habitat and Jurisdictional Assessment*, prepared by Michael Baker International, and dated June 2017 (Baker, 2017).

All references used in this Subsection are included in EIR Section 7.0, *References*.

A. Habitat and Jurisdictional Delineation Methodology

Michael Baker International conducted a thorough literature review and records search to determine which special-status plant and wildlife species have the potential to occur on or within the general vicinity of the Project site. In addition, a general habitat assessment and field investigation was conducted in order to document existing conditions on the Project site and to determine the potential for special-status plant and wildlife species to occur on the Project site. Michael Baker biologists inventoried and evaluated the condition of the habitat within the Project site on October 13, 2016, January 30, 2016, and May 25, 2017. Refer to Section 2 of the habitat and jurisdictional assessment (*Technical Appendix C1)* for a detailed discussion of the methodology used to conduct the Project site's Habitat and Jurisdictional Assessment. (Baker, 2017, Section 2.0)

4.3.1 EXISTING CONDITIONS

The Project site is depicted on the San Bernardino South quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map series in an un-sectioned area of Township 1 south, Range 4 west; therefore, the California Natural Diversity Database (CNDDB) Rarefind 5, CNDDB Quickview Tool in Biographic Observation System (BIOS), and the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California was queried for reported locations of special-status plant and wildlife species as well as special-status natural plant communities in the San Bernardino South USGS 7.5- minute quadrangle. (Baker, 2017, pp. 1 and 17)

A. Site Conditions

The majority of the Project site consists of the San Bernardino Public Golf Club that is currently operating and composed of manicured fairways, sand traps, cart paths, artificial ponds, and associated ornamental landscaping. The northern portion of the golf course includes a parking lot, driving range, pro shop, and clubhouse. The entry driveway for the golf course is accessible from S. Waterman Avenue and traverses the northern portion of the site to the golf course's parking lot in the northern portion of the Project site.

B. Vegetation

As shown on Figure 4.3-1, *Existing Vegetation*, the Project site is comprised of one plant community-landscaped, and land cover types classified as disturbed, developed, and artificial ponds.

1. Landscaped (53.58 acres)

The majority of the Project site is comprised of landscaped vegetation. This plant community is primarily composed of manicured golf course fairways and greens, with rows of ornamental vegetation separating the fairways between each golf course hole. Plant species observed within the landscape areas include eucalyptus, common fig, Shamel ash, jacaranda, pine, western sycamore, black elderberry, and Peruvian peppertree. (Baker, 2017, p. 12)

2. Disturbed (2.91 acres)

Disturbed areas within the Project site have been exposed to anthropogenic (man-made) disturbances that have resulted in the growth of early succession and non-native weedy plant species. Plant species observed within on-site disturbed areas include pigweed amaranth, lamb's quarters, flax-leaved horseweed, short-podded mustard, London rocket, red-stemmed filaree, common fiddleneck, cheeseweed, rigput brome, wild oat, and Russian thistle. (Baker, 2017, p. 12)

3. Developed (6.19 acres)

Developed areas within the Project site generally consist of impervious surfaces that include parking lots, golf cart paths, storage yards, and existing structures (i.e., clubhouse and pro shop). In addition, a paved roadway, Park Center Circle, is located in the northern portion of the Project site. (Baker, 2017, p. 14)

4. Artificial Ponds (1.09 acres)

Four artificial ponds are located within the boundaries of the Project site. The artificial ponds were constructed as water hazards for the San Bernardino Public Golf Club and do not possess a surface hydrological connection to the Santa Ana River that is located off-site to the south or to East Twin Creek that is located off-site to the west of the Project site. The artificial ponds are routinely maintained by golf course personnel and do not contain hygrophytic (a plant that grows in water or very moist ground) or riparian vegetation. (Baker, 2017, p. 14)

C. Wildlife

1. Fish

The artificial ponds located on the Project site have the potential to support exotic/introduced fish species such as mosquito fish, bluegill, and bass. These fish species do not occur naturally and are not native to the off-site Santa Ana River or surrounding tributaries. Bluegill and bass are often introduced to artificial systems for vector control purposes as they prey heavily on amphibian and insect species, keeping their numbers low. The artificial ponds lack connectivity to the off-site Santa Ana River and are routinely maintained by golf course personnel and lack the native plant communities and substrates favored by native fish species known to occur in the general vicinity. Therefore, native fish species are not expected to occur within the artificial ponds and are presumed absent from the Project site. (Baker, 2017, p. 14)

2. Amphibians

No amphibians were observed on the Project site during the habitat assessment. Although no amphibian species were observed during the site investigation, the artificial ponds have the potential to support amphibian species such as bullfrogs and Baja California chorus frogs. However, bluegill and bass are known to prey heavily on amphibian species, potentially keeping their numbers low within the artificial ponds. Further, the artificial ponds are routinely maintained by golf course personnel and lack the native plant communities and substrates that are needed to provide suitable breeding habitat. Therefore, native amphibian species known to occur in the general vicinity of the Project site are not expected to occur within the artificial ponds and are presumed absent from the Project site. (Baker, 2017, p. 14)

3. Reptiles

The Project site and surrounding habitat has the potential to support a variety of reptilian species adapted to a high level of human disturbances. However, no reptilian species were observed during the field survey. Reptilian species that are expected to occur on-site include western side-blotched lizard, western fence lizard, alligator lizard, and Great Basin gopher snake. (Baker, 2017, p. 15)

4. Avian

The Project site provides suitable foraging and cover habitat for a variety of resident and migrant bird species. A total of forty-eight (48) avian species were identified during the field surveys. Common bird species detected during the field surveys included northern mockingbird, savannah sparrow, Nuttall's woodpecker, American bushtit, Say's phoebe, black phoebe, yellow-rumped warbler, western meadowlark, tree swallow, Bewick's wren, Cassin's kingbird, house finch, lesser goldfinch, mourning dove, and white-crowned sparrow. (Baker, 2017, p. 15)

5. Mammals

The Project site and surrounding habitat has the potential to support a variety of mammalian species adapted to a high level of human disturbances. Audubon's cottontail, California ground squirrel and coyote were the only mammalian species observed during the field surveys. Other common mammalian species that are expected to occur on-site include raccoon, Botta's pocket gopher, opossum, Audubon's cottontail, and striped skunk. (Baker, 2017, p. 15)

D. Nesting Birds

No active nests or birds displaying nesting behavior were observed during the field surveys. However, the vegetation within the Project site provides suitable foraging and nesting habitat for a variety of year-round and seasonal avian residents, as well as migrating songbirds that could occur in the area. The Project site also has the potential to support birds that nest on the open ground, such as killdeer. Additional off-site nesting habitat is present in the riparian plant community along the Santa Ana River, within 500 feet of the Project site. (Baker, 2017, p. 15)

E. Migratory Corridors and Linkages

Habitat linkages provide links between larger habitat areas that are separated by development. Wildlife corridors are similar to linkages, but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species but inadequate for others. Wildlife corridors are significant features for dispersal, seasonal migration, breeding, and foraging. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

The Project site is not identified as a wildlife corridor or linkage. However, the off-site Santa Ana River is identified as a wildlife corridor by the San Bernardino County General Plan. Although heavily constrained by surrounding development, the Santa Ana River supports natural habitats which allows wildlife to move through the region in search of food, shelter, or nesting habitat. (Baker, 2017, p. 16)

F. Jurisdictional Areas

There are four artificial ponds on the Project site that were constructed as water hazards for the golf course and are routinely maintained in a very clean/sterile condition by golf course personnel. The artificial ponds were constructed in the uplands and are filled with water from three wells located in the western portion of the Project site. As a result, the artificial ponds do not possess a surface hydrologic connection to the Santa Ana River or East Twin Creek, and thus do not qualify as jurisdictional "waters of the United States" or "waters of the State." In order for the artificial ponds to qualify as an isolated wetland, they must exhibit all three wetland parameters (i.e., hydric soils, hygrophytic vegetation, and hydrology) described in the Corps Arid West Regional Supplement. The only soils found along the edge of the artificial ponds are sandy sediments associated with the

underlying soils that have been mixed from development of the golf course. There are no fine or clay soils accumulated at this interface that could be classified as hydric soils. Additionally, no hygrophytic or riparian vegetation occurs within the artificial ponds. Therefore, the artificial ponds do not meet all three wetland parameters and would not qualify as isolated wetland features. (Baker, 2017, pp. 16-17)

A stand of riparian vegetation dominated by western sycamore, cottonwood, black willow, black elderberry, and mulefat is located approximately 25-feet to the south and outside of the Project site boundaries adjacent to the Santa Ana River. In addition, East Twin Creek runs north to south along the western boundary of the Project site and converges with the Santa Ana River to the southwest of the Project site. The Santa Ana River is ultimately tributary to the Pacific Ocean (Traditional Navigable Water). Therefore, both East Twin Creek and the Santa Ana River possess a surface hydrologic connection to downstream "waters of the United States" and fall under the regulatory authority of the Corps, Regional Water Quality Control Board (RWQCB or "Regional Board"), and CDFW. Refer to Figure 4.3-2, *Off-Site Jurisdictional Areas* for a depiction of the limits of jurisdiction. (Baker, 2017, pp. 16-18)

G. Special-Status Biological Resources

The habitat and jurisdictional assessment (*Technical Appendix C1*) conducted by Michael Baker International, evaluated the conditions of the habitat(s) within the boundaries of the Project site to determine if the existing plant communities, at the time of the habitat survey, have the potential to provide suitable habitat(s) for special-status plant and wildlife species.

The literature search conducted by Michael Baker, International, identified twenty-three (23) special-status plant species, fifty-seven (57) special-status wildlife species, and three (3) special-status plant communities as having the potential to occur within the San Bernardino South quadrangle. Special-status plant and wildlife species were evaluated for their potential to occur within the Project site based on habitat requirements, availability and quality of suitable habitat, and known distributions. Species determined to have the potential to occur within the general vicinity of the Project site are presented in Table C-1, *Potentially Occurring Special-Status Biological Resource*s, provided in Appendix C of *Technical Appendix C1*. Refer to Table C-1 for a detailed analysis regarding the potential occurrence of special-status plant and wildlife species within the Project site. (Baker, 2017, p. 17)

1. Special-Status Plants

Twenty-three (23) special-status plant species have been recorded in the CNDDB and CNPS in the San Bernardino South USGS 7.5-minute quadrangle (refer to Appendix C of *Technical Appendix C1*). No special-status plant species were observed on-site during the field surveys. The majority of the Project site is composed of manicured fairways, sand traps, cart paths, artificial ponds, and associated ornamental landscaping. In addition, the Project site contains land cover types that would be classified as disturbed and developed. Although Santa Ana River woolystar is known to occur in the vicinity along the Santa Ana River, Project activities would be restricted to the existing San Bernardino Golf Club and the previously disturbed areas that do not provide suitable habitat. Based on habitat

requirements for specific special-status plant species and the availability and quality of habitats needed by each species, Michael Baker International determined that the Project site does not provide suitable habitat for special-status plant species identified in the CNDDB or CNPS. As a result, all special-status plant species are not expected to occur and are presumed to be absent from the Project site. (Baker, 2017, p. 19)

2. Special-Status Wildlife

Fifty-six (56) special-status wildlife species have been reported in the San Bernardino South USGS 7.5- minute quadrangle (refer to Attachment C of *Technical Appendix C1*). Great egret, snowy egret, and loggerhead shrike were the only special-status wildlife species observed on-site during the field investigations. Based on habitat requirements for specific special-status wildlife species and the availability and quality of habitats needed by each species, Michael Baker International determined that the Project site has a high potential to support Cooper's hawk, great blue heron, and Lawrence's goldfinch, and has a low potential to support yellow-breasted chat, western yellow bat, yellow warbler, red-breasted sapsucker, and south coast garter snake. All remaining special-status wildlife species are presumed to be absent from the Project site based on habitat requirements, availability and quality of habitat needed by each species, and known distributions. Due to their regional significance, the potential occurrence of southwestern willow flycatcher, Santa Ana Sucker, San Bernardino kangaroo rat, least Bell's vireo, and western burrowing owl is described in further detail below. (Baker, 2017, p. 19)

❑ Southwestern Willow Flycatcher

The southwestern willow flycatcher is a federally and state endangered species that usually arrives in southern California in early May, but rarely as early as the last two or three days of April. In fall, adults depart mainly during the last half of August, but rarely remain as late as September 4th. Juveniles remain until later in September but all usually depart by October 1st. The southwestern willow flycatcher breeds only in riparian habitats, typically along a dynamic river or lakeside. Surface water or saturated soil is usually present in or adjacent to nesting sites during at least the initial portion of the nesting period. Riparian habitats used by southwestern willow flycatchers typically have a dense thicket of trees and shrubs that can range in height from about 2 to 30 meters. Preferred nesting sites usually contain riparian foliage from the ground level up to a dense (about 50 to 100 percent) tree or shrub canopy. (Baker, 2017, p. 20)

The Project site consists of the San Bernardino Public Golf Club and previously disturbed areas that consist of heavily compacted soils dominated by ornamental vegetation and non-native plant species. These plant communities lack the preferred plant species composition, density, and structure needed to provide suitable nesting habitat for southwestern willow flycatcher. As depicted on Figure 4.3-3, *Off-Site Critical Habitat*, federally designated Critical Habitat for southwestern willow flycatcher is located approximately 25-feet to the south and outside of the Project site along the Santa Ana River. The closest occurrence of southwestern willow flycatcher was documented approximately 6.50 miles northeast of the Project site. One territorial male was observed 0.3 miles northwest of Hemlock Drive

within a 20 to 30-foot-wide riparian belt at the base of the San Bernardino Mountain Range. Riparian vegetation located to the south of the Project site within the Santa Ana River is dominated by western sycamore, cottonwood, black willow, mulefat, and Mexican elderberry. Although these plant species often occur within plant communities occupied by southwestern willow flycatcher, the density and understory structure of the riparian vegetation within these areas is generally too open and does not provide suitable nesting habitat. Therefore, southwestern willow flycatcher is presumed absent from the Project site and no additional surveys are recommended. (Baker, 2017, p. 20)

❑ Santa Ana Sucker

The Santa Ana sucker is a species of fish that is endemic to the Los Angeles, San Gabriel, and Santa Ana river drainages of southern California. Currently, populations of this species are in a decline due to habitat loss and degradation. Due to the decline, the USFWS recently listed the Santa Ana sucker as threatened under the Endangered Species Act. Santa Ana sucker are about six inches long and require various substrate types throughout its different stages of life. The presence of coarse substrates such as gravel, cobble, and a mixture of gravel or cobble with sand, and a combination of shallow riffle areas and deeper runs and pools provide optimal stream conditions for this species. Areas that contain shifting sandy substrates are less suitable for the development of algae which is an important food source for Santa Ana sucker. Native riparian vegetation is also an important factor for the Santa Ana sucker in that it provides cover and shelter from predators. (Baker, 2017, p. 20)

The closest recorded occurrence of Santa Ana sucker to the Project site occurred downstream of the Project site within the Santa Ana River approximately 4.10 miles southwest of the site. As depicted on Figure 4.3-3, federally designated Critical Habitat for Santa Ana sucker is located immediately south of the Project site along the Santa Ana River. The Project site does not provide suitable habitat for Santa Ana sucker which requires perennial flowing surface water associated with the Santa Ana River. The four on-site artificial ponds have no upstream or downstream surface connections to the Santa Ana River or East Twin Creek. Therefore, Santa Ana sucker is presumed absent from the Project site and no additional surveys are recommended. (Baker, 2017, p. 22)

❑ San Bernardino Kangaroo Rat

The San Bernardino kangaroo rat, federally listed as endangered, is one of several kangaroo rat species in its range. The habitat of the San Bernardino kangaroo rat is described as being confined to pioneer and intermediate Riversidian Alluvial Fan Sage Scrub (RAFSS) habitats, with sandy soils deposited by fluvial (water) rather than Aeolian (wind) processes. Burrows are dug in loose soil, usually near or beneath shrubs. The subspecies known as the San Bernardino kangaroo rat is confined to inland valley scrub communities, and more particularly, to scrub communities occurring along rivers, streams and drainages. Most of the drainages have been historically altered as a result of flood control efforts and the resulting increased use of river resources, including mining, off-road vehicle use and road and housing development. This increased use of river resources has resulted in a reduction in both the amount and quality of habitat available for the San Bernardino kangaroo rat. The past habitat losses and potential future losses prompted the emergency listing of the San Bernardino kangaroo rat as an

endangered species. Primary Constituent Elements (PCE's) are a physical or biological features essential to the conservation of a species for which its designated critical habitat is based on. Examples of PCE's include food, water, space for individual and population growth, cover or shelter, etc. The PCEs essential to support the biological needs of foraging, reproducing, rearing of young, intra-specific communication, dispersal, genetic exchange, or sheltering for San Bernardino kangaroo rat are: 1) river, creek, stream, and wash channels; alluvial fans, flood plains, flood benches and terraces; and historic braided channels that are subject to dynamic geomorphological and hydrological processes; 2) alluvial sage scrub and associated vegetation such as coastal sage scrub and chamise chaparral with a moderately open canopy; 3) soil series consisting of sand, sandy loam, or loam within its geographical range; 4) upland areas proximal to flood plains containing suitable habitat (land adjacent to alluvial fans that provides Refugia); and 5) moderate to low degree of human disturbances to habitat. (Baker, 2017, pp. 22-23)

The closest recorded occurrence of San Bernardino kangaroo rat was approximately 1.6 miles northeast of the Project site. The species was found within California buckwheat scrub habitat in the vicinity of Central Avenue and the Santa Ana River in the City of San Bernardino. As depicted on Figure 4.3-3, federally designated Critical Habitat for San Bernardino kangaroo rat is located to the south of the Project site along the Santa Ana River. Because the Project site consists of the San Bernardino Public Golf Club and previously disturbed areas that consist of heavily compacted soils dominated by ornamental vegetation and non-native plant species, the Project site does not provide any of the PCE's needed to support this species. Therefore, San Bernardino kangaroo rat is presumed absent from the Project site and no additional surveys are recommended. (Baker, 2017, p. 23)

- **Least Bell's Vireo**

Least Bell's vireo is a federally and state endangered subspecies of the Bell's vireo. It is a summer migrant to California and is the only regularly-occurring subspecies of Bell's vireo in San Bernardino County. Its nesting habitat typically consists of a well-developed over-story and understory, along with low densities of aquatic and herbaceous plant cover. The understory frequently contains dense sub-shrub or shrub thickets that are often dominated by plants such as willow, mulefat, and one or more herbaceous species. Least Bell's vireos begin to arrive at their breeding grounds in southern California riparian areas from mid-March to early April. Upon arrival, males establish breeding territories that range in size from 0.5 to 7.4 acres, with an average size of approximately two acres. In California, females begin laying eggs in April, fledging birds until the end of July. The fledglings will remain in the parental territory for up to a month. Bell's vireos leave the breeding grounds and migrate south during mid- to late September. Although not common, a few have been found wintering in southern California. (Baker, 2017, p. 23)

The Project site consists of the San Bernardino Public Golf Club and previously disturbed areas that consist of heavily compacted soils dominated by ornamental vegetation and non-native plant species. These plant communities lack the preferred plant species composition, density, and structure needed to provide suitable nesting habitat for least Bell's vireo. The closest occurrence of least Bell's vireo was documented approximately 0.11 miles south of the Project site within the Santa Ana River.

Throughout the 2000s, various numbers of paired adults and juveniles were detected in this area. However, in 2014 only one territorial male was observed. Riparian vegetation located to the south of the Project site within the Santa Ana River is dominated by western sycamore, cottonwood, black willow, mulefat, and Mexican elderberry. Although these plant species often occur within plant communities occupied by least Bell's vireo, the density and understory structure of the riparian vegetation within these areas is generally too open and likely does not provide suitable nesting habitat based on the declining number of occurrences of least Bell's vireo documented by the CNDDB over the past several years. Therefore, least Bell's vireo is presumed absent from the Project site and no additional surveys are recommended. (Baker, 2017, p. 23)

- **Burrowing Owl**

Burrowing owl is designated as a California Species of Special Concern by the CDFW. The burrowing owl is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments with level to gently-sloping areas characterized by open vegetation and bare ground. The western burrowing owl, which occurs throughout the western United States including California, rarely digs its own burrows and is instead dependent upon the presence of burrowing mammals (i.e., California ground squirrels, coyotes, and badgers) whose burrows are often used for roosting and nesting. The presence or absence of colonial mammal burrows is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drain pipes, stand-pipes, and dry culverts. They also require low growth or open vegetation allowing line-of-sight observation of the surrounding habitat to forage and watch for predators. In California, the burrowing owl breeding season extends from the beginning of February through the end of August.

Disturbed areas within the northern portions of the Project site are generally vegetated with a variety of low-growing, early successional plant species that provides open foraging habitat and allows for line-of- sight observation favored by burrowing owl. However, the Project site lacks mammal burrows capable of providing suitable roosting and nesting opportunities. The only burrows observed during the habitat assessment were generally too small (less than 4 inches in diameter) to be used by burrowing owls. Despite a systematic search of open habitat on the Project site during the field investigations, no burrowing owls or sign (i.e., pellets, feathers, castings, or white wash) was observed. Therefore, burrowing owls are presumed absent from the Project site. (Baker, 2017, p. 24)

3. Special-Status Plant Communities

According to the CNDDB, three (3) special-status plant communities have been reported in the San Bernardino South USGS 7.5-minute quadrangle. Riversidian Alluvial Fan Sage Scrub, Southern Cottonwood Willow Riparian Forest, and Southern Riparian Scrub (refer to Attachment C of *Technical Appendix C1*). No special-status plant communities were observed within the Project site during the habitat assessment. (Baker, 2017, p. 24)

4. Critical Habitat

Under the federal Endangered Species Act, "Critical Habitat" is designated at the time of listing of a species or within one year of listing. Critical Habitat refers to specific areas within the geographical range of a species at the time it is listed that include the physical or biological features that are essential to the survival and eventual recovery of that species. Maintenance of these physical and biological features requires special management considerations or protection, regardless of whether individuals or the species are present or not. In the event that a project may result in take or adverse modification to a species' designated Critical Habitat, a project proponent may be required to engage in suitable mitigation. However, consultation for impacts to Critical Habitat is only required when a project has a federal nexus. This may include projects that occur on federal lands, require federal permits (e.g., Clean Water Act (CWA) Section 404 permit), or receive any federal oversight or funding. If there is a federal nexus, then the federal agency that is responsible for providing funds or permits would be consult with the USFWS. (Baker, 2017, p. 24)

The Project site is not located with federally designated Critical Habitat. However, as depicted on Figure 4.3-3, areas off-site to the south and west of the Project site along the Santa Ana River and East Twin Creek are designated as Critical Habitat for southwestern willow flycatcher, Santa Ana sucker, and San Bernardino kangaroo rat. (Baker, 2017, p. 24)

4.3.2 REGULATORY SETTING

The Project is subject to federal and State regulations associated with a number of regulatory programs. Provided below is a brief overview of applicable federal, State, and regionals laws, regulations, and requirements that are applicable to the Project site.

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates discharge of dredge or fill materials into "waters of the United States" pursuant to Section 404 of the Federal CWA and Section 10 of the Rivers and Harbors Act. Of the State agencies, the Regional Board regulates discharges to surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act and the CDFW regulates alterations to streambed and associated plant communities under Section 1600 et seq. of the California Fish and Game Code. (Baker, 2017, p. 16)

A. Federal Endangered Species Act

The Federal Endangered Species Act of 1973 (FESA) provides definitions for endangered species and threatened species of the U.S. Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to "take" any listed species. "Take" is defined in Section 3(18) of FESA: "...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Further, the USFWS, through regulation, has interpreted the terms "harm" and "harass" to include certain types of habitat modification that result in injury to, or death of species as forms of "take." These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a federal agency for

an action that could affect a federally listed plant and animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

Federal authorizations of impacts to or incidental take of a listed species by a private individual or other private entity can be granted in one of the following ways:

- Section 7(a)(2) of the FESA of 1973, as amended (16 U.S.C. 1536(a)(2) stipulates that any federal action that may affect a species listed as threatened or endangered requires a formal consultation with USFWS to ensure that the action is not likely to jeopardize the continued existence of the listed species or result in destruction or adverse modification of designated critical habitat.

- In 1982, the FESA was amended to give private landowners the ability to develop Habitat Conservation Plans (HCPs) pursuant to Section 10(a) of the FESA. Upon development of an HCP, the USFWS can issue incidental take permits for listed species where the HCP specifies at minimum, the following: (1) the level of impact that will result from the taking, (2) steps that will minimize and mitigate the impacts, (3) funding necessary to implement the plan, (4) alternative actions to the taking considered by the applicant and the reasons why such alternatives were not chosen, and (5) such other measures that the Secretary of the Interior may require as being necessary or appropriate for the plan.

B. Migratory Bird Treaty Act (MBTA) 16 U.S.C 703-712)

The U.S. Fish and Wildlife Service has statutory authority and responsibility for enforcing the Migratory Bird Treaty Act (MBTA). The specific provisions in the statute include:

> *Establishment of a Federal prohibition, unless permitted by regulations, to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention . . . for the protection of migratory birds . . . or any part, nest, or egg of any such bird." (16 U.S.C. 703)* (USFWS, 1998)

C. Clean Water Act, Section 404

Pursuant to Section 404 of the Federal Clean Water Act (CWA), the U.S Army Corps of Engineers (ACOE) regulates the discharge of dredged and/or fill material into waters of the United States. The term “waters of the United States” is defined in ACOE regulations at 33 CFR Part 328.3(a) and generally includes waters used in interstate or foreign commerce; all interstate waters and interstate wetlands; waters that would adversely affect foreign commerce in the instance of their destruction; impoundments of waters of the United States; or tributaries of the aforementioned waters. The term

"wetlands" (a subset of "waters of the United States") is defined in 33 CFR 328.3(b) as that inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. In the absence of wetlands, the limits of ACOE jurisdiction in non-tidal waters, such as intermittent streams, extend to the ordinary high water mark (OHWM) which is defined in 33 CFR 328.3(e). Two legal decisions that clarified the definition of USACE jurisdiction are "Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al." and "Rapanos v. United States and Carabell v. United States."

D. Clean Water Act, Section 401 and 402

The Clean Water Act (CWA) Section 401 requires federal agencies to obtain a Water Quality Certification from the Regional Water Quality Control Board (RWQCB) before issuing permits that would result in increased pollutant loads to a water body. A Section 401 certification can be issued only if increased pollutant loads would not cause or contribute to exceedances of water quality standards. Subsequent to the legal decision in "Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.," the Chief Counsel for the State Water Resources Control Board issued a memorandum that addressed the effects of that decision on the Section 401 Water Quality Certification Program.

> *"California's right and duty to evaluate certification requests under section 401 is pendant to (or dependent upon) a valid application for a section 404 permit from the Corps, or another application for a federal license or permit. Thus, if the Corps determines that the water body in question is not subject to regulation under the COE's 404 program, for instance, no application for 401 certifications will be required…"*

E. California Fish and Game Code, Section 1600

Pursuant to Division 2, Chapter 6, Section 1602 of the California Fish and Wildlife Code, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife. CDFW requires an entity to notify CDFW of any proposed activity that may modify a river, stream, or lake if the activity will:

- Substantially divert or obstruct the natural flow of any river, stream, or lake;
- Substantially change or use any material from the bed, channel, or bank if, any river, stream or lake; or
- Deposit or dispose of debris, waste, or other material containing crumbled, flakes, or ground pavement where it may pass into any river, stream or lake.

"Any river, stream or lake" includes those that are episodic (dry for periods of time) as well as those that are perennial (flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water. (CDFW, 2016-2017)

F. State of California Endangered Species Act

California's Endangered Species Act (CESA) provides definitions for endangered species, threatened species, and candidate species of California. Listed endangered and threatened species are protected by the CESA and candidate species may be afforded temporary protection as though they were already listed as threatened or endangered, at the discretion of the Fish and Game Commission. Article 3, Sections 2080 through 2085, of the CESA address the taking of threatened, endangered or candidate species by stating "No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided." Under the CESA, "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Exceptions authorized by the state to allow "take" require permits or memoranda of understanding and can be authorized for endangered species, threatened species, or candidate species for scientific, educational, or management purposes and for take incidental to otherwise lawful activities. Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required prior to disturbance.

State authorizations of impacts to or incidental take of a listed species by a private individual or other private entity can be granted as follows:

- Sections 2090-2097 of the California Endangered Species Act (CESA) require that the state lead agency consult with CDFW on projects with potential impacts on state-listed species. These provisions also require CDFW to coordinate consultations with USFWS for actions involving federally listed as well as state-listed species. In certain circumstances, Section 2080.1 of the California Fish and Game Code allows CDFW to adopt the federal incidental take statement or the 10(a) permit as its own based on its findings that the federal permit adequately protects the species under state law.

G. City of San Bernardino Municipal Code 15.34.020

Municipal Code 15.34.020, *Permit Required*, states that is unlawful for any person, firm, corporation, partnership, or association, either as owner, agent or otherwise, to cut down, uproot, destroy, and/or remove more than five (5) trees within any 36-month period from a development site or parcel of property without first being issued a permit from the Development Services Department of the City of San Bernardino. (City of San Bernadino, 2017)

4.3.3 BASIS FOR DETERMINING SIGNIFICANCE

Environmental impacts to biological resources are assessed using impact significance threshold criteria, which reflect the policy statement contained in CEQA, § 21001(c) of the California Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the State of California to:

"Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities..."

In the development of thresholds of significance for impacts to biological resources, the CEQA Guidelines provides guidance primarily in § 15065, Mandatory Findings of Significance, and Appendix G, Environmental Checklist Form. CEQA Guidelines § 15065(a) states that a project may have a significant effect where:

"The project has 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 wildlife community, reduce the number or restrict the range of an endangered, rare, or threatened species"

Therefore, for the purpose of analysis in this EIR, the proposed Project would result in a significant impact to biological resources if the Project or any Project-related component would:

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 Game or U.S. Fish and Wildlife Service;*

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 Game or U.S. Fish and Wildlife Service;*

c. *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling hydrological interruption, or other means;*

d. *Interfere substantially with the movement of any native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;*

e. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or*

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.*

4.3.4 IMPACT ANALYSIS

Threshold a) Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No special-status plant species were observed on-site during the field surveys. The majority of the Project site is composed of manicured golf course fairways, sand traps, cart paths, artificial ponds, and associated ornamental landscaping. In addition, the Project site contains land cover types that are classified as disturbed and developed. Based on habitat requirements for specific special-status plant species and the availability and quality of habitats needed by each species, Michael Baker International determined that the Project site does not provide suitable habitat for special-status plant species identified by the CNDDB or CNPS. Therefore, the Project would not impact special-status plant species and no mitigation is required.

Great egret, snowy egret, and loggerhead shrike were the only special-status wildlife species observed on-site during the field surveys. Even though not observed during field surveys, based on habitat requirements for specific special-status wildlife species and the availability and quality of habitats needed by each species, Michael Baker International determined that the Project site has a high potential to support Cooper's hawk, great blue heron, and Lawrence's goldfinch, and has a low potential to support yellow-breasted chat, western yellow bat, yellow warbler, red-breasted sapsucker, and south coast garter snake. Based on habitat requirements, availability and quality of habitat needed by each species, and known distributions, all other special-status wildlife species are presumed to be absent from the Project site.

Vegetation within and surrounding the Project site has the potential to provide refuge/cover from predators, perching sites, and favorable conditions for avian nesting. Thus, nesting birds could be impacted by construction activities associated with the Project, if construction activities occur during the nesting season (February 1st to August 31st). Nesting birds are protected pursuant to the MBTA and California Fish and Game Code (Sections 3503, 3503.3, 3511, and 3513 of the California Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs). If avian nesting behaviors are disrupted, such as nest abandonment and/or loss of reproductive effort, it is considered "take" under the MBTA. Therefore, if Project construction occurs between February 1st and August 31st, impacts to nesting birds, if present, would be a significant direct impact and avoidance and mitigation would be required as identified in Subsection 4.3.8. Similarly, although no burrowing owl are present on the property under existing conditions, the species is migratory and has the potential to be located on the site prior to construction activities commencing. If burrowing owl is present on the site at the time ground-disturbing construction activities commence, impacts to the species would be a significant direct impact.

Threshold b) Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No riparian habitats or special-status plant communities occur within the boundaries of the Project site or would be affected by the Project. In addition, the Project site is not located within federally designated Critical Habitat. Therefore, the Project would not impact any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS and no mitigation is required. (Baker, 2017, p. 27)

Threshold c) Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling hydrological interruption, or other means?

The four (4) artificial ponds on the Project site have no upstream or downstream surface hydrologic connection to the Santa Ana River or East Twin Creek, and thus do not qualify as jurisdictional "waters of the United States" or "waters of the State." In order for the artificial ponds to qualify as an isolated wetland, they must exhibit all three wetland parameters (hydric soils, hygrophytic vegetation, and hydrology) described in the Corps Arid West Regional Supplement. The only soils found along the edge of the artificial ponds are sandy sediments associated with the underlying soils that have been mixed from development of the golf course. There are no fine or clay soils accumulated at this interface that could be classified as hydric soils. Additionally, no hygrophytic or riparian vegetation occurs within the artificial ponds. Therefore, Michael Baker International determined that the artificial ponds do not meet all three wetland parameters and therefore do not qualify as isolated wetland features. (Baker, 2017, p. 28)

A stand of riparian vegetation dominated by western sycamore, cottonwood, black willow, black elderberry, and mulefat is located approximately 25-feet to the south and outside of the Project site boundaries adjacent to the Santa Ana River. In addition, East Twin Creek runs north to south along the western boundary of the Project site and converges with the Santa Ana River to the southwest of the Project site. The Santa Ana River is ultimately tributary to the Pacific Ocean (Traditional Navigable Water). Therefore, both East Twin Creek and the Santa Ana River possess a surface hydrologic connection to downstream "waters of the United States" and fall under the regulatory authority of the Corps, Regional Board, and CDFW. Refer to Figure 4.3-2, *Off-Site Jurisdictional Areas*, for a depiction of the limits of jurisdiction. (Baker, 2017, p. 17)

Project-related construction activities would occur completely within the existing San Bernardino Public Golf Club and previously disturbed areas, and would not result in the discharge of dredged or fill material to the Santa Ana River or East Twin Creek. Further, the Project would not result in the removal of riparian vegetation located off-site to the south of the Project site along the Santa Ana

River. Therefore, impacts to Corps, Regional Board, and CDFW jurisdiction would not occur and no mitigation is required. (Baker, 2017, p. 17)

Threshold d) Would the Project interfere substantially with the movement of any native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The Project site is not identified as a wildlife corridor or linkage or a native wildlife nursery site. However, the San Bernardino General Plan identifies the Santa Ana River, located to the south of the Project site, as a wildlife corridor. Although heavily constrained by surrounding development, the Santa Ana River supports natural habitats which allow wildlife to move through the region in search of food, shelter, or nesting habitat. Because Project-related construction and operational activities would be limited to the existing San Bernardino Public Golf Club and previously disturbed areas and these areas are not identified as part of an existing or planned wildlife corridor or linkage, the Project would not significantly impact wildlife movement opportunities or prevent the off-site Santa Ana River from continuing to function as a wildlife corridor. Therefore, the Project would have a less-than-significant impact to wildlife corridors and linkages. (Baker, 2017, p. 28)

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

City of San Bernardino Municipal Code 15.34.020, *Permit Required*, states that is unlawful for any person, firm, corporation, partnership, or association, either as owner, agent or otherwise, to cut down, uproot, destroy, and/or remove more than five (5) trees within any 36-month period from a development site or parcel of property without first being issued a permit from the Development Services Department of the City of San Bernardino (City of San Bernadino, 2017). The Project site contains approximately 300 trees under existing conditions, including but not limited to eucalyptus, common fig, Shamel ash, jacaranda, pine, western sycamore, black elderberry, and Peruvian peppertree, a majority of which would be removed to construct the proposed Project. The Project proposes to plant new trees on the site in accordance with City requirements for landscape coverage as described in Section 3.0, *Project Description*. As a condition of Project approval, the Project Applicant would be required by law to comply with Municipal Code 15.34.020. Therefore, the Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. No impact would occur and no mitigation is required.

Threshold f) Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The Project site is not located within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impact would occur and no mitigation is required. (Baker, 2017, p. 29)

4.3.5 CUMULATIVE IMPACT ANALYSIS

This cumulative analysis considers development of the proposed Project in conjunction with other development projects in the vicinity of the Project site resulting from full General Plan buildout in the City of San Bernardino and other surrounding jurisdictions as identified in Subsection 4.0.2, *Scope of Cumulative Effects Analysis*. This cumulative analysis also considers the full loss of existing biological resources on the San Bernardino Public Golf Club property, including the portion of the golf club located off-site and north of the Project site on property that is approved for industrial/warehouse development.

A. Candidate, Sensitive, or Special Status Species

Vegetation within and surrounding the Project site has the potential to provide refuge/cover from predators, perching sites, and favorable conditions for avian nesting that could be impacted by construction activities associated with the Project. Nesting birds are protected pursuant to the MBTA and California Fish and Game Code (Sections 3503, 3503.3, 3511, and 3513 of the California Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs). Other development projects in the site's vicinity would similarly have the potential to impact nesting birds; therefore, the Project's potential to impact nesting birds is considered cumulatively considerable. Migratory nesting birds are protected by the MBTA and all development projects and other activities that would impact nesting birds are subject to compliance with the MBTA.

B. Riparian Habitat or Other Sensitive Natural Community

No riparian habitats or other special-status plant communities occur within the boundaries of the Project site. Further, the Project site is not located within federally designated Critical Habitat. Therefore, the Project would not impact any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS. Therefore, the Project has no potential to contribute cumulatively considerable impacts to riparian habitat or other sensitive natural communities; no impacts would occur as a result of the Project.

C. Federally Protected Wetlands

Project construction activities would be limited to the existing San Bernardino Public Golf Club and previously disturbed areas and would not result in the discharge of dredged or fill material to the Santa Ana River or East Twin Creek. Further, the Project would not result in the removal of riparian vegetation located off-site to the south of the Project site along the Santa Ana River. Therefore, cumulatively considerable impacts to federally protected wetlands would not occur as a result of the Project.

D. Native Resident or Migratory Wildlife Corridors or Native Wildlife Nursery Sites

The Project site is not identified as a wildlife corridor or linkage or a native wildlife nursery site. However, the Santa Ana River is located to the south of the Project site and is identified as a wildlife corridor by the San Bernardino County General Plan. Because Project activities would be limited to

the existing San Bernardino Golf Club property and previously disturbed areas, and these areas are not part of an existing or planned wildlife corridor or linkage, the Project would not have a significant impact on wildlife corridors or prevent the off-site Santa Ana River from continuing to function as a wildlife corridor. Therefore, the Project's impact to the wildlife corridor would be less than cumulatively. The Project site is not a native wildlife nursery site, so the Project has no potential to contribute cumulatively considerable impacts to a wildlife nursery.

E. Local Policies or Ordinances Protecting Biological Resources

City of San Bernardino Municipal Code 15.34.020, *Permit Required,* requires that a permit be issued by the Development Services Department of the City of San Bernardino prior to the removal or destruction of more than five (5) trees within any 36-month period from a development site or parcel of property (City of San Bernadino, 2017). To construct the Project, approximately 300 existing trees would be removed and as a condition of Project approval, the Project Applicant would be required by law to comply with Municipal Code 15.34.020. Other development projects in the City of San Bernardino would similarly be required to comply with Municipal Code 15.34.020. Because the Project Applicant would comply with Municipal Code 15.34.020 as a condition of Project approval, the Project would have a less than significant cumulatively considerable impact to local policies or ordinances protecting biological resources.

F. Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plans

The Project site is not located within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, cumulatively considerable impacts to an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan would not occur as a result of the Project.

4.3.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a): Significant Direct and Cumulatively Considerable Impact. The Project site does not contain sensitive habitat communities or sensitive plant species; therefore, the loss of vegetation on the Project site would be less than significant. In regards to wildlife species, no sensitive species were observed on the Project site or have the potential to occur on the Project site with the exception of nesting migratory birds and burrowing owl. If Project construction activities occur during the nesting season (February 1 to August 31), and migratory bird nests are present, the removal of such nests would be a significant direct and cumulatively considerable impact. Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code. Similarly, if burrowing owl is present on the site prior to grading, impacts to burrowing owls would be a significant direct and cumulatively considerable impact.

Threshold b): No Impact. No riparian habitats or special-status plant communities occur within the boundaries of the Project site. Further, the Project site is not located within federally designated Critical

Habitat. Therefore, the Project would not impact any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS).

Threshold c): No Impact. The Project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act. Project activities would not result in the discharge of dredged or fill material to the Santa Ana River or East Twin Creek, which are adjacent to the Project site and contain federally protected wetlands. Four (4) artificial ponds are located on the Project site that were constructed as water hazards for the San Bernardino Public Golf Club and that would be removed by the Project. These ponds have no upstream or downstream surface hydrologic connection to the Santa Ana River or East Twin Creek, and thus do not qualify as jurisdictional "waters of the United States" or "waters of the State." Additionally, the ponds do not meet the three wetland parameters required to qualify as isolated wetland features.

Threshold d): Less-than-Significant Impact. The Project site is not identified as a wildlife corridor or linkage or native wildlife nursery. However, the Santa Ana River, located to the south of the Project site is identified as a wildlife corridor by the San Bernardino County General Plan. Because Project activities would be limited to the existing San Bernardino Public Golf Club and previously disturbed areas, and these areas are not part of an existing or planned wildlife corridor or linkage, the Project would not significantly impact wildlife movement opportunities or prevent the Santa Ana River from continuing to function as a wildlife corridor.

Threshold e): No Impact. City of San Bernardino Municipal Code 15.34.020, *Permit Required,* is the only applicable local policy or ordinance protecting biological resources, which requires that a permit be obtained from the City of San Bernardino Development Services Department prior to the removal of five (5) or more trees on any development site or parcel within any 36-month period. The Project site contains trees under existing conditions, which would be removed to accommodate construction of the Project. However, because Municipal Code compliance is required by law, the Project has no potential to conflict with the ordinance. No impact would occur as a result of the Project.

Threshold f): No Impact. The Project site is not located within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impact would occur as a result of the Project.

4.3.7 MITIGATION

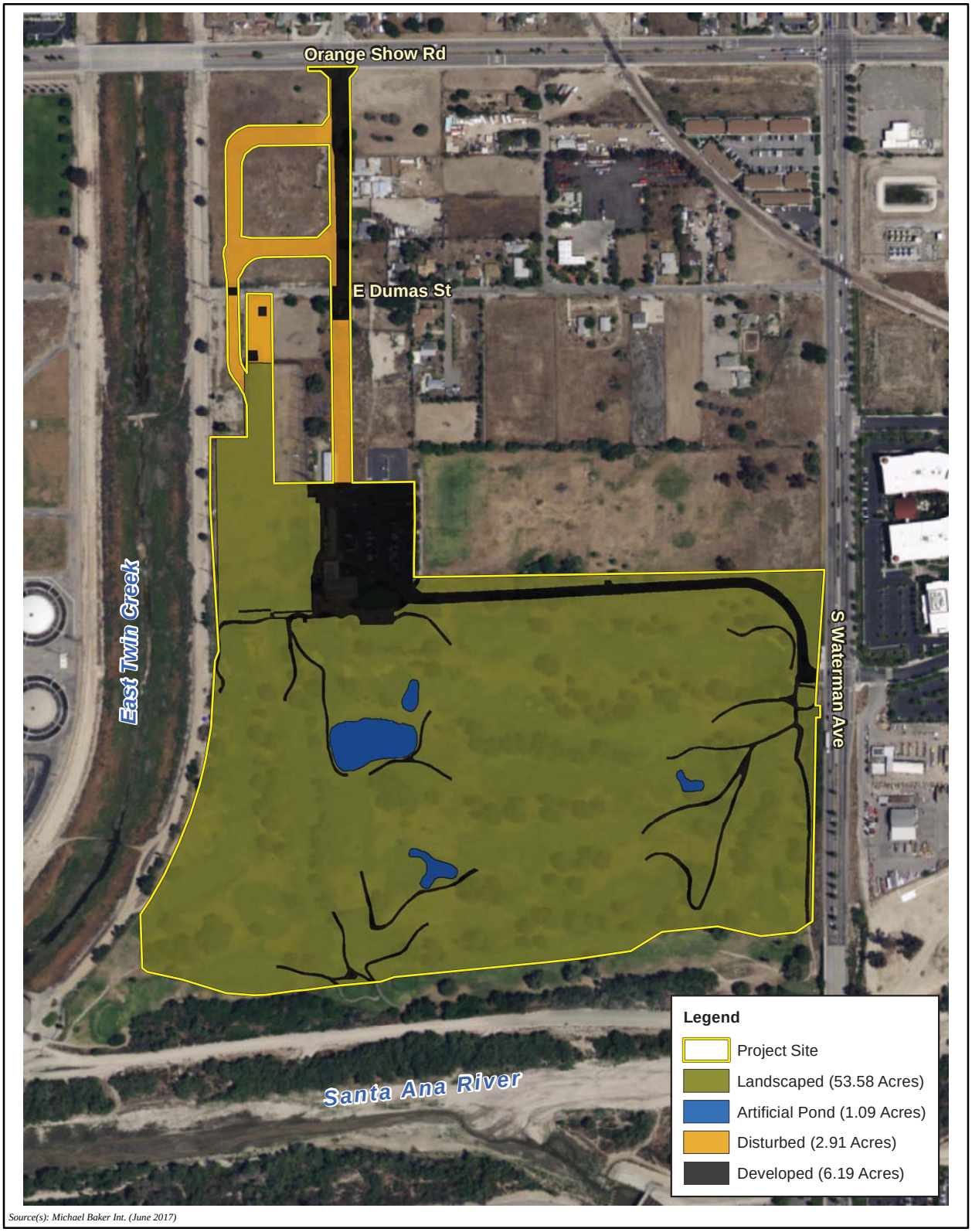
MM 4.3-1 A pre-construction clearance survey for nesting birds shall be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey shall document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities shall stay outside of a 300-foot buffer around the active nest. For listed and raptor species,

this buffer shall be expanded to 500 feet. A biological monitor shall be present to delineate the boundaries of the buffer area and monitor the active nest to ensure that nesting behavior is not adversely affected by construction activities. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area may occur.

MM 4.3-2 Prior to the start of any vegetation removal or ground disturbing activities, a pre-construction clearance survey for burrowing owls shall be conducted. In accordance with the California Department of Fish and Wildlife (CDFW) Staff Report on Burrowing Owl Mitigation, two pre- construction clearance surveys shall be conducted 14-30 days and 24 hours prior to any vegetation removal or ground disturbing activities. If an occupied burrow is found within the development footprint during the pre-construction clearance survey, a burrowing owl exclusion plan shall be prepared and submitted to California Department of Fish and Wildlife (CDFW) for approval. The exclusion plan, as approved by the CDFW, shall be implemented to ensure that burrowing owl are not significantly impacted by Project-related construction activities.

4.3.8 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold a): Less-than-Significant with Mitigation Incorporated. Implementation of MM 4.3-1 would ensure that a pre-construction survey is conducted and appropriate actions are taken to avoid significant impacts to nesting birds protected by the Migratory Bird Treaty Act (MBTA) and avoid impacts to burrowing owl.



Source(s): Michael Baker Int. (June 2017)

Figure 4.3-1

NOT TO SCALE

EXISTING VEGETATION

Source(s): Michael Baker Int. (June 2017)

Figure 4.3-2

NOT TO SCALE

OFF-SITE JURISDICTIONAL AREAS

Source(s): Michael Baker Int. (June 2017)

Figure 4.3-3

NOT TO SCALE

OFF-SITE CRITICAL HABITAT

4.4 CULTURAL RESOURCES

The analysis in this Subsection is based on the following technical reports. For purposes of discussion and analyses in this Subsection 4.4, the term "Project site" refers collectively to the 62.02-acre Project site as well as the interim roadway improvement disturbance area that is proposed as part of the Project and two potential permanent roadway improvement disturbance areas in order to connect the Project site to Orange Show Road. Refer to Figure 2-4, *Aerial Photograph*, for the location of the off-site roadway improvement areas.

- *Cultural Resource Assessment of the Proposed Alliance California Gateway South Building 4 Project, City of San Bernardino, San Bernardino County, California*, prepared by Applied Earthworks, Inc. dated May 2017 and appended to this EIR as *Technical Appendix D1* (Applied EarthWorks, Inc., 2017a).

- *Paleontological Resource Assessment for the Proposed Alliance California Gateway South Building 4 Project, City of San Bernardino, San Bernardino County, California*, prepared by Applied Earthworks, Inc. dated May 30, 2017, and appended to this EIR as *Technical Appendix D2* (Applied EarthWorks, Inc., 2017b).

Confidential information has been redacted from *Technical Appendix D1* for purposes of public review. In addition, much of the written and oral communication between Native American tribes, the City of San Bernardino, and Applied Earthworks is considered confidential in respect to places that may have traditional tribal cultural significance (Gov. Code § 65352.4), and although relied upon in part to inform the preparation of this EIR Subsection, those communications are treated as confidential and are not available for public review. Under existing law, environmental documents must not include information about the location of archeological sites or sacred lands or any other information that is exempt from public disclosure pursuant to the Public Records Act (Cal. Code Regs. § 15120(d)).

All references used in this Subsection are included in EIR Section 7.0, *References*.

4.4.1 EXISTING CONDITIONS

A. Historical Setting

1. California History

Exploration of the California coast in the sixteenth and seventeenth centuries was the basis for the Spanish claim to the region. In the latter half of the eighteenth century, Spain and the Franciscan Order founded a series of presidios, or military camps, and missions along the California coast, beginning at San Diego in 1769. Southern California was promoted as an ideal agricultural area, with fertile soil and a mild climate. There were three land booms tied to railroad construction: (1) after the transcontinental railroad was completed, enabling easy travel to California; (2) late 1870s after the Southern Pacific was completed; and (3) 1886–1888, when the Santa Fe transcontinental line was completed. (Applied EarthWorks, Inc., 2017a, pp. 13-14)

2. San Bernardino County

What is now known as San Bernardino County was initially settled by Native American groups. A group of missionaries, Native Americans, and soldiers from the San Gabriel Mission named San Bernardino in honor of the feast day of San Bernardino of Sienna when they entered the valley on May 10, 1810. After Mexico achieved independence from Spain in 1821, the Mexican government seized ownership of church properties through the Secularization Act of 1833, and lands were redistributed as ranchos through a tribute system. This land redistribution by the Mexican government fostered the development of ranchos in what is now known as California. (Applied EarthWorks, Inc., 2017a, pp. 14-15)

What became known as San Bernardino County originally consisted of the following ranchos: Canon de Santa Ana, Jurupa and El Rincon, Cucamonga, Santa Ana del Chino, San Bernardino, and Muscupiabe. The ranchos largely subsisted on cattle ranching and raising crops that were irrigated from the Mill Creek Zanja and other irrigation ditches. San Bernardino County was established on April 26, 1853, and ceded a portion of its territory to the formation of Riverside County in 1892. (Applied EarthWorks, Inc., 2017a, p. 15)

General agriculture and livestock raising pursuits were quickly overshadowed by the citrus industry in southern California beginning in the 1870s. The burgeoning citrus industry led to a population boom and spurred the development of transcontinental railroads. The Semi-Tropic Land and Water Company, though ultimately unsuccessful in its attempts, initiated much of the early residential and commercial development in San Bernardino County. After the Semi-Tropic Land and Water Company failed, largely due to a nationwide economic depression, several other development companies, such as the Fontana Farms Company, were formed to purchase the Semi-Tropic Land and Water Company holdings and also to further development of towns and industries throughout the county. The establishment of interstate and intercontinental rail lines brought an influx of people and money to Southern California, which lead to a real estate boom. (Applied EarthWorks, Inc., 2017a, pp. 15-16)

3. City of San Bernardino

Shortly after San Bernardino County was established, the City of San Bernardino was established as the county seat. The townsite was surveyed in 1853 by Henry G. Sherwood. The township was originally one square mile with a grid of wide streets forming a grid of eight-acre blocks. The City of San Bernardino was incorporated on April 13, 1854. By 1891, San Bernardino had established itself as a cosmopolitan settlement. The population had reached 5,000, the city had 26 miles of paved streets, and the primary industries were lumber, mining, and tourism; citrus had yet to take hold as the chief source of income. (Applied EarthWorks, Inc., 2017a, p. 16)

4. San Bernardino Golf Club

Under existing conditions, the majority of the Project site is currently developed with the San Bernardino Public Golf Club located at the physical address of 1494 S. Waterman Avenue. The San Bernardino Public Golf Club was developed in 1968 by real estate developer and philanthropist

William E. Leonard. Leonard was born in San Bernardino in 1922. After serving in the United States Army, Leonard joined the Leonard Realty and Building Company, a firm established in 1905 by his grandfather. By the early 1960s, Leonard had transformed his grandfather's firm into a leading development firm in San Bernardino. He became the founding director of Inland Action, Inc., a group of business and education leaders originally founded to oppose the closure of Norton Air Force Base in 1962 and the group evolved to address the broader economic issues of the Inland Empire. Leonard took an active interest in the economic well-being of San Bernardino and was a strong advocate for the establishment of Cal State University, San Bernardino (CSUSB) and the construction of I-215. Leonard chaired the California Highway Commission from 1973-1977 and the California Transportation Commission from 1985-1983. Leonard commissioned Daniel Brown, a golf enthusiast living in San Bernardino, to design the golf course. While a dedicated and avid golfer, Brown was not a golf course architect. He did work at the Orange Show Public Golf Course in San Bernardino prior to designing and managing the San Bernardino Public Golf Club. The circumstances of how he became involved with Leonard and came to design the San Bernardino Golf Club are unclear and research does not indicate that he designed any other golf courses. (Applied EarthWorks, Inc., 2017a, p. 19)

The San Bernardino Public Golf Club opened on April 1, 1968. It was constructed on lands leased from Riverside Public Utilities. On opening day, only the back nine holes of the 6,480-yard course were available to play and the front nine holes were completed later that year. A clubhouse, golf cart storage building, access road, and cart paths, and paved parking lots were constructed in 1968. A golf cart storage shed was added to the property in 1970 and in 1972 an addition was constructed on the clubhouse. The golf course has undergone alterations since its construction, including lengthening, relocating and renumbering fairways, lengthening tees, adding tee boxes, and other forms of standard golf course maintenance and operation. No aspect of the golf course meets the definition of a historic resource. (Applied EarthWorks, Inc., 2017a, pp. 19-20)

5. Single-Family Residence at 141 East Dumas Street

Located in the Project's off-site improvement area, is a single-family residence with the physical address of 141 East Dumas Street. The building is a one-story Minimal Traditional style home that was constructed in 1955. The building has stucco siding and a low-pitched roof with asphalt shingles. The north elevation features a gabled patio cover supported by wood poles and the primary entrance is centered beneath the patio cover. Fenestration (the arrangement of windows and doors) on the north elevation includes a band of three wooden frame double-hung windows and aluminum sliding windows. The south elevation features a shed roof with lateral wood siding and doors and windows filled with plywood. The west elevation features a double hung wood frame window and a replacement vinyl window. This building does not meet the definition of a historic resource. (Applied EarthWorks, Inc., 2017a, p. 37)

6. Single-Family Residence at 145 East Dumas Street

Located in the Project's off-site improvement area is a single-family residence with the physical address of 145 East Dumas Street. The building is also a one-story Minimal Traditional style home

that was constructed in 1955. The building has stucco siding and a low-pitched roof with asphalt shingles that extend into a small gable on the north elevation. The north elevation features a large picture window with a gabled pop-out and two vinyl sliding windows. The primary entrance is located on the north elevation and recessed beneath a covered porch. The north elevation features an attached garage that has been converted into an addition to the home. The door of the garage has been filled and covered with stucco. The garage and north elevation patio are covered by a roof with a slight pitch. The south elevation does not feature and addition to the home. This building does not meet the definition of a historic structure. (Applied EarthWorks, Inc., 2017a, p. 38)

7. South Washington Avenue

The Project's off-site improvement area also includes a 700-foot long section of South Washington Avenue that runs south of Orange Show Road and north of East Dumas Street. The asphalt-concrete paved road measures approximately 24-feet in width and is flanked by approximately 5-foot wide dirt shoulders. No historic-period signage, guardrails or other historical roadway features were observed by Applied EarthWorks along this road segment. (Applied EarthWorks, Inc., 2017a, p. 39)

B. Archaeological Setting

1. Prehistoric Context

Native American occupation of the inland valleys of southern California is divided into seven cultural periods: Paleoindian (circa (ca.) 12,000–9,500 years before present (B.P.); Early Archaic (ca. 9,500–7,000 B.P.); Middle Archaic (ca. 7,000–4,000 B.P.); Late Archaic (ca. 4,000–1,500 B.P.); Saratoga Springs (ca. 1,500–750 B.P.); Late Prehistoric (ca. 750–410 B.P.); and Protohistoric (ca. 410–180 B.P.), which ended in the ethnographic period. Due to the nature of prehistoric archaeological sites identified within a one-mile radius of the Project area, the prehistoric cultural setting discussed below begins at the Late Archaic period. (Applied EarthWorks, Inc., 2017a, p. 7) Refer to Section 2.0 of the Cultural Resources Assessment (*Technical Appendix D1*) for a more detailed discussion of the prehistoric context.

- **Late Archaic Period (ca 4,000 to 1,500 B.P.)**

Archaeological site types that typify this time period include residential bases with large, diverse artifact assemblages, abundant faunal remains, and cultural features as well as temporary bases, temporary camps, and task-specific activity areas. In general, sites showing evidence of the most intensive use tend to be on range-front benches adjacent to permanent water sources, such as perennial springs or larger streams, while less intensively used locales occur either on upland benches or on the margins of active alluvial fans. The technological advancement of the mortar and pestle may indicate the use of acorns, an important storable subsistence resource. An abundance of broad, leaf-shaped blades and heavy, often stemmed or notched projectile points have been found in association with large numbers of terrestrial and aquatic mammal bones. Other characteristic features of this period include the appearance of bone and antler implements and the occasional use of asphaltum and steatite. Diagnostic projectile points of this period were still fairly large (dart point size), but also include more

refined notched (Elko), concave base (Humboldt), and small stemmed (Gypsum) forms. (Applied EarthWorks, Inc., 2017a, pp. 7-8)

- **Saratoga Springs Period (ca. 1,500 to 750 B.P.)**

The frequency of artifact and toolstone caches more than doubled during the Saratoga Springs period from the preceding period, while the frequency of human remains reached the highest point of any time in the archaeological record. The intentional caching of toolstone and ground stone tools suggests that people anticipated returning to the same locations. The midden-altered sediments, which appear for the first time during the Saratoga Springs period, support the continued re-use of desired locations. (Applied EarthWorks, Inc., 2017a, pp. 8-9)

- **Late Prehistoric Period (ca. 750 to 410 B.P.)**

The final desiccation (extreme drying substance) of Lake Cahuilla, which had occurred by approximately 370 B.P. (A.D. 1580), resulted in a population shift away from the lakebed into the Peninsular Ranges and inland valleys to the west, such as the Project area, as well as to the Colorado River regions to the east. The number and frequency of artifact and toolstone caches were reduced and hearth features became slightly more common. Rock art also first appeared in association with Late Prehistoric components that post-date the Medieval Warm Interval. The decrease in the number of artifact and toolstone caches and the first appearance of rock art during this time suggest that residential sites were now occupied on a year-round basis. A reduction in emphasis on plant foods – especially acorns, which require intensive preparation, is also visible in the archaeological record, and likely accounts for the reduction in refuse deposits, fire-altered rock weights, and midden development visible toward the end of the Late Prehistoric period. Finally, the percentage of non-utilitarian artifacts declined considerably, suggesting that trade was no longer critical for assuring food supplies. (Applied EarthWorks, Inc., 2017a, pp. 9-10)

- **Protohistoric Period (ca, 410 to 180 B.P.)**

The most striking change in material cultural during this time is the local manufacture of ceramic vessels and ceramic smoking pipes. Although pottery was known in the Colorado Desert as long ago as 800 B.P., ceramic technology in the Project region appears to date to approximately 350 B.P. As well, abundant amounts of Obsidian Butte obsidian were imported into the region. Cottonwood Triangular points were supplemented by Desert Side-notched points. Late in this period, some European trade goods (i.e., glass trade beads) were added to the previous cultural assemblage. (Applied EarthWorks, Inc., 2017a, pp. 10-11)

2. Ethnographic Setting

Archival and published reports suggest the Project area is situated where the traditional use territories of the Serrano, Cahuilla, and Gabrielino meet, just southwest of the present-day city of San Bernardino. All of these cultural groups belonged to cultural nationalities speaking languages belonging to the Takic branch of the Shoshonean family, a part of the larger Uto-Aztecan language stock. (Applied

EarthWorks, Inc., 2017a, p. 11) Refer to Section 2.0 of the Cultural Resources Assessment (*Technical Appendix D1*) for a more detailed discussion of the ethnographic setting.

❑ Social Structure

Prior to the Mission period (i.e., prior to 1769), the Cahuilla and Serrano had non-political, non-territorial patrimoieties that governed marriage patterns as well as patrilineal clans and lineages. Clan lineages cooperated in large communal subsistence activities (e.g., animal drives and hunts, controlled burning) and in performing rituals. Founding lineages often owned the office of ceremonial leader, the ceremonial house, and a ceremonial bundle. Gabrielino lineages were capable of being split and reorganized into segmentary lineages, which served as a mechanism for territorial expansion. Hunting and gathering territories were owned by the lineage and lineage membership gave individual families, use rights. Unlike their Cahuilla and Serrano neighbors, the Gabrielino had a hierarchically ordered social class of elite, middle class, and commoners. (Applied EarthWorks, Inc., 2017a, p. 11)

❑ Subsidence and Domestic Resources

The Serrano, Cahuilla, and Gabrielino were, for the most part, hunting, collecting, and harvesting peoples. For the Serrano and Cahuilla, clans were apt to own land in the valley, foothill, and mountain areas, providing them with the resources of many different ecological niches. The Gabrielino lineage ownership of land in valley, foothill, mountain, coastal, and estuary areas offered a diverse array of food and other natural resources. In addition to gathering and hunting, the mainland Gabrielino were involved in an extensive trade network that extended as far east as the Colorado River and as far west as San Nicolas Island. With the Serrano, the Gabrielino traded shell beads, fish, sea otter skins, and soapstone vessels for deerskin and seeds. The Cahuilla received beads, soapstone, and asphaltum from the Gabrielino in exchange for food, furs, hides, obsidian, and salt. In addition to forging alliances with neighboring groups, trade and exchange were also a means of offsetting food shortages during winter months and in times of resource stress (e.g., drought).(Applied EarthWorks, Inc., 2017a, pp. 11-12)

❑ Shelter and Community Structures

In prehistoric times, Serrano, Cahuilla, and Gabrielino shelters were dome-shaped and during post-contact times they were rectangular and made of reed. Within Serrano and Cahuilla villages, the chief's house was the largest and was usually next to the ceremonial house. Each village also had a men's sweathouse and several granaries. At a typical Gabrielino settlement, a yovaar, an unroofed religious structure, was built in the center and surrounded first by the houses of the chief and elite members of society and then by the smaller houses of other community members; poor members occupied simple lean-to style structures along the outskirts of the settlement. Sweat huts and granaries were also present in Gabrielino settlements. (Applied EarthWorks, Inc., 2017a, pp. 12-13)

❑ Religion, World View, and the Sacred

The Serrano, Cahuilla, and Gabrielino, like other California Indians, understand the universe in terms of power, and power, believed to be sentient and to have will, was assumed to be the principal causative

agent for all phenomena. Particular mountaintops unusual rock formations, springs, and streams were considered sacred. Rock art sites were considered sacred and were the sites of ceremonies. (Applied EarthWorks, Inc., 2017a, p. 13)

C. Archaeological Resources

1. South Central Coastal Information Center (SCCIC) Records Search

A cultural resource literature and records search of the Project area with a one-mile buffer, was conducted by staff at the SCCIC on November 16, 2016. The records search was conducted to obtain baseline data on previously identified archaeological and historic-built environment resources within the records search area in order to evaluate the potential impacts of the Project on significant cultural resources. (Applied EarthWorks, Inc., 2017a, p. 21)

In addition to SCCIC's historical resource files, Applied EarthWorks also consulted the following resources:

- National Register of Historic Places website (www.cr.nps.gov/nr);
- Office of Historic Preservation (OHP) Archaeological Determinations of Eligibility; and
- OHP's Directory of Properties in the Historic Property Data File. (Applied EarthWorks, Inc., 2017a, p. 21)

The records search indicates that no fewer than 60 cultural resource studies have been completed within the records search area since 1972. Two of these studies included portions of the Project area. Refer to Table 3-1, *Cultural Resource Studies within 1-Mile of the Project Area* and Table 3-2, *Cultural Resources within 1-Milke of the Project Area* in *Technical Appendix D1*. (Applied EarthWorks, Inc., 2017a, p. 20)

2. Native American Coordination

As part of the cultural resource assessment, Applied EarthWorks also requested a Sacred Lands File (SLF) search from the NAHC. The NAHC responded that no SLF resources are known to exist in the vicinity of the Project area, but cautioned that the absence of specific site information does not indicate the absence of such resources. The NAHC provided a list of regional Native American tribes who have an interest in and/or knowledge of the region and detailed the process of recommended consultation efforts. Tribal communities listed on the NAHC list include: Agua Caliente Band of Cahuilla Indians, Augustine Band of Cahuilla Indians, Cabazon Band of Mission Indians, Cahuilla Band of Mission Indians, Gabrielino Band of Mission Indians – Kizh Nation, Gabrielino Tongva Indians of California Tribal Council, Gabrielino/Tongva Nation, Gabrieleno/Tongva San Gabriel Band of Mission Indians, Gabrielino-Tongva Tribe, Los Coyotes Band of Mission Indians, Morongo Band of Mission Indians, Ramona Band of Cahuilla Indians, San Fernando Band of Mission Indians, San Manuel Band of Mission Indians, Santa Rosa Band of Mission Indians, and Serrano Nation of Mission Indians. Applied EarthWorks sent scoping letters on December 9, 2016, to each of the listed tribes and individuals. Applied EarthWorks also conducted follow-up telephone calls with the Native American groups and

individuals on December 23, 2016. An example of the letter sent by Applied Earthworks, the list of contacts, and the responses received are included in Appendix A of EIR *Technical Appendix D1*. (Applied EarthWorks, Inc., 2017a, p. 2 and pp. 25-26)

Archival and published reports suggest the Project area is situated where the traditional use territories of the Serrano, Cahuilla, and Gabrieleno meet, just southwest of the present-day city of San Bernardino. These cultural groups belonged to cultural nationalities speaking languages belonging to the Takic branch of the Shoshonean family, a part of the larger Uto-Aztecan language stock. (Applied EarthWorks, Inc., 2017a, p. 11)

As required by Assembly Bill 52 (AB 52) on December 28, 2016 the Lead Agency (City of San Bernardino) sent formal notification letters of the proposed development to the tribes that requested notice under AB 52. As required by AB 52, if any tribe wishes to initiate consultation on the proposed Project, they must send a consultation request within thirty (30) days of receiving the notification.

In addition, because the Project proposes a General Plan Amendment (GPA 16-09), the Project is subject to Section 65352.3 of the Government Code (SB 18). According to SB 18, Chapter 905, Section 7, 65352.3(a) (1) and (2): "Prior to the adoption or any amendment of a city or county's general plan, proposed on or after March 1, 2005, the city shall conduct consultations with California Native American tribes that are on the contact list maintained by the NAHC for the purpose of preserving or mitigating impacts to places, features, and on objects described in Section 5097.9 and 5097.995 of the Public Resources Code that are located within the city's jurisdiction. From the date on which a California Native American tribe is contacted by the City pursuant to this subdivision, the tribe has 90 days in which to request a consultation, unless a shorter time has been agreed to by that tribe." In compliance with SB 18, on December 28, 2016, the City of San Bernardino sent SB 18 letters to the tribes listed in the NAHC Contact List.

3. Other Sources Consulted

The cultural resources assessment of the Project area resulted in the identification of four potential historical built-environment resources that include the San Bernardino Golf Club, two off-site residential buildings, and an off-site roadway. In order to develop a historical context within which to evaluate these four historical built-environment resources, numerous sources were consulted as part of historical background research. These sources included historical United States Geological Society (USGS) maps; aerial photographs; archived records of the San Bernardino County Assessor's Office; the San Bernardino Historical Society; and literature on various American architectural styles of the twentieth century. The purpose of this research was to determine if the built-environment resource has significant associations with historic trends and persons and to assess the architectural quality of the resource. (Applied EarthWorks, Inc., 2017a, p. 27)

4. Survey Methods and Results

Applied EarthWorks conducted a Phase I pedestrian survey of the Project area, including the off-site roadway improvement areas, on November 30, 2016 and May 25, 2017. The San Bernardino Public Golf Club, the two single-family residences, and the 700-foot segment of South Washington Road meet the 45-year threshold for consideration as potential historical resources and were therefore evaluated in the Project's cultural resources assessment (*Technical Appendix D1*) and herein.

- **San Bernardino Public Golf Club**

No historic-period or prehistoric archaeological materials were observed by Applied EarthWorks during the pedestrian survey of the Project site. However, archival research conducted for the Project found that the San Bernardino Public Golf Club was initially built in 1968 with additional structures and buildings constructed in 1970 and 1972. Based on this finding, the San Bernardino Golf Club meets the 45-year threshold for consideration as a potential historic resource for the purposes of CEQA. (Applied EarthWorks, Inc., 2017a, p. 32) Refer to Section 4.2.1 of *Technical Appendix D1* for a more detailed description of the San Bernardino Golf Club.

The San Bernardino Golf Club is an 18-hole golf course that is owned by Riverside Public Utilities and the golf course is leased from Riverside Public Utilities by J.G. Golfing Enterprises Inc. In addition to the 18-hole golf course, the facility includes a clubhouse, practice green, driving range, golf cart storage, and maintenance area. The clubhouse and course were completed in 1968. A parking lot is located adjacent to the clubhouse to the east and is reached by an access road that extends east to S. Waterman Avenue. (Applied EarthWorks, Inc., 2017b, p. 28)

EarthWorks evaluation of the significance of the San Bernardino Golf Club indicates that the historical built environment resource does not meet the criteria for listing on the CRHR. Specifically, no information has been found to suggest that the San Bernardino Golf Club is directly associated with historical events of importance in local, state, or national history under CRHR Criterion 1. The golf course was constructed in 1968 during a period of golf course construction proliferation in southern California and the nation. The golf course is not the earliest constructed in San Bernardino, Riverside County, California, or the United States. No significant events related to the history of golf or the general history of California or the United States have occurred at this golf course. The design of the course is not particularly significant or unique and did not initiate changes in golf course design or the way in which golf is played. The presence of the golf course in San Bernardino did not represent a significant enough tourist draw for the City of San Bernardino or represent a significant contribution to the culture and character of the city to be considered historically significant. While it does appear that the golf course is currently the oldest golf course in the City of San Bernardino, it is not the oldest within the region or the state. Its status as the oldest golf course in San Bernardino County does not merit historical significance because the economic development, history, and cultural identity of San Bernardino is not significantly tied to golf. Therefore, the San Bernardino Public Golf Club is not eligible for inclusion of CRHR under Criterion 1. (Applied EarthWorks, Inc., 2017a, p. 36)

In addition, Applied EarthWorks found no information to suggest that the San Bernardino Public Golf Club is directly associated with the productive life of a historical person of importance in local, state, or national history under CRHR Criterion 2. The golf course was initially developed by William E. Leonard, a prominent San Bernardino real estate developer and philanthropist. While Leonard may be considered a person of significance with the history of San Bernardino, his contributions to the community are many and the construction of the golf course is not among his most significant accomplishments. Therefore, the San Bernardino Public Golf Club is not eligible for inclusion of CRHR under Criterion 2. (Applied EarthWorks, Inc., 2017a, p. 36)

Based on their research, Applied EarthWorks concluded that the San Bernardino Public Golf Club does not appear to embody the distinctive characteristics of a type, period, region, or method of construction, represent the work of an important creative individual, or possess high artistic value. The course was designed by Daniel Brown, an amateur golf course architect who does not appear to have designed any other golf course besides the San Bernardino Public Golf Club. Brown is not considered a master in the field of golf course architecture and his design for the San Bernardino Public Golf club does not appear to be a unique example of or significant departure from established golf course design. The clubhouse is a fairly common example of the Modern-style of architecture and does not exhibit any significant character- defining features or design elements that would make it significant. The remaining buildings and structures on the golf course are utilitarian in design and exhibit no indication of being architecturally significant. The architect and builder of the club house and other ancillary buildings could not be identified. Therefore, the San Bernardino Public Golf Club is not eligible for inclusion of CRHR under Criterion 3. (Applied EarthWorks, Inc., 2017a, p. 36)

Finally, the San Bernardino Public Golf Club does not appear to meet CRHR Criterion 4 because it has not yielded and is unlikely to yield, information important in prehistory or history. This criterion is typically reserved for archaeological resources, ruins, or rare built-environments resources of which little is already known and that are the sole sources of historical data. Therefore, the San Bernardino Public Golf Club is not eligible for inclusion of CRHR under Criterion 4. (Applied EarthWorks, Inc., 2017a, p. 36)

Because the San Bernardino Public Golf Club does not appear to meet any of the criteria to be considered eligible for listing in the CRHR, the structures are not considered to be historical resources for the purposes of CEQA (Section 15064.5(a) of the CEQA Guidelines). (Applied EarthWorks, Inc., 2017a, p. 37)

❑ Single-Family Residences

An evaluation of the significance of the buildings at 141 East Dumas Street and 145 East Dumas Street indicates that the historical built environment resources do not meet the criteria for listing on the CRHR. No information was found to suggest that the buildings are directly associated with historical events of importance in local, state, or national history under CRHR Criteria 1. Both buildings were constructed in 1955 during the post-WW II housing boom in southern California. The homes are two of many small single-family homes constructed during this period throughout southern California and

the United States. Research yielded no evidence that important historical events are specifically associated with the two buildings. Therefore, the buildings located at 141 East Dumas Street and 145 East Dumas Street are not eligible for the CRHR under Criterion 1. (Applied EarthWorks, Inc., 2017a, pp. 37-40)

No information was found to suggest that the buildings located at 141 East Dumas Street and 145 East Dumas Street are directly associated with the productive life of a historical person of importance in local, state, or national history under CRHR Criterion 2. No one associated with the two buildings appears to be persons of importance in local, state, or national history, therefore, the two buildings are not eligible for inclusion of CRHR under Criterion 2. (Applied EarthWorks, Inc., 2017a, pp. 37-40)

The buildings located at 141 East Dumas Street and 145 East Dumas Street do not embody the distinctive characteristics of a type, period, region, or method of construction; represent the work of an important creative individual, or possess high artistic value. The two buildings are a fairly common and unremarkable example of Minimal Traditional-style architecture. While the two buildings do exhibit some of the character-defining features of the style, they are not particularly a good example. Both buildings are essentially similar to many other single-family residences constructed during this period throughout California and the United States. The architect and builder of the buildings was not identified; however, the buildings are unlikely to be the work of a master. Therefore, the buildings located at 141 East Dumas Street and 145 East Dumas Street are not eligible for inclusion of CRHR under Criterion 3. (Applied EarthWorks, Inc., 2017a, pp. 37-40)

The buildings located at 141 East Dumas Street and 145 East Dumas Street do not meet CRHR Criterion 4 because they have not yielded and are unlikely to yield, information in prehistory or history. Criterion 4 is typically reserved for archeological resources, ruins, or rare built-environment resources of which little is already known, that are considered to be the sole source of historical data. Therefore, the buildings located at 141 East Dumas Street and 145 East Dumas Street are not eligible for inclusion of CRHR under Criterion 4. (Applied EarthWorks, Inc., 2017a, pp. 37-40)

❑ South Washington Road

Historical maps indicate that the section of South Washington Avenue located north of East Dumas Street and within the Project's off-site improvement area, has been in use since at least 1898. When first constructed, South Washington Avenue consisted of an approximately 0.14-mile long (740-foot-long) roadway that could only be accessed off East Dumas Street. By the late 1930s, the road had been extended 0.45 miles further north to connect to Central Avenue. On 1938 and 1943 topographic maps, the full length of South Washington Avenue appears to have been used as a light duty road. Topographic maps dating to the latter half of the 20th century show no major changes in the road alignment between the 1950s and the 1980s. (Applied EarthWorks, Inc., 2017a, pp. 40-41)

An evaluation of the off-site segment of South Washington Avenue indicates that the road does not meet the criteria for listing on the CRHR. The road is completely modern in appearance, design, and construction, and lacks any historical features. Only the segment itself appears historic in age based

upon its depiction on historical maps. Although the road is broadly associated with the early development of the San Bernardino area, no information was found to suggest this portion of South Washington Avenue is directly associated with historical events of importance in local, state, or national history under CRHR Criterion 1. The road was likely built by the county and consequently, a specific individual for building this section of South Washington Avenue cannot be identified. Therefore, the structure cannot be directly associated with the productive life of an important historical figure under CRHR Criterion 2. In addition, the road is similar in design and materials to numerous other roads in the area and as such, it does not qualify as an important example of its type, period, region, or method of construction under CRHR Criterion 3. Finally, because South Washington Avenue does not have the potential to yield any information important to the study of our local, state, or national history, it is not eligible for listing under CRHR Criterion 4. (Applied EarthWorks, Inc., 2017a, p. 41)

D. Paleontological Resources

In order to assess whether a particular project area has the potential to contain significant fossil resources at the subsurface, it is necessary to review published geologic mapping to determine the geology and stratigraphy of the area. Geologic units are considered to be "sensitive" for paleontological resources if they are known to contain significant fossils anywhere in their extent. For this Project, Applied EarthWorks. conducted a museum records search at the Los Angeles County Museum of Natural History (LACM) on October 20, 2016. The records search was supplemented by a review of the University of California Museum of Paleontology's (UCMP's) online database, which contains paleontological records for San Bernardino County. (Applied EarthWorks, Inc., 2017b, p. 3)

1. Project Area

The Project area is located in the alluvial plain of the Santa Ana River within the geologically complex Peninsular Ranges geomorphic province. The Project area is situated within the Perris Block, a relatively stable rectangular structural unit positioned between the Santa Ana Mountains of the Peninsular Ranges and the San Jacinto fault zone. The Project area is located immediately east of the northwest-trending right- lateral strike-slip San Bernardino Valley section of the San Jacinto fault zone, which extends from the Cajon Pass in the north to the San Jacinto Valley in the south. The geology in the vicinity of the Project area is dominated by Cretaceous plutonic rocks of the Peninsular Ranges Batholith, local Mesozoic metasedimentary rocks, and widespread Pleistocene-age alluvial fan and valley deposits. (Applied EarthWorks, Inc., 2017b, p. 3)

As depicted on Figure 4.4-1, *Geologic Units*, the Project area is directly underlain by Quaternary alluvial channel (Qya5) and recent wash deposits (Qw1) of Holocene age. The thickness of the Quaternary alluvial channel deposits in the Project area likely varies due to the local differences caused by fluvial aggradation versus erosion; however, the deposits are probably less than 20 feet thick. Although Holocene-age alluvial deposits are typically too young to contain fossils, they may be shallowly underlain by older, sensitive Pleistocene deposits, which have proven to yield scientifically significant paleontological resources throughout southern California from the coastal areas to the

inland valleys. Several vertebrate localities are known north and south of the Santa Ana River valley, in the vicinity of the Project area. (Applied EarthWorks, Inc., 2017b, pp. 3-4)

2. Records Search Results

The LACM reports that there are no previously recorded vertebrate fossil localities in the Project area or in the immediate vicinity from within Quaternary alluvial deposits. However, LACM museum collections identify two vertebrate localities that were recorded nearby from within older fine-grained Pleistocene-age sedimentary deposits. These Pleistocene sedimentary deposits are likely similar to older deposits that underlie the younger Quaternary alluvial channel and wash deposits at an unknown depth within the Project area. The localities were identified approximately 15 miles west and south of the Project area and yielded vertebrate fossil specimens of horse and whipsnake. A supplemental review of online museum collections records maintained by the UCMP identified no previously recorded vertebrate localities from similar Pleistocene-age deposits in the vicinity of the Project area. (Applied EarthWorks, Inc., 2017b, p. 4)

Based on the literature review and museum records search results, the paleontological sensitivity was determined in accordance with the SVP's sensitivity scale. Because they are likely too young to contain fossilized material, the Quaternary alluvium deposits were determined to have a low paleontological resource potential (Applied EarthWorks, Inc., 2017b, p. 4)

E. Human Remains

Under existing conditions, the Project site is developed with the San Bernardino Public Golf Club and the Project's off-site improvement area consists of two residences and segments of roadways. Therefore, the Project site and the Project's off-site improvement area do not contain a known cemetery or any known human remains.

4.4.2 APPLICABLE REGULATORY SETTING

The proposed Project shall comply with the CEQA Statute (Public Resources Code [PRC] 21000–21777) and Guidelines (14 California Code of Regulations [CCR] 15064.5), which directs lead agencies to first determine whether cultural resources are historically significant resources. A project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment (PRC 21084.1). Generally, a cultural resource shall be considered historically significant if the resource is 45 years old or older, possesses integrity of location, design, setting, materials, workmanship, feeling, association, and meets the requirements of listing on the California Register of Historic Places (CRHR) Resources listed on the National Register of Historic Places (NRHP) area are automatically listed in the CRHR. (Applied EarthWorks, Inc., 2017a, pp. 4-5)

A. *California Code of Regulations (CCR) Title 14, Chapter 3, § 15064.5*

California Code of Regulations, Title 14, Chapter 3, § 15064.5, "Determining the Significance of Impact to Archaeological and Historical Resources," establishes the procedure for determining the significance of impacts to archeological and historical resources in CEQA compliance documents, as well as classifying the type of resource. The evaluation of cultural resources under CEQA in this EIR is based upon the definitions of resources provided in § 15064.5. According to CEQA § 15064.5(a), the term "historical resources" shall include the following:

> *(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources.*
>
> *(2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.*
>
> *(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852) including the following*:
>
> *(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;*
> *(B) Is associated with the lives of persons important in our past;*
>
> *(C) 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; or*
>
> *(D) Has yielded, or may be likely to yield, information important in prehistory or history.*
>
> *(4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources*

Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.

B. California Health and Safety Code, Division 7, Chapter 2, § 7050.5

California Health and Safety Code § 7050.5 makes it illegal for persons to knowingly mutilate or disinter, disturb, or willfully remove any human remains in or from any location other than a dedicated cemetery without authority of law, except as provided in § 5097.99 of the Public Resources Code. § 5097.94 also establishes procedures for the identification and appropriate handling of human remains, should they be discovered inadvertently. The procedures require notice to the coroner of the county in which the human remains are discovered. If the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, the corner is required to contact the California Native American Heritage Commission (NAHC).

C. California Public Resources Code, Division 5, Chapter 1.75, § 5097.98

In the event of discovery of Native American human remains, California Public Resources Code § 5097.98 requires the California NAHC to contact the most likely descendant of the deceased Native American within 48 hours of discovery. California Public Resources Code § 5097.98 also establishes procedures to allow the most likely descendant to inspect the remains and recommend a means of disposition.

D. California Senate Bill (SB 18) (Chapter 905, Statutes of 2004)

The California Office of Planning and Research (OPR) is required to implement various long-range planning and research policies and goals that are intended to shape statewide development patterns and influence the quality of the state's environment. California Senate Bill (SB) 18 required that the OPR guidelines contain advice, developed in consultation with the NAHC for consulting with California Native American tribes for the preservation of, or the mitigation of impacts to, specified Native American places, features, and objects. SB 18 also requires those guidelines to address procedures for identifying the appropriate California Native American tribes, for consultation. SB 18 requires that, prior to the adoption or amendment of a city or county's general plan, the city or county conduct consultations with California Native American tribes for the purpose of preserving specified places, features, and objects (known as Traditional Tribal Cultural Places) that are located within the city or county's jurisdiction. (See Senate Bill 18 Chapter 905 for full context) (California State Legislature, 2004). The consultation process must be completed prior to project approval. Because the proposed Project includes a General Plan Amendment, the City of San Bernardino acting as the CEQA lead agency for the proposed Project is subject to all requirements associated with the SB 18 process for Native American consultation.

E. California Assembly Bill No. 52 (AB 52), 2014

California Assembly Bill 52 (AB 52) Chapter 532 is an act to amend Section 5097.94 of, and add Sections 21073, 21074, 21080.3.1, 21080.3.2, 21802.3, 21083.09, 21084.2 and 21084.3 to the

California Public Resources Code, relating to Native Americans. AB 52 Chapter 532 was approved by the California Governor on September 25, 2014. (Assembly Bill No. 52 Chapter 532, 2014)

If the tribes desire notification of proposed projects in that area that may cause a substantial adverse change in the significance of a cultural resource, AB 52 requires that Native American tribes send written notice of their geographic areas of traditional and cultural affiliation to CEQA lead agencies. The CEQA lead agency is then required to provide such notification and consult with the tribe(s) if the tribe(s) requests consultation.

The provisions listed in AB 52 are applicable to projects that have a notice or preparation or a notice of negative declaration filed on or after July 1, 2015. By requiring the CEQA lead agency to consider the effects relative to cultural resources and to conduct consultation with California Native American tribes, AB52 imposes a state-mandated local program. AB52 additionally requires the NAHC to provide each California Native American tribe, as defined, on or before July 1, 2016, with a list of all public agencies that may be a lead agency within a geographic area in which the tribe is traditionally or culturally affiliated; the contact information of those agencies; and information on how the tribe may request those public agencies to notify the tribe of projects within the jurisdiction of those public agencies for the purposes of requesting consultation. See AB52 Chapter 532 for full context (Assembly Bill No. 52 Chapter 532, 2014).

According to CEQA Statute § 21074.

(a) "Tribal cultural resources" are either of the following:

(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

(A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.

(B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

(2) 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

(b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

(c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a

"nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

F. Paleontological Resources

In order to determine the uniqueness of a given paleontological resource, it must first be identified or recovered (i.e., salvaged). Therefore, mitigation of adverse impacts to paleontological resources is mandated by CEQA. In addition, although the City of San Bernardino General Plan does not set forth specific mitigation requirements for paleontological resources, they are addressed under the Conservation Element of the County of San Bernardino General Plan. The following policies are included under GOAL CO 3 in the Cultural/Paleontological Resources Section (V-C2), which stipulates that San Bernardino County will preserve and promote its historic and prehistoric cultural heritage:

1. *In areas of potential but unknown sensitivity, field surveys prior to grading will be required to establish the need for paleontologic monitoring.*

2. *Projects requiring grading plans that are located in areas of known fossil occurrences, or demonstrated in a field survey to have fossils present, will have all rough grading (cuts greater than 3 feet) monitored by trained paleontologic crews working under the direction of a qualified professional, so that fossils exposed during grading can be recovered and preserved. Fossils include large and small vertebrate fossils, the latter recovered by screen washing of bulk samples.*

3. *A report of findings with an itemized accession inventory will be prepared as evidence that monitoring has been successfully completed. A preliminary report will be submitted and approved prior to granting of building permits, and a final report will be submitted and approved prior to granting of occupancy permits. The adequacy of paleontologic reports will be determined in consultation with the Curator of Earth Science, San Bernardino County Museum [V-18–V-19].* (Applied EarthWorks, Inc., 2017b, p. 2)

Absent specific agency guidelines, most professional paleontologists in California adhere to the guidelines set forth by the SVP (2010) to determine the course of paleontological mitigation for a given project. These guidelines establish protocols for the assessment of the paleontological resource potential of underlying geologic units and outline measures to mitigate adverse impacts that could result from project development. Using baseline information gathered during a paleontological resource assessment, the paleontological resource potential of the geologic unit(s) (or members thereof) underlying a Project area can be assigned to one of four categories defined by the Society of Vertebrate Paleontology (SVP). These categories include high, undetermined, low, and no paleontological resource potential. (Applied EarthWorks, Inc., 2017b, p. 2)

4.4.3 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to cultural resources if the Project or any Project-related component would:

a. *Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Section 15064.5;*

b. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Section 15064.5;*

c. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;*

d. *Disturb any human remains, including those interred outside formal cemeteries; or*

Tribal Cultural Resources

e. *The proposed Project would 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 that is:*

   a. *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*

   b. *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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

4.4.4 IMPACT ANALYSIS

Threshold a) Would the Project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Section 15064.5?

The cultural resource assessment of the Project area resulted in the identification of four historical built-environment resources, that include the San Bernardino Public Golf Club located on the Project site, and two single-family residences located at 141 East Dumas Street and 145 East Dumas Street, and a 700-foot long segment of South Washington Avenue, all located within the Project's off-site improvement area. The historical significance of the San Bernardino Public Golf Club was assessed by Applied EarthWorks within the context of the development of golf courses in the United States and southern California and the San Bernardino Golf Club was found to not meet any criteria for listing on the CRHR and as such, is not considered a historical resource for the purposes of CEQA. In addition, because the two off-site residential buildings located at 141 East Dumas Street and 145 East Dumas

Street, and the off-site 700-foot long segment of South Washington Avenue do not meet any of the criteria for listing on the CRHR, the two buildings and the section of South Washington Avenue are not considered historical resources. (Applied EarthWorks, Inc., 2017a, p. 42) Therefore, the Project would not cause a substantial adverse change in the significance of a historical resource as defined in CEQA Section 15064.5. Impacts would be less than significant and no mitigation is required.

Threshold b) Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Section 15064.5?

The results obtained from the SCCIC records search and Applied EarthWorks Phase I pedestrian survey indicates that there are no known archaeological resources within the Project area. In addition, the majority of the Project area lies within the floodplain of the Santa Ana River which is a very dynamic and high energy flow area. The northern part of the Project area consists of soil deposits that are derived from overbank flows of the Santa Ana River and Warm Creek with very weak soil development possibly indicating the geologic unit is very young. Both of these deposits are down-cut by drainages revealing that they were deposited prior the current bed alignment and suggesting that this area changed a lot in the late Holocene. Due to the high energy of the floodplain deposits and the young age of the northern part of the Project area, there is a low potential for encountering intact buried archaeological deposits within the Project area. (Applied EarthWorks, Inc., 2017b, p. 42) However, there is a remote potential to uncover previously undiscovered archaeological resources during mass grading and excavation activities. If archaeological resources are unearthed during Project construction activities, and they meet the definition of a significant archeological resource as defined by California Code of Regulations § 15064.5, there is a potential that the resource(s) would be significantly impacted if not properly identified and treated. Thus, there is a potential for the Project to cause significant impacts to previously undiscovered significant archaeological resources on the Project site. Accordingly, impacts are potentially significant and mitigation is required. Refer to Subsection 4.4.7 for applicable mitigation.

Threshold c) Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Based on the SVP sensitivity scale, the Project site's Quaternary alluvium deposits were determined to have a low paleontological resource potential because they are likely too young to contain fossilized materials. However, although not anticipated by Applied EarthWorks, there is a remote potential, should the Project-related ground disturbing activities extend into sensitive Pleistocene-age alluvial deposits that are buried at unknown depth within the Project boundary and exposed at the ground surface nearby, that previously unearthed paleontological resources could be uncovered. Accordingly, if significant paleontological resources are unearthed, there is a potential for a significant impact to occur if the resources are not properly identified and treated. Therefore, the Project's potential to directly or indirectly destroy unique paleontological resources that may be present beneath the ground surface of the Project site is a potentially significant impact and mitigation is required. Refer to Subsection 4.4.7 for applicable mitigation.

Threshold d) Would the Project disturb any human remains, including those interred outside formal cemeteries?

The Project site does not contain a cemetery and no known formal cemeteries are located in the immediate vicinity of the Project site. A Presbyterian church is located north of the Project site but there is no formal cemetery associated with that church. Under existing conditions, no known human remains are present on the Project site. There is a remote potential that human remains may be unearthed during the Project's mass grading and excavation activities. This same potential for the discovery of human remains occurs on nearly every construction site that disturbs a ground surface.

If human remains are encountered during Project construction, the construction contractor would be required by law to comply with California Health and Safety Code, Section 7050.5 "Disturbance of Human Remains" and Public Resources Code Section 5097.98. Pursuant to § 7050.5(b) and (c), if human remains are discovered, the County Coroner must be contacted and if the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, the Coroner is required to contact the NAHC by telephone within 24 hours. Pursuant to California Public Resources Code § 5097.98, whenever the NAHC receives notification of a discovery of Native American human remains from a county coroner, the NAHC is required to immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American human remains and may recommend to the owner or the person responsible for the excavation work, the means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants are required to complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. According to Public Resources Code § 5097.94(k), the NAHC is authorized to mediate disputes arising between landowners and known descendants relating to the treatment and disposition of Native American human burials, skeletal remains, and items associated with Native American burials.

With mandatory compliance to California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98, any potential impacts to human remains, including human remains of Native American descent, would be reduced to less than significant. Although regulatory requirements are not required to be repeated as mitigation measures, mitigation is provided in Subsection 4.4.7 to ensure that the Project Applicant complies with California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98.

Threshold e) 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:

a) 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 Section 5020.1 (k), or

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

The NAHC indicated that according to their files, no SLF resources are known to exist in the vicinity of the Project area. The NAHC provided a list to the Project's archaeologist, Applied Earthwork. Inc. of regional Native American tribes who have an interest in and/or knowledge of the region and detailed the process of recommended consultation efforts. Pursuant to the NAHC list, Native American individuals and organizations were contacted by Applied Earthworks Inc. to elicit information regarding Native American resource information related to the proposed Project. Of the 16 groups and/or individuals contacted, six responses were received. The Gabrieleno/Tongva San Gabriel Band of Mission Indians, Morongo Band of Mission Indians, and Serrano Nation of Mission Indians did not have any specific information regarding sensitive Native American resources that may be present in the area. The Soboba Band of Luiseno Indians also could not provide specific information about the Project area but recommended that the San Manuel Band of Mission Indians be contacted. The Agua Caliente Band of Cahuilla Indians and San Manuel Band of Mission Indians indicated that the Project area is located outside of the Tribe's ancestral lands and, as such, do not have any information on sensitive Native American resources in the vicinity. (Applied EarthWorks, Inc., 2017a, pp. 26-27)

As part of the SB18 and AB52 consultation processes required by State law, the City of San Bernardino sent notification of the proposed Project to the following Native American tribes with possible cultural affiliation to the area: Gabrieleno Band of Mission Indians- Kihz Nation, San Manuel Band of Mission Indians (SMBMI), and the Soboba Band of Mission Indians. The Gabrieleno Band of Mission Indians-Kizh Nation and the SMBMI responded to the City's SB18 and AB52 letters and requested consultation. The Gabrieleno Band of Mission Indians-Kizh Nation responded that the Project site lies in an area where the Ancestral territories of the Kizh (Kitc) Gabrieleno's villages adjoined and overlapped with each other, at least during the Late Prehistoric and Protohistoric Periods (Gabrieleno, 2017). The SMBMI also responded that the Project area exists within the Serrano ancestral territory and therefore is of interest to the Tribe (SMBMI, 2017).

At this time, no known tribal cultural resources occur on the Project site. The Project site is primarily developed with a golf course and no surface features have been identified that meet the definition of a

tribal cultural resource. However, there is a remote potential to uncover previously undiscovered tribal cultural resources during mass grading and excavation activities. If resources are unearthed during Project construction activities, and they meet the definition of a tribal cultural resource as defined by California Code of Regulations § 21074, there is a potential that the resource(s) would be significantly impacted if not properly identified and treated. Thus, there is a potential for the Project to cause significant impacts to previously undiscovered tribal cultural resources on the Project site. Accordingly, impacts are potentially significant and mitigation is required. Refer to Subsection 4.4.7 for applicable mitigation.

4.4.5 CUMULATIVE IMPACT ANALYSIS

The cumulative impact analysis considers development of the Project site in conjunction with other development projects in the vicinity of the Project site resulting from full General Plan buildout in the San Bernardino General Plan, in addition to the neighboring jurisdictions of Loma Linda, Redlands, Grand Terrace, and Colton.

A. Historical and Archaeological Resources

Applied EarthWorks determined that the San Bernardino Public Golf Club, and the off-site single-family residences at 141 East Dumas Street and 145 East Dumas Street, and the 700-foot segment of South Washington Avenue do not meet any criteria for listing on the CRHR and as such, are not considered a historical resource for the purposes of CEQA. Therefore, the Project has no potential to contribute towards a significant cumulatively considerable impact to historical sites and resources as defined in California Code of Regulations §15064.5.

The results obtained from the SCCIC records search and Applied EarthWorks Phase I pedestrian survey indicates that there are no known archaeological resources within the Project area. In addition, the majority of the Project area lies within the floodplain of the Santa Ana River which is a very dynamic and high energy flow area. Due to the high energy of the floodplain deposits and the young age of the northern part of the Project area, there is a low potential for encountering intact buried archaeological deposits within the Project area. (Applied EarthWorks, Inc., 2017b, p. 33) However, there is a remote potential to uncover previously undiscovered archaeological resources during mass grading and excavation activities. If archaeological resources are unearthed during Project construction activities, and they meet the definition of a significant archeological resource as defined by California Code of Regulations § 15064.5, there is a potential that the resource(s) would be significantly impacted if not properly identified and treated. Other projects in the region would similarly have the potential to impact unknown, subsurface paleontological resources during ground-disturbing activities. Therefore, the Project's potential to directly impact subsurface archeological resources is a potentially cumulatively considerable impact for which mitigation is required.

B. Paleontological Resources

There are no known archaeological resources within the Project area. Due to the high energy of the floodplain deposits and the young age of soils in the northern part of the Project area, there is a low

potential for encountering intact buried archaeological deposits within the Project area. However, because there is a remote potential to uncover previously undiscovered archaeological resources during mass grading and excavation activities, if archaeological resources are unearthed during Project construction activities, and they meet the definition of a significant archeological resource as defined by California Code of Regulations § 15064.5, there is a potential that the resource(s) would be significantly impacted if not properly identified and treated. Similarly, other development projects in the cumulative development area that are located in the same geologic formation have the potential to unearth paleontological resources. Therefore, the Project's potential to result in a cumulatively considerable impact to unique paleontological resources is a significant impact for which mitigation is required.

C. Human Remains

The Project site does not contain a cemetery and no known formal cemeteries are located in the immediate vicinity of the Project site. Due to mandatory compliance required of all ground-disturbing activities within the provisions of the California Health and Safety Code § 7050.5 as well as Public Resources Code § 5097 et. seq., human remains would be assured proper treatment if encountered. Because all other development projects within the region similarly would be required to comply with State law, any cumulative impact associated with human remains discovery would be reduced to below a level of significance.

D. Tribal Cultural Resources

Although there are no known tribal cultural resources on the Project site, there is a remote potential to uncover previously undiscovered tribal cultural resources during mass grading and excavation activities. If tribal cultural resources are unearthed during Project construction activities, and they meet the definition of a significant archeological resource as defined by California Code of Regulations § 21074, there is a potential that the resource(s) would be significantly impacted if not properly identified and treated. Other projects in the region would similarly have the potential to impact tribal cultural resources associated with the Gabrieleno Band of Mission Indians-Kizh Nation and/or the San Manuel Band of Mission Indians (SMBMI). As such, any impacts to resources on the Project site, should they be unearthed, would be significant on a direct and cumulatively considerable basis.

4.4.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a): Less-than-Significant Impact. The Project site is the current location of the San Bernardino Public Golf Club. The San Bernardino Public Golf Club does not meet any criteria for listing on the California Register of Historic Places (CRHR) and as such, is not considered a historical resource for the purposes of CEQA. In addition, the single-family residences at 141 East Dumas Street and 145 East Dumas Street, and the 700-foot section of South Washington Avenue that are located in the Project's off-site improvement area, do not meet any criteria for listing on the CRHR. Therefore, because no resources on the Project site or within the Project's off-site improvement area meet any criteria for listing on the CRHR, the Project would not cause a substantial adverse change in the significance of a historical resource as defined in CEQA Section 15064.5.

Threshold b): Significant Direct and Cumulatively Considerable Impact. There are no known archaeological resources within the Project area. Due to the high energy of the floodplain deposits and the young age of soils in the northern part of the Project area, there is a low potential for encountering intact buried archaeological deposits within the Project area. However, because there is a remote potential to uncover previously undiscovered archaeological resources during mass grading and excavation activities, if archaeological resources are unearthed during Project construction activities, and they meet the definition of a significant archeological resource as defined by California Code of Regulations § 15064.5, there is a potential that the resource(s) would be significantly impacted if not properly identified and treated.

Threshold c): Significant Direct and Cumulatively Considerable Impact. The Quaternary alluvium deposits on the Project site have a low paleontological resource potential because they are likely too young to contain fossilized materials. However, because there is a remote potential that Project-related ground disturbing activities could extend into sensitive Pleistocene age alluvial deposits that are buried at unknown depth within the Project boundary and unearth significant paleontological resources, impacts would be significant on a direct and cumulatively considerable basis.

Threshold d): Less-than-Significant Impact. No known human remains are present on the Project site. In the unlikely event that human remains are discovered during Project grading or other ground-disturbing activities, compliance with the applicable provisions of the California Health and Safety Code § 5097 et. seq. is required. Mandatory compliance with State law would ensure that human remains, if encountered, are appropriately treated and would preclude the potential for significant impacts to Native American remains.

Threshold e): Significant Direct and Cumulatively Considerable Impact. Although there are no known tribal cultural resources on the Project site, there is a remote potential to uncover previously undiscovered tribal cultural resources during mass grading and excavation activities. If resources are discovered that meet the definition of a tribal cultural resource as defined by California Code of Regulations § 21074, there is a potential that the resource(s) would be significantly impacted if not properly identified and treated.

4.4.7 MITIGATION

MM 4.4-1 Prior to the issuance of a grading permit, the Project Proponent or construction contractor shall provide evidence to the City of San Bernardino Community Development Department that the construction site supervisors and crew members involved with Project grading and trenching operations are trained to recognize archaeological resources and tribal cultural resources should such resources be unearthed during Project ground-disturbing construction activities. If a suspected archaeological resource or tribal cultural resource is identified on the property, the construction supervisor shall be required by his/her contract to immediately halt and redirect grading operations within a 100-foot radius of the suspected resource(s) and seek identification and evaluation of the suspected resource(s) by a professional archaeologist. This requirement shall be noted on all grading plans and the construction

contractor shall be obligated to comply with the note. The archaeologist shall evaluate the suspected resource and make a determination of significance pursuant to California Public Resources Code Section 21083.2. If the resource is a suspected tribal cultural resource that potentially meets the definition given in Public Resources Code Section 21074, the professional archaeologist shall consult with the Gabrieleno Band of Mission Indians-Kizh Nation and/or the San Manuel Band of Mission Indians before making a definitive determination of significance. If the resource is determined to be significant, then Mitigation Measure MM 4.4-2 shall apply.

MM 4.4-2 If a significant archaeological resource(s) or tribal cultural resource is discovered on the property, ground-disturbing activities shall be suspended within a 100-foot radius of the resource(s). The archaeological monitor and a representative of the appropriate Native American Tribe(s), the Project Proponent, and the City of San Bernardino Community Development Department shall confer regarding mitigation of the discovered archaeological or tribal cultural resource(s). A treatment plan shall be prepared and implemented by the archaeologist to protect the identified archeological resource(s) or tribal cultural resource from damage and destruction. A final report containing the significance and treatment findings shall be prepared by the archaeologist and submitted to the City of San Bernardino Community Development Department and the San Bernardino Archaeological Information Center.

MM 4.4-3 Prior to the issuance of a grading permit, the Project Proponent or construction contractor shall provide evidence to the City of San Bernardino Community Development Department that the construction site supervisors and crew members involved with the Project's grading and trenching operations are trained to recognize paleontological resources (fossils), should resources be unearthed during Project ground-disturbing activities. If a suspected paleontological resource(s) is identified, the construction supervisor shall be required by his/her contract to immediately halt and redirect grading operations within a 100-foot radius of the suspected resource and seek identification and evaluation of the suspected resource by a qualified paleontologist meeting the definition of a qualified vertebrate paleontologist as defined in the County of San Bernardino Development Code Section 82.20.040. This requirement shall be noted on all grading plans and the construction contractor shall be obligated to comply with the note. The significance of the discovered resource(s) shall be determined by the paleontologist. If the resource is significant, then Mitigation Measure MM 4.4-4 shall apply.

MM 4.4-4 If a significant paleontological resource is discovered on the property, discovered fossils or samples of such fossils shall be collected and identified by a qualified paleontologist meeting the definition of a qualified vertebrate paleontologist as defined in the County of San Bernardino Development Code Section 82.20.040. Significant specimens recovered shall be properly recorded, treated, and donated to the San Bernardino County Museum, Division of Geological Sciences, or other repository with permanent retrievable paleontologic storage. A final report shall be prepared and

submitted to the City of San Bernardino that itemizes any fossils recovered, with maps to accurately record the original location of recovered fossils, and evidence that the resources were curated by an established museum repository.

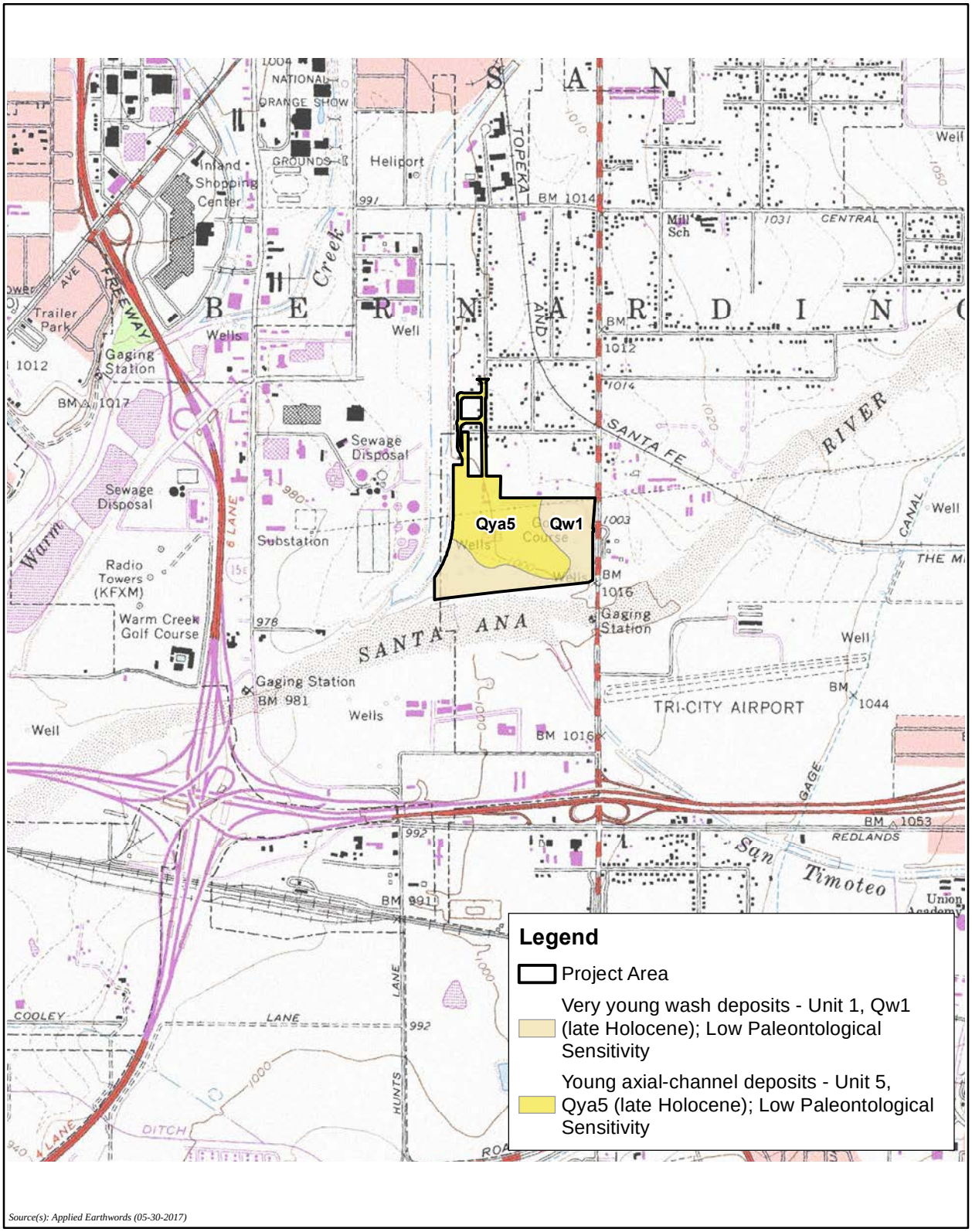
MM 4.4-5 Pursuant to California Health and Safety Code Section 7050.5, if human remains are encountered, no further disturbance shall occur until the San Bernardino County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98 (b), human remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. In the event that the remains are determined to be of Native American origin, Native American Heritage Commission (NAHC) shall be contacted by the Coroner within the period specified by law (24 hours). Subsequently, the NAHC shall identify the "Most Likely Descendent." The "Most Likely Descendent" shall then make recommendations and engage in consultation with the property owner concerning the treatment of the remains as provided in Public Resources Code Section 5097.98. Human remains from other ethnic/cultural groups with recognized historical associations to the Project area shall also be subject to consultation between the appropriate representatives from that group and the City Archaeologist.

4.4.8 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold b): Less-than-Significant Impact with Mitigation Incorporated. In the event that archaeological resources are unearthed during Project construction activities, and they meet the definition of a significant archeological resource as defined by California Public Resources Code § 15064.5, implementation of Mitigation Measures MM 4.4-1 and MM 4.4-2 would ensure that any uncovered resources are appropriately treated as recommended by a qualified archaeologist.

Threshold c): Less-than-Significant Impact with Mitigation Incorporated. Should the Project-related ground-disturbing activities unearth significant paleontological resources, implementation of Mitigation Measure MM 4.4-3 would ensure the proper identification and subsequent treatment of the previously uncovered paleontological resource(s).

Threshold e): Less-than-Significant Impact with Mitigation Incorporated. In the event that tribal cultural resources are unearthed during Project construction activities, and they meet the definition of a tribal cultural resource as defined by California Public Resources Code § 21074, implementation of Mitigation Measures MM 4.4-1 and MM 4.4-2 would ensure that uncovered resources are appropriately treated as recommended by a qualified archaeologist and Native American representatives.



Source(s): Applied Earthwords (05-30-2017)

Figure 4.4-1

NOT TO SCALE

GEOLOGIC UNITS

4.5 GEOLOGY / SOILS

The analysis in this Subsection is based on the following two technical reports. All other references used in this Subsection are included in EIR Section 7.0, *References.*

- *Geotechnical Feasibility Study Proposed Commercial/Industrial Building*, prepared by Southern California Geotechnical (herein SoCalGeo), dated November 14, 2016, and appended to this EIR as *Technical Appendix E1* (SoCalGeo, 2016a).

- *Result of Infiltration Testing*, prepared by SoCalGeo, dated November 8, 2016, and appended to this EIR as *Technical Appendix E2* (SoCalGeo, 2016b).

4.5.1 EXISTING CONDITIONS

A. Regional Geologic Setting

The Project area is situated south of the San Bernardino Mountains, which comprises the eastern-most portion of the Transverse Ranges, on the North American Plate in the eastern portion of the San Bernardino Valley. The San Andreas Fault separates the San Bernardino Mountains from the San Gabriel Mountains, which were uplifted during the middle Pleistocene. The San Bernardino Valley is associated with erosion in the nearby mountains that occurred prior to their uplift. During the early Pliocene, sedimentary deposits formed in large freshwater lakes in the mountains. Late Pliocene rejuvenation of the mountains caused these lakes to fill in. As a result, streams coming down out of the mountains created a floodplain. During the late Pliocene and early Pleistocene, the sedimentary rocks folded, establishing the San Bernardino Valley by the late middle Pleistocene. (Applied EarthWorks, 2017, p. 6)

The Santa Ana River, which originates on the northern and eastern slopes of Mt. San Gorgonio, is the largest hydrological feature near the Project area. Mill Creek, which begins south of Mt. San Gorgonio, joins the Santa Ana River where it emerges from the mountains. Other major tributaries emerging from the southern slopes of the San Bernardino Mountains include Plunge Creek, City Creek, Waterman Creek, Devil Canyon Creek, and Warm Creek channel. (Applied EarthWorks, 2017, p. 6)

The hydrological characteristics of the Santa Ana River are determined by many factors, including seasonality of precipitation as well as its amount, duration, and intensity. Prehistorically and historically, the Santa Ana River was probably at the surface most of the year. In the early 1900s, the flow was sufficiently continuous to support a hydroelectric plant between the cities of Riverside and Colton. Today, the water table is much lower due to groundwater pumping and decreased infiltration and the surface of the streambed is frequently dry during the summer and fall months.

B. Project Site Topography

The Project's grading plan indicates that the site topography is relatively level, with the exception of some areas of moderately sloping terrain and some localized variations, including golf hazards and

berms. The overall site topography slopes downward to the west at gradients ranging from 1 to 2 percent. However, several terraced areas located within the central and northeastern region of the Project site possess slope indications of up to 3h:1v (horizontal to vertical). The terraced areas are generally 4 to 10 plus or minus (±) feet higher in elevation than the surrounding adjacent grades. The existing grades range from an elevation of 1,010 ± above mean sea level (AMSL) in the northeastern portion of the site to an elevation of 983 ± feet AMSL in the southwestern portion of the site. (SoCalGeo, 2016a, p. 4)

C. *Soils*

The surface and subsurface soil composition of the Project site is described below and depicted on Figure 4.5-1, *Soils Map*.

1. *Artificial Fill*

Soils identified as possible fill were encountered by SoCalGeo at the ground surface extending to depths of approximately 4.5 and 5.5 feet below the existing site grades. The possible fill soils generally consist of loose to medium dense silty fine sands and fine to medium sands. SoCalGeo determined that the possible fill soils possess some indicators of fill but also resemble the underlying native soil. (SoCalGeo, 2016a, p. 6)

2. *Alluvium*

SoCalGeo identified disturbed alluvial soils at the ground surface at one of the subsurface testing locations. The soils generally consist of loose silty fine sands and extend to a depth of ±2.5 feet below existing grades. These soils are classified as disturbed alluvium because they resemble the underlying native soils, however, these soils, observed at the ground surface, are expected to have been disturbed as part of the current use as a golf course. (SoCalGeo, 2016a, pp. 6-7)

Native alluvium soil was encountered beneath the disturbed soils, possible fill soils, or at the ground surface, at all of the boring locations. The near-surface alluvial soils generally consist of loose to medium dense fine sands and silty sands with varying fine to coarse sand content and zones of stiff to very stiff silty clays, extending to depths of approximately 12 to 24 ± feet. At greater depths, the alluvium generally consists of medium dense to very dense fine to medium sands, silty fine sands, and stiff to hard silty clays extending to the maximum depth explored of 50 ± feet. (SoCalGeo, 2016a, p. 7)

As shown on Figure 4.5-1, the on-site alluvium soils are identified as 60.6 acres of Tujunga gravelly loamy sand (TvC), 0.6 acres of Psamments, Fluvents and Frequently flooded soils (Ps), and 0.5 acres of Grangeville fine sandy loam (Gr). Soils in the Project's off-site roadway improvement area consist of 3.1 acres of Gr, and a negligible amount of TvC (0.7 acres). The TvC soil is determined to be negligible due to having a small offsite impact area.

D. Groundwater

Research of historic high groundwater levels indicates that the minimum historic depth to groundwater at the site is approximately 10 ± feet. No groundwater or free water was encountered during the geotechnical investigation conducted by SoCalGeo. Based on SoCalGeo's subsurface exploration, the static groundwater at the Project site is considered to be present at a depth in excess of 50 ± feet. (SoCalGeo, 2016a, pp. 7 and 17)

E. Seismic Hazards

The Uniform Building Code (UBC) Seismic Zone Map divides the United States into zones of potential earthquake damage. The City of San Bernardino is located in Seismic Zone 4 defined as major damage caused by nearby fault movements. (City of San Bernardino, 2005b, p. 5.5-13). The City of San Bernardino contains numerous strands of active faults, including the San Andreas and San Jacinto faults. The Alquist-Priolo Earthquake Fault Zones Act requires the State Geologist to establish Earthquake Fault Zones to encompass all potentially active fault traces of the San Andreas and San Jacinto Faults. The Earthquake Fault Zones boundaries extend approximately 500 feet away from major active faults and about 200 to 300 feet away from well-defined minor faults. Within the City of San Bernardino, the San Andreas Fault system and the San Jacinto Fault system, including the Glen Helen and Loma Linda Faults, are included in these Special Studies Zones. (City of San Bernardino, 2005b, p. 5.5-16) The San Bernardino planning area is regionally designated as a high severity zone where structural damage may occur from a maximum expectable earthquake. According to General Plan Figure 5.5-4, *Regional Fault Map*, and Figure 5.5-5, *Alquist-Priolo Earthquake Fault Zones*, the Project site is in close proximity to the San Jacinto Fault System and an Alquist-Priolo Special Study Zone (City of San Bernardino, 2005b, Figure 5.5-4)

Secondary hazards associated with seismic events include surface rupture, ground failure, liquefaction, and landslide and rockfalls, which are briefly discussed below.

1. Known Earthquake Fault/Strong Seismic Ground Shaking

Fault rupture can occur along pre-existing, known active fault traces; however, fault rupture also can extend from known active faults or rupture along unidentified fault traces. Research of available maps by SoCalGeo indicates that the Project site is not located within an Alquist-Priolo Earthquake Fault Zone; therefore, SoCalGeo determined that the possibility of a significant fault rupture on the site is considered to be low. (SoCalGeo, 2016a, p. 10) However, according to the General Plan Figure 5.5-4, *Regional Fault Map*, and Figure 5.5-5, *Alquist-Priolo Earthquake Fault Zones*, the Project site is in close proximity to the San Jacinto Fault System and an Alquist-Priolo Special Study Zone (City of San Bernardino, 2005b, p. 5.5-16). The Project site, similar to most of southern California, is located in an area that is susceptible to strong ground motions due to earthquakes and there are numerous faults located near the Project site that are capable of producing significant ground motions (SoCalGeo, 2016a, p. 10). Thus, the Project site is susceptible to seismically-induced ground shaking and would have the potential of exposing people or structures to substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

2. *Liquefaction*

Liquefaction is the loss of strength in generally cohesionless, saturated soils when the pore-ware pressures induced in soil by a seismic event becomes equal to or exceeds the overburden pressure. The primary factors which influence the potential for liquefaction include groundwater table elevation, soil type and plasticity characteristics, relative density of the soil, initial pressures, and intensity and duration of ground shaking. The depth to which the occurrence of liquefaction may impact subsurface improvements is generally identified as the upper 50 feet below the existing ground surface. Liquefaction potential is greater in saturated, loose, poorly, graded fine sands. (SoCalGeo, 2016a, p. 12)

The Project site is located within a zone of moderate to high liquefaction susceptibility. Therefore, a site-specific liquefaction evaluation was conducted by SoCalGeo. Potentially liquefiable soil strata at two of the subsurface testing locations were identified within the Project site at a depth of 10 to 12 feet and 17 to 22 ± feet. Soils which are located above the groundwater table (10 feet), or possessing factors of safety in excess of 1.3 are considered non-liquefiable. Several strata of silty clay were determined to be non-liquefiable due to their cohesive characteristics. (SoCalGeo, 2016a, p. 13) The results of the preliminary liquefaction evaluation indicate that the total dynamic settlements of 0 to 0.69 ± inches could occur at the Project site during the design seismic event concurrent with historically high groundwater levels. (SoCalGeo, 2016a, p. 1)

3. *Landslides*

According to General Plan EIR Figure 5.5-2, *Soil-Slip Susceptibility*, the Project site is not identified within an area of the City with the potential for landslides or soil-slip susceptibility (City of San Bernardino, 2005b, Figure 5.5-2). The Project site and immediately surrounding properties are either flat or gently-sloping and contain no steep natural or manufactured slopes; thus, there is no potential for landslides to occur on or immediately adjacent to the site.

F. Soils and Slope Instability Hazards

1. *Soil Erosion*

Erosion is the process by which the upper layers of the surface (such as soils) are worn and removed by the movement of water or wind. Soils with characteristics such as low permeability and/or low cohesive strength are more susceptible to erosion than those soils having higher permeability and cohesive strength. For water erosion, the slope gradient on which a given soil is located contributes to the soil's resistance to erosive forces because water is able to flow faster down steeper gradients. Wind erosion can damage land and natural vegetation by removing soil from one place and depositing it in another. It mostly affects dry, sandy soils in flat, bare areas, but wind erosion may occur wherever soil is loose, dry, and finely granulated. Soil erodibility is an estimate of the ability of soils to resist erosion, based on the physical characteristics or each soil. The texture and potential limitations of on-site soils is identified in Table 4.1-1, *On-Site Soils*.

Table 4.5-1 On-Site Soils

Soil (Symbol)	Texture	Potential Limitations
Grangeville (Gr)	Fine Sandy Loam	None
Psamments/Fluvents (Ps)	---	Flooding
Tujunga (TvC)	Gravelly Loamy Sand	High Blowing Soil

(City of San Bernardino, 2005b, Table 5.5-1)

2. *Shrinking/Subsidence*

Subsidence is a gradual settling or sudden sinking of the ground surface (i.e., loss of elevation). The principal causes of subsidence are aquifer-system compaction, drainage of organic soils, underground mining, and natural compaction. Shrinkage is the reduction in volume in soil as the water content of the soil drops (i.e., loss of volume).

According to General Plan EIR Figure 5.5-1, *Potential Subsidence Areas*, the Project site is located in an area of potential ground subsidence (City of San Bernardino, 2005b, Figure 5.5-3). SoCalGeo estimated that removal and re-compaction of the soils on the property would result in an average shrinkage of 8 to 12 percent and minor ground subsidence is expected to occur in the soils below the zone of removal, due to settlement and machinery working. The subsidence is estimated to be 0.10 ± feet. The actual amount of subsidence is expected to be variable and will be dependent on the type of machinery used repetitions of use, and dynamic effects. (SoCalGeo, 2016a, p. 14)

3. *Soil Expansion*

Expansive soils are soils that exhibit cyclic shrink and swell patterns in response to variations in moisture content. The near-surface soils generally consist of fine sands and silty sands. Based on their composition, the near-surface soils were visually classified as very low to non-expansive. (SoCalGeo, 2016a, p. 14).

4.5.2 APPLICABLE ENVIRONMENTAL REGULATIONS

A. Alquist-Priolo Earthquake Fault Zoning Act (CA Pub. Res. Code § 2621 et Seq.)

The Alquist-Priolo Special Studies Zone Act was signed into law in 1972 and renamed the Alquist-Priolo Earthquake Fault Zoning Act in 1994. The primary purpose of the Alquist-Priolo Act is to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault.

B. Seismic Hazards Mapping Act (CA Pub. Res. Code § 2690 et Seq.)

The Seismic Hazards Mapping Act of 1990 is a statewide seismic hazard mapping and technical advisory program in California to assist cities and counties in fulfilling their responsibilities for protecting the public health and safety from the effects of strong ground shaking, liquefaction, landslides, or other ground failure and other seismic hazards caused by earthquakes. The California Geologic Survey (CGS) is the principal State implementing agency that mapped seismic zones

requiring the completion of site-specific geotechnical investigations prior to construction of a development project.

C. *California Building Standards Code, CCR Title 24*

The California Building Standards Code (CCR, Title 24), also known as the CBSC, is the standard from which California buildings derive appropriate building design standards. The International Building Code (IBC) used by the International Conference of Building Officials establishes design and construction standards for buildings and facilities. The CBSC incorporates the IBC as well as other uniform codes into its code standards. All development projects in California are required to comply with the CBSC.

Development in the San Bernardino planning area is required to adhere to the building standards of the most recent CBSC, which regulates the design and construction of excavations, foundations, building frames, retaining walls, and other building elements top mitigate the effects of seismic shaking and adverse soil conditions. (City of San Bernardino, 2017, p. 5.5-38)

D. *National Pollutant Discharge Elimination System (NPDES) and Storm Water Pollution Prevention Plan (SWPPP)*

Waste discharge requirements are established for the incorporated cities of San Bernardino County, the County Flood Control District and the remainder of the County within the Santa Ana Region Area-Wide Urban Storm Water Runoff (NPDES) permit otherwise known as the San Bernardino County MS4 permit. The City adopted a Storm Water Drainage Systems ordinance (Title 8, Health & Safety, Chapter 8.80) that provides measures for compliance with the MS4 permit including but not limited to protection of the storm drainage system (8.80.205), prohibited discharges (8.80.206), compliance with Best Management Practices (BMPs) (8.80.208), treatment of stormwater runoff (8.80.209), and spill containment (8.80.211), and established Water Quality Management Plan (WQMP) requirements for all new development. All new development is required to submit for approval, a Storm Water Quality Management Plan outlining structural and mon-structural BMPs during and after construction in adherence with this ordinance. (City of San Bernardino, 2005b, p. 5.7-29)

Future projects encompassing an area of one-acre or more shall submit for approval to the State Water Resources Board, a notice of Intent to be covered under the General Construction Storm Water Pollution Prevention Plan (SWPPP), which incorporates BMPs that address pollutant source reduction and provide measures/controls necessary to mitigate potential pollutant sources. These include but are not limited to: erosion controls, sediment controls, tracking controls, non-storm water management, materials and waste management, good housekeeping practices and monitoring. (City of San Bernardino, 2005b, p. 4.7-30)

E. *South Coast Air Quality Management District*

The South Coast Air Quality Management District (SCAQMD) is responsible for enforcing air pollution control measures in the South Coast Air Basin, within which the Project site is located. Rule

403 addresses blowing dust from construction sites and is applicable to the Project due to the potential for wind erosion during Project grading and construction activities.

4.5.3 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to geology and soils if the Project or any Project-related component would:

a. *Expose people or structures to 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 based on other substantial evidence of a known fault;*
   - *ii) Strong seismic ground shaking;*
   - *iii) Seismic-related ground failure, including liquefaction;*
   - *iv) Landslides.*

b. *Result in substantial erosion or the loss of topsoil;*

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;*

d. *Be located on expansive soil, creating substantial risks to life or property; or*

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.*

4.5.4 IMPACT ANALYSIS

Threshold a)	***Would the Project expose people or structures to 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 based on other substantial evidence of a known fault?
	ii) Strong seismic ground shaking?
	iii) Seismic-related ground failure, including liquefaction?
	iv) Landslides?

1. *Rupture of a Known Earthquake Fault /Strong Seismic Ground Shaking*

Because no known earthquake faults underlie the Project site, there is no potential for the Project to expose people or structures to substantial adverse effects, including the risk of loss, injury, or death related to hazards from a rupture of a known earthquake fault. No impact would occur.

2. *Strong Seismic Ground Shaking*

The Project site is located in close proximity to the San Jacinto Fault System and an Alquist-Priolo Special Study Zone (City of San Bernardino, 2005b, p. 5.5-4). Thus, the Project site is susceptible to seismically-induced ground shaking, and has the potential to expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. This risk is not substantially different than the risk experienced by other properties in the southern California.

As a mandatory condition of Project approval, the Project Applicant would be required to construct the proposed high cube warehouse building in accordance with the City of San Bernardino Building Code and the most recent California Building Standards Code (CBSC). The CBSC and the City of San Bernardino Building Code provide standards specifically tailored for California earthquake conditions. In addition, to further reduce the risk of adverse seismic-related effects, as a condition of Project approval, the Project would be required to comply with the site-specific grading and construction recommendations contained in the geotechnical feasibility study and infiltration study attached as *Technical Appendix E1* and *Technical Appendix E2* to this EIR. With compliance with the grading and construction recommendations as set forth in the Project's geotechnical studies (*Technical Appendix E1 and E2*), potential impacts associated with strong seismic ground shaking would be less than significant and no mitigation is required.

3. *Ground Failure, Including Liquefaction*

The Project site is located within a zone of moderate to high liquefaction susceptibility. Therefore, a site-specific liquefaction evaluation was conducted by SoCalGeo. Potentially liquefiable soil strata at two of the subsurface testing locations were identified within the Project site at a depth of 10 to 12 feet

and 17 to 22 ± feet. Soils which are located above the groundwater table (10 feet), or possessing factors of safety in excess of 1.3 are considered non-liquefiable. Several strata of silty clay were determined to be non-liquefiable due to their cohesive characteristics. (SoCalGeo, 2016a, p. 13) The results of the preliminary liquefaction evaluation indicate that the total dynamic settlements of 0 to 0.69 ± inches could occur at the Project site during the design seismic event concurrent with historically high groundwater levels. (SoCalGeo, 2016a, p. 1)

The Project's high cube logistics warehouse building is required to be constructed in accordance with the latest applicable seismic safety guidelines, and the most recent CBSC. The City of San Bernardino also would impose the site-specific grading and construction recommendations contained within the geotechnical feasibility study and infiltration study (*Technical Appendix E1 and E2*) as conditions of Project approval. With compliance with the grading and construction recommendations as set forth in the Project's geotechnical studies (*Technical Appendix E1 and E2*), potential impacts associated with seismic-related ground failure, including liquefaction, would be less than significant and no mitigation is required.

4. *Landslides*

The Project's grading plan indicates that the site topography is relatively level, with the exception of some areas of moderately sloping terrain and some localized variations, including golf hazards and berms. According to General Plan EIR Figure 5.5-2, *Soil-Slip Susceptibility*, the Project site is not identified within an area of the City with the potential for landslides or soil-slip susceptibility (City of San Bernardino, 2005b, Figure 5.5-2).

The Project's manufactured slopes would be engineered to maximize stability so as to not pose a safety hazard to future site workers or the proposed building. In addition, The Project's high cube warehouse building is required to be constructed in accordance with the latest applicable seismic safety guidelines, including the most recent CBSC. The City of San Bernardino also would impose the site-specific grading and construction recommendations contained within the geotechnical feasibility study and infiltration study (*Technical Appendix E1 and E2*) as conditions of Project approval. With compliance with the grading and construction recommendations as set forth in the Project's geotechnical studies (*Technical Appendix E1 and E2*), potential impacts associated with seismic-induced landslides would be less than significant and no mitigation is required.

Threshold b) Would the Project result in substantial erosion or the loss of topsoil?

Grading and construction of the Project site would temporarily increase erosion susceptibility. Implementation of the Project has the potential to result in soil erosion. The analysis below summarizes the likelihood of the Project to result in substantial soil erosion during temporary construction activities and/or long-term operation of the Project.

A. *Impacts Analysis for Temporary-Constructed-Related Activities*

Proposed demolition, grading, and construction activities on the Project site would expose underlying soils and disturb surficial soils on the respective properties. Exposed soils would be subject to erosion during rainfall events or high winds due to the removal of stabilizing vegetation and exposure of these erodible materials to wind and water.

Waste discharge requirements are established for the incorporated cities of San Bernardino County, the County Flood Control District and the remainder of the County within the Santa Ana Region Area-Wide Urban Storm Water Runoff (NPDES) permit otherwise known as the San Bernardino County MS4 permit. The City adopted a Storm Water Drainage Systems ordinance (Title 8, Health & Safety, Chapter 8.80) that provides measures for compliance with the MS4 permit including but not limited to protection of the storm drainage system (8.80.205), prohibited discharges (8.80.206), compliance with Best Management Practices (BMPs) (8.80.208), treatment of stormwater runoff (8.80.209), and spill containment (8.80.211), and established Water Quality Management Plan (WQMP) requirements for all new development. All new development is required to submit for approval, a Storm Water Quality Management Plan outlining structural and mon-structural BMPs during and after construction in adherence with this ordinance. (City of San Bernardino, 2005b, p. 5.7-29)

Future projects encompassing an area of one-acre or more shall submit for approval to the State Water Resources Board, a notice of Intent to be covered under the General Construction Storm Water Pollution Prevention Plan (SWPPP), which incorporates BMPs that address pollutant source reduction and provide measures/controls necessary to mitigate potential pollutant sources. These include but are not limited to: erosion controls, sediment controls, tracking controls, non-storm water management, materials and waste management, good housekeeping practices and monitoring. (City of San Bernardino, 2005b, p. 4.7-30)

In addition, proposed construction activities would be required to comply with SCAQMD Rule 403, which would reduce the amount of particulate matter in the air and minimize the potential for wind erosion. With mandatory compliance to the requirements noted in the Project's SWPPP, as well as applicable regulatory requirements, the potential for water and/or wind erosion impacts during Project construction would be less than significant and no mitigation is required.

B. *Impact Analysis for Long-Term Operational Activities*

Following construction, wind and water erosion on the Project site would be minimized, because the areas disturbed during construction would be landscaped or covered with impervious surfaces and drainage would be controlled through a storm drain system. Implementation of the Project would likely result in less long-term erosion and loss of topsoil than occurs under the site's existing conditions as a golf course.

Furthermore, the City's MS4 NPDES Permit requires the Project Applicant to prepare and submit to the City for approval, a WQMP (Refer to EIR *Technical Appendix H2* for the Project's WQMP). The

WQMP identifies an effective combination of erosion control and sediment control measures (i.e., BMPs) to reduce or eliminate sediment discharge to surface water from storm water and non-storm water discharges. The WQMP for the proposed Project incorporates a water quality detention basin designed to remove silt and sediment from storm water runoff. The Project's WQMP also requires post-construction maintenance and operational measures to ensure on-going erosion potential. Compliance with the Project's WQMP would be required as a condition of Project approval. Therefore, with compliance with the Project's WQMP, the Project would not result in substantial erosion or the loss of topsoil during long-term operation. Thus, long-term impacts would be less than significant and no mitigation is required.

Threshold c) Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

The Project's grading plan indicates that the site topography is relatively level, with the exception of some areas of moderately sloping terrain and some localized variations, including golf hazards and berms. There is no evidence of landslides on or near the Project site, nor are there any exposed boulders that could result in rock fall hazards (City of San Bernardino, 2005a, Figure S-7). The Project's manufactured slopes would be engineered to maximize stability so as to not pose a safety hazard to future site employees or the proposed building. According to General Plan Figure 5.5-3, *Potential Subsidence Areas*, the Project site is located in an area identified as an area of potential ground subsidence. Removal and recompaction of the near surface native soils is estimated to result in an average shrinkage of 8 to 12 percent. Minor ground subsidence is expected to occur in the soils below the zone of removal, due to settlement and machinery working. The subsidence is estimated to be ±10 feet. These estimates are based on SoCalGeo's previous experience and the subsurface conditions encountered at the boring locations. The actual amount of subsidence is expected to be variable and would be dependent on the type of machinery used, repetitions of use, and dynamic effects. (SoCalGeo, 2016a, p. 14) As discussed in Threshold (a) (iii) above, the Project site is also subject to liquefaction.

The recommended remedial grading would remove and replace any existing soils from the building pad area, as well as the upper portion of the low strength native alluvium, and replace these materials as compacted structural fill. Following completion of the recommended remedial grading as set forth on the Project's geotechnical feasibility study (Refer to Technical Appendix E1), the soil conditions would be suitable for development. (SoCalGeo, 2016a, pp. 13-14)

The Project's high cube warehouse building is required to be constructed in accordance with the latest applicable seismic safety guidelines, including the most recent CBSC. The City of San Bernardino also would impose the site-specific grading and construction recommendations contained within the geotechnical feasibility study and infiltration study (*Technical Appendix E1 and E2*) as conditions of Project approval. With compliance with the grading and construction recommendations as set forth in the Project's geotechnical studies (*Technical Appendix E1 and E2*), potential impacts associated with

landslide, lateral spreading, subsidence, liquefaction, or collapse would be less than significant and no mitigation is required.

Threshold d) Would the Project be located on expansive soil, creating substantial risks to life or property?

The near surface soils generally consist of fine sands and silty sands. Based on their composition, SoCalGeo classified the soils as very low to non-expansive (SoCalGeo, 2016a, p. 14). The City of San Bernardino would impose the site-specific grading and construction recommendations contained within the geotechnical feasibility study and infiltration study (*Technical Appendix E1 and E2*) as conditions of Project approval. With compliance with the grading and construction recommendations as set forth in the Project's geotechnical studies (*Technical Appendix E1 and E2*), the Project would not create substantial risks to life or property from exposure to expansive soils. Impacts would be less than significant and no mitigation is required.

Threshold e) Would the Project 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?

The Project does not propose the use of septic tanks or alternative wastewater disposal systems. The Project would install domestic sewer infrastructure and connect to the City of San Bernardino Municipal Water Department (SBMWD) existing sewer conveyance and treatment system. Accordingly, no impact would occur.

4.5.5 CUMULATIVE IMPACT ANALYSIS

A. Seismic Hazards

Because seismic activity is detectible at considerable distances up to several hundred miles, the cumulative study area for seismic effects and erosion and sedimentation is considered to be the southern California region. Similarly, erosion and sedimentation effects can extend considerable distances in surface water bodies reaching discharge points such as the Pacific Ocean. As such, a summary of projections approach was used in this analysis of cumulative effects for seismic hazards and erosion. Other potential geologic and soils effects are inherently restricted to the areas proposed for on-site development and as such, there is no potential for the Project to contribute to cumulative impacts that require study. Regarding seismic effects, the Project has no potential to cause a seismic event or affect the magnitude of a seismic event. As such, the Project has no potential to contribute to a cumulatively significant seismic impact.

B. Soils and Slope Instability Hazards

As discussed in the impact analysis for Threshold (b), measures would be incorporated into the Project design during construction and long-term operation as part of the Project's required SWPPP and WQMP to ensure that significant erosion impacts do not occur on the Project site or off-site resulting

from Project implementation. Other development projects in the southern California region would be required to comply with similar regulatory requirements as required by State law and RWQCB requirements to preclude substantial adverse erosion impacts, including mandatory compliance with NPDES requirements and the resulting SWPPPs and WQMPs. All development projects in the vicinity of the Project also would be required to comply with SCAQMD Rule 403, which would preclude wind-related erosion hazards during construction. In addition, erosion on the Project site would be further controlled by the creation of manufactured slopes planted with stabilizing vegetation. Therefore, because the Project would result in less-than significant erosion impacts, and because other projects within the cumulative study area would be subject to similar requirements to control erosion hazards during construction and long-term operation, cumulative impacts associated with wind and water erosion hazards would be less than significant.

4.5.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold (a) (i) - (iv): Less-than-Significant Impact. The Project site is subject to seismic ground shaking and liquefaction hazards. The Project's high cube logistics warehouse building is required to be constructed in accordance with the latest applicable seismic safety guidelines, and the most recent California Building Standards Code (CBCS). The City of San Bernardino also would impose the site-specific grading and construction recommendations contained within the Project's geotechnical feasibility study and infiltration study (*Technical Appendix E1 and E2*) as conditions of Project approval. Therefore, with compliance with the latest applicable seismic safety guidelines, the most recent CBSC, and the grading and construction recommendations as set forth in the Project's geotechnical studies (*Technical Appendix E1 and E2*), potential impacts associated with seismic hazards would be less than significant.

Threshold (b): Less-than-Significant Impact. The Project would not result in substantial soil erosion or the loss of topsoil. The Project Applicant is required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for construction activities as well as adhere to SCAQMD Rule 403 during Project construction. With mandatory compliance to these regulatory requirements, the potential for soil erosion impacts during construction would be less than significant. Following construction, soil erosion on the Project site would be minimized, as the areas disturbed during construction would be landscaped or covered with impervious surfaces and drainage would be controlled through a storm drain system. Furthermore, the Project would be required to comply with the site-specific Water Quality Management Plan (WQMP) during operation, which would preclude substantial erosion impacts in the long-term. Impacts would be less than significant.

Threshold (c): Less-than-Significant Impact. The Project site's soils are subject to subsidence and liquefaction. The Project's high cube logistics warehouse building is required to be constructed in accordance with the latest applicable seismic safety guidelines, including the most recent California Building Standard Code (CBSC). The City of San Bernardino also would impose the site-specific grading and construction recommendations contained within the Project's geotechnical feasibility study and infiltration study (*Technical Appendix E1 and E2*) as conditions of Project approval. With compliance with the grading and construction recommendations as set forth in the Project's

geotechnical studies (*Technical Appendix E1 and E2*), potential impacts associated with unstable soils would be less than significant.

Threshold (d): Less-than-Significant-Impact. Soils on the Project site have a very low to non-expansive expansion potential and have little to no potential to create substantial risks to life or property. The City of San Bernardino would impose the site-specific grading and construction recommendations contained within the Project's geotechnical feasibility study and infiltration study (*Technical Appendix E1 and E2*) as conditions of Project approval. With compliance with the grading and construction recommendations as set forth in the Project's geotechnical studies (*Technical Appendix E1 and E2*), the Project would not create substantial risks to life or property from exposure to expansive soils.

Threshold (e): No Impact. The Project would not install septic tanks or alternative wastewater disposal systems. Accordingly, no impact would occur.

4.5.7 MITIGATION

No potentially significant impacts associated with geology and soils would occur as a result of the proposed Project; therefore, no mitigation is required.

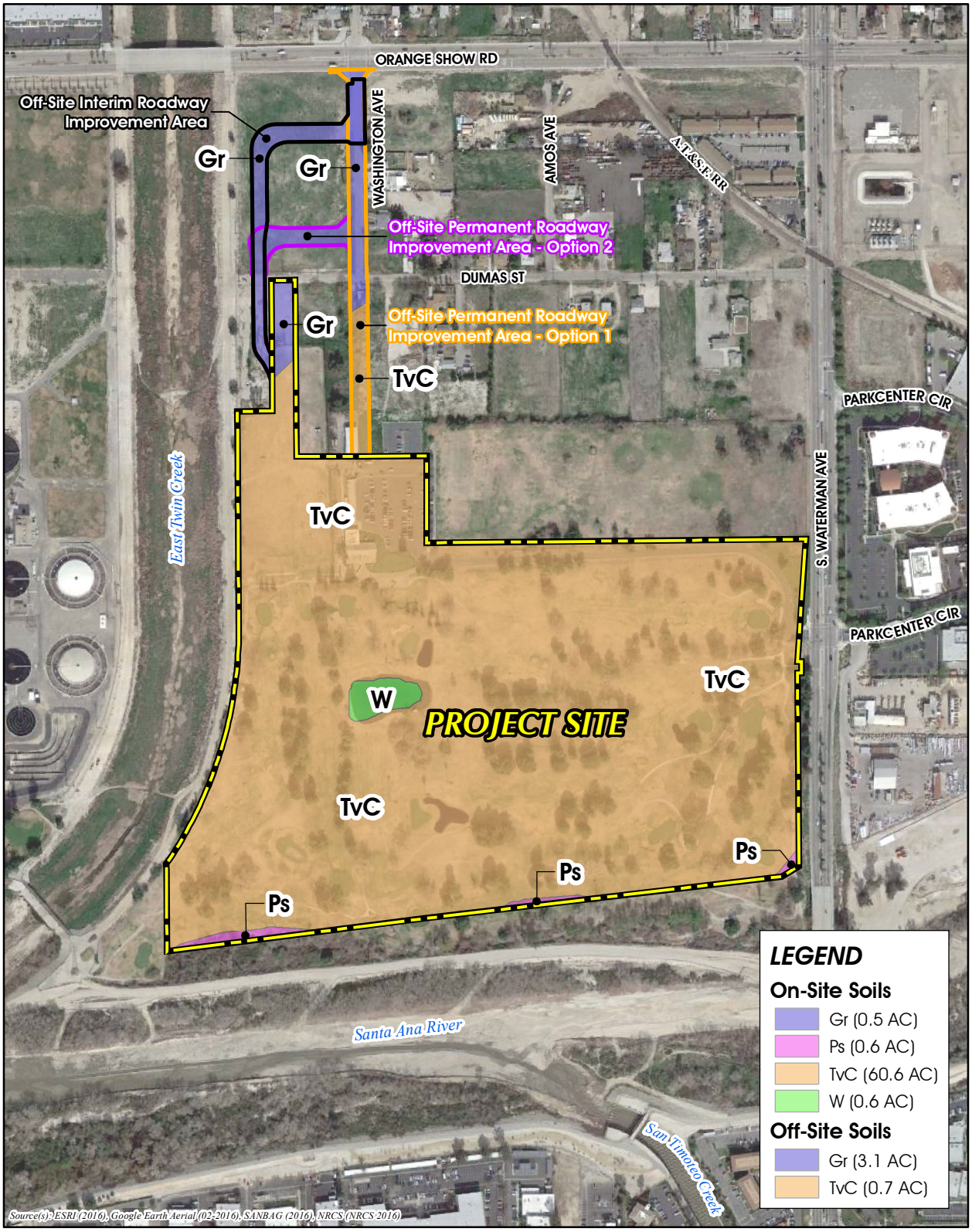


Figure 4.5-1

SOILS MAP

4.6 GREENHOUSE GAS EMISSIONS

The analysis in this Subsection is based on a report titled "Gateway South Building 4 Greenhouse Gas Analysis, City of San Bernardino," prepared by Urban Crossroads, Inc. and dated April 17, 2017 (Urban Crossroads, 2017c). This technical report is provided as *Technical Appendix F1* to this EIR and assesses the potential for the Project to generate greenhouse gas (GHG) emissions that could contribute to Global Climate Change (GCC) and its associated environmental effects.

4.6.1 EXISTING CONDITIONS

A. Introduction to Global Climate Change

GCC is defined as the change in average meteorological conditions on Earth with respect to temperature, precipitation, and storms. GCC is one of the most controversial environmental issues in the United States and there is much debate within the scientific community about the degree to which GCC is occurring naturally or as a result of human activity. Some data suggests that GCC has occurred over the course of thousands or millions of years, and that these historical changes to Earth's climate have occurred naturally without human influence, as in the case of an ice age. However, many scientists believe that the climate shift taking place since the industrial revolution (1900) is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of GHGs in planet Earth's atmosphere, including carbon dioxide, methane, nitrous oxide, and fluorinated gases. (Urban Crossroads, 2017c, p. 9)

An individual land development project is not capable of generating the magnitude of GHG emissions necessary to cause a discernible effect on global climate. However, individual development projects may contribute to GCC by generating GHGs that combine with other regional and global sources of GHGs. (Urban Crossroads, 2017c, p. 9)

B. Greenhouse Gases

Carbon dioxide (CO_2), methane (CH_4), and Nitrous Oxide (N_2O) emissions are the focus of evaluation in this Subsection because these gases are the primary contributors to GCC from land development projects. Although other substances, such as fluorinated gases, also contribute to GCC, sources of fluorinated gases are not well-defined and no accepted emissions factors or methodology exist to accurately calculate the emissions of these gases. (Urban Crossroads, 2017c, p. 11)

GHGs have varying global warming potential (GWP) values; GWP values represent the potential of a gas to trap heat in the atmosphere. CO_2 is used as the base reference unit for GWP and, therefore, has a GWP of 1. The atmospheric lifetime and GWP of selected GHGs are summarized in Table 4.6-1, *Global Warming Potential and Lifetime of Select GHGs*. As shown in Table 4.6-1, the GWP for primary GHGs ranges from 1 (CO_2) to 22,800 (Sulfur Hexafluoride, SF_6).

Table 4.6-1 Global Warming Potential and Lifetime of Select GHGs

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)	
		Second Assessment Report (SAR)	4th Assessment Report (AR4)
Carbon Dioxide	50-200	1	1
Methane	12 ± 3	21	25
Nitrous Oxide	120	310	298
HFC-23	264	11,700	14,800
HFC-134a	14.6	1,300	1,430
HFC-152a	1.5	140	124
Sulfur Hexafluoride (SF_6)	3,200	23,900	22,800

Source: (Urban Crossroads, 2017c, Table 2-2)

Provided below is a description of the various gases that contribute to GCC. For more information about these gases and their associated human health effects, refer to Section 2.4 of *Technical Appendix F1* and the reference sources cited therein (Urban Crossroads, 2017c, pp. 11-14).

- Water Vapor (H_2O) is the most abundant, and variable, GHG in the atmosphere. Changes in the concentration of water vapor in the atmosphere are considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity rises (in essence, the air is able to 'hold" more water when it is warmer), leading to more water vapor in the atmosphere. The higher concentration of water vapor in the atmosphere is then able to absorb more indirect thermal energy radiated from the Earth, further warming the atmosphere and causing the evaporation cycle to perpetuate. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop will continue is unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are able to reflect incoming solar radiation and thereby allow less energy to reach the Earth's surface and heat it up. There are no human health effects from water vapor itself; however, certain pollutants can dissolve in water vapor and the water vapor can then act as a pollutant-carrying agent.

- Carbon Dioxide (CO_2) is an odorless and colorless GHG that is emitted from natural and man-made sources. Natural CO_2 sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals and fungus; evaporation from oceans; and volcanic outgassing. Man-made CO_2 sources include: the burning of coal, oil, natural gas, and wood. Since the industrial revolution began in the mid-1700s, human activities that produce CO_2 have increased dramatically. As an example, prior to the industrial

revolution, CO_2 concentrations in the atmosphere were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30 percent. Exposure to CO_2 in high concentrations can cause adverse human health effects, but outdoor (atmospheric) levels are not high enough to be detrimental to human health.

- Methane (CH_4) absorbs radiation extremely effectively. Over the last 50 years, human activities such as rice cultivation, cattle ranching, natural gas combustion, and coal mining have increased the concentration of methane in the atmosphere. Other man-made sources include fossil-fuel combustion and biomass burning. No human health effects are known to occur from atmospheric exposure to methane; however, methane is an asphyxiant that may displace oxygen in enclosed spaces.

- Nitrous Oxide (N_2O) concentrations began to rise in the atmosphere at the beginning of the industrial revolution. N_2O can be transported into the stratosphere, be deposited on the Earth's surface, and be converted to other compounds by chemical reaction. N_2O is produced by microbial processes in soil and water, including reactions that occur in nitrogen-containing fertilizer. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. N_2O also is used as an aerosol spray propellant, as a preservative in potato chip bags, and in rocket engines and in race cars. Also, known as laughing gas, N_2O is a colorless GHG that can cause dizziness, euphoria, and hallucinations. In small doses, it is considered harmless; however, heavy and extended use can cause brain damage.

- Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are non-toxic, non-flammable, insoluble and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs were first synthesized in 1928 and have no natural source. CFCs were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and has been extremely successful, so much so that levels of CFCs are now remaining steady or declining. However, due to their long atmospheric lifetime, some of the CFCs will remain in the atmosphere for over 100 years.

- Hydrofluorocarbons (HFCs) are synthetic, man-made chemicals that are used as a substitute for CFCs and have one of the highest global warming potential ratings. The HFCs with the largest measured atmospheric abundances are (in order largest to smallest), HFC-23 (CHF_3), HFC-134a (CF_3CH_2F), and HFC-152a (CH_3CHF_2). No human health effects are known to result from exposure to HFCs, which are man-made and used for applications such as automobile air conditioners and refrigerants.

- Perfluorocarbons (PFCs) are primarily produced for aluminum production and semiconductor manufacture. PFCs have stable molecular structures and do not break down through chemical processes in the lower atmosphere. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). No human health effects are known to result from exposure to PFCs.

- Sulfur Hexafluoride (SF_6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection. In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing.

C. *Greenhouse Gas Emissions Inventory*

1. Global and National

Worldwide man-made GHG emissions are tracked by the Intergovernmental Panel on Climate Change. Man-made GHG emissions data is available through 2012. In 2012, total GHG emissions was approximately 28,865,994 gigagrams (Gg) of carbon dioxide equivalent (CO_2e). The United States is the second-largest emitter of GHGs in the world in 2012. (Urban Crossroads, 2017c, pp. 9-10)

The primary man-made GHG emitted in the United States was CO_2, representing approximately 81 percent of the United States' total GHG emissions. Fossil fuel combustion is the largest source of GHG emission in the United States. (Urban Crossroads, 2017c, p. 10)

2. State of California

The California Air Resources Board (CARB) compiles GHG inventories for the State of California. Based on 2014 GHG inventory data (the most recent year for which data was available when the NOP for this EIR was released for public review), California emitted approximately 441.5 million metric tons (MMT) CO_2e. California is the second-largest emitter of GHGs in the United States; California's GHG emissions account for approximately 6.8 percent of the country's total GHG emissions. However, California's per capita GHG emissions are ranked 45 is ranked 45th in the United States. (Urban Crossroads, 2017c, p. 10)

3. Project Site

Under existing conditions, the Project site is developed as a golf course with ancillary facilities (e.g., clubhouse/restaurant, maintenance building). Under existing conditions, sources of GHG emissions at the Project site include tailpipe emissions from vehicles traveling to and from the site and emissions from landscape maintenance equipment. GHG emissions at the Project site are considered to be nominal under existing conditions.

D. Potential Effects of Climate Change in California

In February 2006, the California Climate Change Center (CCCC) published a report titled "Scenarios of Climate Change in California: An Overview" (the "Climate Scenarios report") that is generally instructive about effects of climate change in California. The Climate Scenarios report used a range of emissions scenarios developed by the Intergovernmental Panel on Climate Change (IPCC) to project a series of potential warming ranges (i.e., temperature increases) that may occur in California during the 21st century: lower warming range (3.0-5.4°F); medium warming range (5.5-7.8°F); and higher warming range (8.0-10.4°F). (Cal. Climate Change Center, 2006, p. 7)

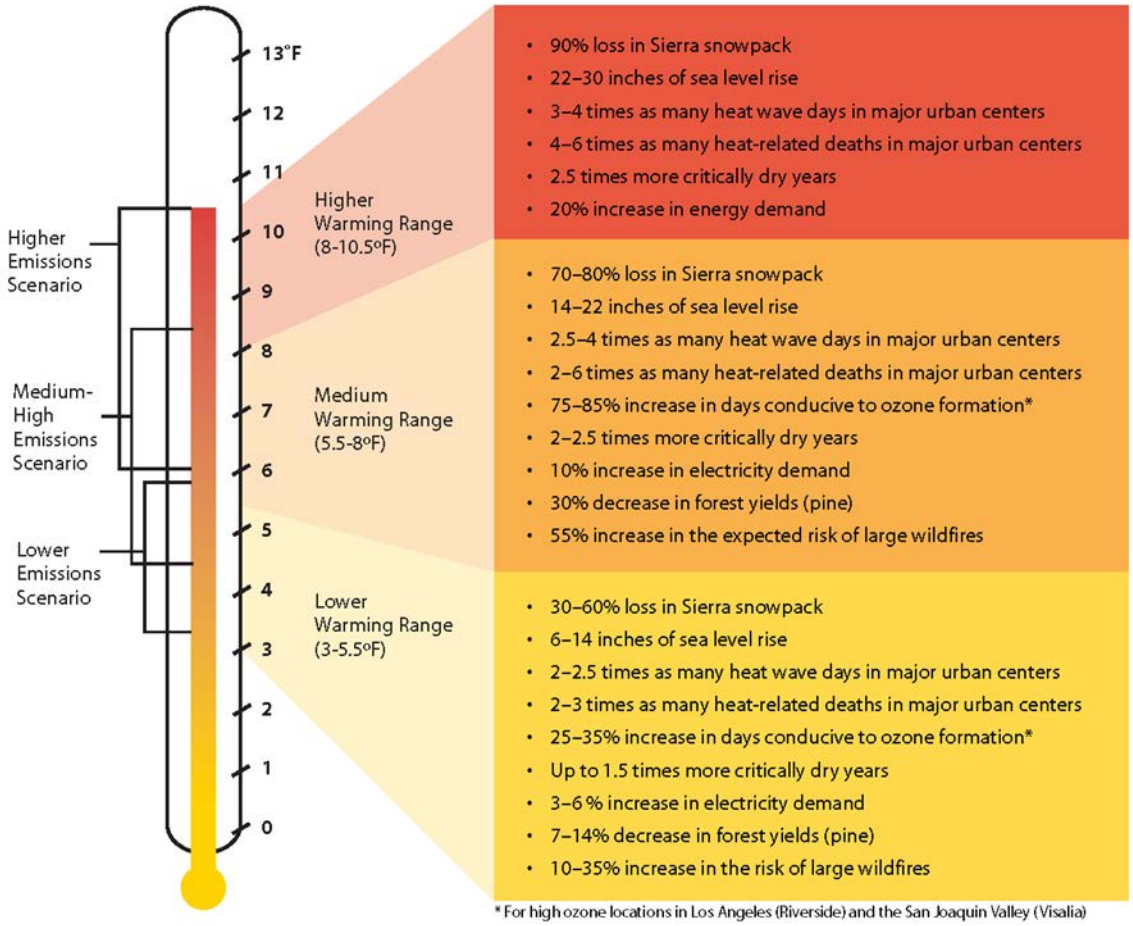
In addition, the California Natural Resources Agency adopted a "California Climate Adaptation Strategy" in 2009. This report details many vulnerabilities arising from climate change with respect to matters such as temperature extremes, sea level rise, wildfires, floods and droughts and precipitation changes, and responds to the Governor's Executive Order (EO) S-13-2008 that called on state agencies to develop California's strategy to identify and prepare for expected climate impacts. (California Natural Resources Agency, 2009)

Based on the estimated scenarios presented in the Climate Scenario and California Climate Adaption Strategy reports, Table 4.6-2, *Potential GCC Impact in California, 2070-2099*, presents potential impacts of global warming within California. The potential effects of climate change in California are summarized in more detail below and include, but are not limited to, the following:

- Human Health Effects. Climate change can affect the health of Californians by increasing the frequency, duration, and intensity of conditions conducive to air pollution formation, oppressive heat, and wildfires. The primary concern is not the change in average climate, but rather the projected increase in extreme conditions that are responsible for the most serious health consequences. In addition, climate change has the potential to influence asthma symptoms and the incidence of infectious disease. (Cal. Climate Change Center, 2006, p. 26)

- Water Resource/Supply Effects. Although most climate model simulations predict relatively moderate changes in precipitation over the 21st century, rising temperatures are expected to lead to diminishing snow accumulation in mountainous watersheds, including the Sierra Nevada. Warmer conditions during the last few decades across the western United States have already produced a shift toward more precipitation falling as rain instead of snow, and snowpacks over the region have been melting earlier in the spring. Delays in snow accumulation and earlier snowmelt can have cascading effects on water supplies, natural ecosystems, and winter recreation. (Cal. Climate Change Center, 2006, p. 14)

Table 4.6-2 Potential GCC Impact in California, 2070-2099



Source: (Urban Crossroads, 2017c, Exhibit 2-A)

- Agriculture Effects. Agriculture, along with forestry, is the sector of the California economy that is most likely to be affected by a change in climate. California agriculture is a $68 billion industry. California is the largest agricultural producer in the nation and accounts for 13% of all U.S. agricultural sales, including half of the nation's total fruits and vegetables. Regional analyses of climate trends over agricultural regions of California suggest that climate change is already affecting the agriculture industry. Over the period 1951 to 2000, the growing season has lengthened by about a day per decade, and warming temperatures resulted in an increase of 30 to 70 growing degree days per decade, with much of the increase occurring in the spring. Climate change affects agriculture directly through increasing temperatures and rising CO2 concentrations, and indirectly through changes in water availability and pests. (Cal. Climate Change Center, 2006, p. 19)

- Forest and Landscape Effects. Climate changes and increased CO2 concentrations are expected to alter the extent and character of forests and other ecosystems. The distribution of

species is expected to shift; the risk of climate-related disturbance such as wildfires, disease, and drought is expected to rise; and forest productivity is projected to increase or decrease – depending on species and region. In California, these ecological changes could have measurable implications for both market (e.g., timber industry, fire suppression and damages costs, public health) and nonmarket (e.g., ecosystem services) values. (Cal. Climate Change Center, 2006, p. 22)

- Sea Level Effects. Coastal observations and global model projections indicate that California's open coast and estuaries will experience rising sea levels during the next century. Sea level rise already has affected much of the coast in southern California, Central California, and the San Francisco Bay and estuary. These historical trends, quantified from a small set of California tide gages, have approached 0.08 inches per year (in/yr), which are rates very similar to those estimated for global mean sea level. So far, there is little evidence that the rate of rise has accelerated, and indeed the rate of rise at California tide gages has actually flattened since about 1980. However, projections indicate that substantial sea level rise, even faster than the historical rates, could occur during the next century. Sea level rise projections range from 5.1–24.4 inches (in.) higher than the 2000 sea level for simulations under the lower emissions scenario, from 7.1–29.9 in. for the medium-high emission scenario, and from 8.5–35.2 in. for the higher emissions scenario. (Cal. Climate Change Center, 2006, p. 10)

E. Regulatory Setting

Below is a summary of the regulatory programs, policies, laws, and regulations that are applicable to GHG emissions and GCC in California. For more information, refer to Section 2.7 of *Technical Appendix F1* and the reference sources cited therein.

1. International Regulation and the Kyoto Protocol

In 1988, the United Nations established the Intergovernmental Panel on Climate Change to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail GCC. In 1992, the United States joined other countries around the world in signing the United Nations' Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling GHG emissions. The Kyoto Protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. If the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced an estimated 5 percent below 1990 levels by 2012. Notably, while the United States is a signatory to the Kyoto Protocol, Congress has not ratified the Protocol and the United States is not bound by the Protocol's commitments. (Urban Crossroads, 2017c, pp. 18-19)

2. United Nations Paris Climate Change Conference

On December 12, 2015, 195 nations – including the United States and China – agreed upon a strategy for combatting GCC. The meeting, known as the 21st Annual Conference of Parties (COP21), established a framework for reducing GHG emissions, to go in effect in 2020. COP 21 participating nations agreed upon a universal, long-term goal of keeping the global temperature to less than 3.6°F

above pre-industrial levels. In addition to that, nations agreed to minimize their GHG emissions as soon as possible, with the recognition that developing countries may take longer to reach this goal than developed countries. Thereafter, nations are to undergo rapid reductions in accordance to best available technological advances. Nations are to submit national climate action plans that detail future objectives to address climate change. (Urban Crossroads, 2017c, pp. 19-20)

With the election of President Trump, the United States' commitment to the Paris Agreement is uncertain. The Trump administration has expressed its concerns about the Paris Agreement's purported adverse effects on national economic interests, and has announced that the United States intends to exit the Agreement.

3. Federal Regulations and the Clean Air Act

In 2009, the U.S. Environmental Protection Agency (EPA) issued an Endangerment Finding under the federal Clean Air Act (CAA), opening the door to federal regulation of GHGs. The Endangerment Finding notes that GHGs threaten public health and welfare and are subject to regulation under the federal CAA. Previously the EPA had not regulated GHGs under the CAA because it asserted that the Act did not authorize it to issue mandatory regulations to address GCC and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. In *Massachusetts v. Environmental Protection Agency et al.* (127 S. Ct. 1438 [2007]); however, the U.S. Supreme Court held that GHGs are pollutants under the CAA and directed the EPA to decide whether the gases endangered public health or welfare. To date, the EPA has not promulgated regulations on GHG emissions, but it has begun to develop them. (Urban Crossroads, 2017c, p. 20)

4. California Assembly Bill No. 1493 (AB 1493)

AB 1493 directed CARB to develop and adopt the nation's first GHG emission standards for automobiles. To meet the requirements of AB 1493, CARB amended to the California Code of Regulations (CCR) adding GHG emission standards to California's existing motor vehicle emission standards in 2004. Amendments to CCR Title 13 §§ 1900 and 1961 and adoption of § 1961.1 require automobile manufacturers to meet fleet average GHG emission limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes beginning with the 2009 model year. Emission limits are further reduced each model year through 2016. (Urban Crossroads, 2017c, p. 22)

5. Executive Order S-3-05

Executive Order S-3-05 was signed by former Governor Arnold Schwarzenegger in June 2005, and documents the Governor's goals for reducing statewide GHG emissions: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels. (Urban Crossroads, 2017c, p. 23)

6. California Assembly Bill 32 (AB 32)

In September 2006, former Governor Schwarzenegger signed the California Global Warming Solutions Act of 2006 (AB 32). AB 32 requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. (Urban Crossroads, 2017c, p. 24)

In November 2007, CARB completed its estimates of 1990 GHG levels that would be used as the target for GHG emissions. Net 1990 emissions levels were estimated at 427 MMT, thus 427 MMT CO_2e was established as the emissions limit for 2020. For comparison, CARB's estimate for "business as usual" conditions for 2020 (without the reductions to be implemented by CARB regulations) were projected to be 596 MMT CO_2e. On December 11, 2008, CARB adopted a *Scoping Plan* that outlines the CARB's plan to meet AB 32's GHG emissions reduction goal for 2020. Table 4.6-3, *CARB Scoping Plan Reduction Measures*, summarizes the GHG reduction measures and their associated, estimated emissions reductions. (Urban Crossroads, 2017c, p. 24)

In May 2014, CARB adopted the First Update to the original *Scoping Plan* which was necessary to establish long-term GHG emissions reduction policies. The update includes key recommendations for six key economic sectors (energy, transportation, agriculture, water, waste management, and natural and working lands) as well as short-lived climate pollutants, green buildings, and the Cap-and-Trade Program. The recommendations included within the First Update to the *Scoping Plan* largely affects statewide regulatory measures. (Urban Crossroads, 2017c, p. 26)

In January 2017, CARB released the draft Second Update to the *Scoping Plan*, which identifies the State's post-2020 reduction strategy. The Second Update would reflect the 2030 target of a 40 percent reduction below 1990 levels, set by Senate Bill (SB) 32. Key GHG emissions reductions programs that the draft Second Update proposes to build upon include the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and much cleaner cars, trucks and freight movement, utilizing cleaner, renewable energy, and strategies to reduce methane emissions from agricultural and other wastes. It should be noted the proposed Second Update is undergoing a review period and was not adopted at the time the NOP for this EIR was published. (Urban Crossroads, 2017c, p. 26)

7. California Senate Bill No. 1368 (SB 1368)

In 2006, the State Legislature adopted SB 1368, which directs the California Public Utilities Commission (CPUC) to adopt a GHG emission performance standard (EPS) for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than five years from resources that exceed specified emissions criteria. Accordingly, SB 1368 effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. SB 1368 will lead to dramatically lower GHG emissions associated with California energy demand. (Urban Crossroads, 2017c, p. 27)

Table 4.6-3 CARB Scoping Plan Reduction Measures

Recommended Reduction Measures	*Reductions Counted Toward 2020 Target of 169 MMT CO_2e*	*Percentage of Statewide 2020 Target*
Cap and Trade Program and Associated Measures		
California Light-Duty Vehicle GHG Standards	31.7	19%
Energy Efficiency	26.3	16%
Renewable Portfolio Standard (33 percent by 2020)	21.3	13%
Low Carbon Fuel Standard	15	9%
Regional Transportation-Related GHG Targets[1]	5	3%
Vehicle Efficiency Measures	4.5	3%
Goods Movement	3.7	2%
Million Solar Roofs	2.1	1%
Medium/Heavy Duty Vehicles	1.4	1%
High Speed Rail	1.0	1%
Industrial Measures	0.3	0%
Additional Reduction Necessary to Achieve Cap	34.4	20%
Total Cap and Trade Program Reductions	146.7	87%
Uncapped Sources/Sectors Measures		
High Global Warming Potential Gas Measures	20.2	12%
Sustainable Forests	5	3%
Industrial Measures (for sources not covered under cap and trade program)	1.1	1%
Recycling and Waste (landfill methane capture)	1	1%
Total Uncapped Sources/Sectors Reductions	27.3	16%
Total Reductions Counted toward 2020 Target	174	100%
Other Recommended Measures – Not Counted toward 2020 Target		
State Government Operations	1.0 to 2.0	1%
Local Government Operations	To Be Determined[2]	NA
Green Buildings	26	15%
Recycling and Waste	9	5%
Water Sector Measures	4.8	3%
Methane Capture At large Dairies	1	1%
Total Other Recommended Measures – Not Counted toward 2020 Target	42.8	NA

[1]Reductions represent an estimate of what may be achieved from local land use changes. It is not the SB 375 regional target.
[2]According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 million metric tons of CO2e (or approximately 1.2 percent of the GHG reduction target). However, these reductions were not included in the Scoping Plan reductions to achieve the 2020 Target

Source: (Urban Crossroads, 2017c, Table 2-3)

8. Executive Order S-01-07

Executive Order S-01-07 was signed by former Governor Schwarzenegger in January 2007 and is effectively known as the Low Carbon Fuel Standard (LCFS). The Executive Order seeks to reduce the carbon intensity of California's passenger vehicle fuels by at least 10 percent by 2020. The LCFS requires fuel providers in California to ensure that the mix of fuel they sell into the California market meet, on average, a declining standard for GHG emissions measured in CO_2e grams per unit of fuel energy sold. (Urban Crossroads, 2017c, p. 28)

9. Executive Order S-14-08

Executive Order S-14-08 was signed by former Governor Schwarzenegger on November 2008 and is effectively known as the Renewable Portfolio Standard (RPS). According to S-14-08, the RPS will require that all retail sellers of electricity shall serve 33 percent of their load with renewable energy by 2020. State government agencies are directed to take all appropriate actions to implement this target in all regulatory proceedings, including siting, permitting, and procurement for renewable energy power plants and transmission lines. (Urban Crossroads, 2017c, p. 28)

10. Senate Bill 375 (SB 375)

SB 375 requires metropolitan planning organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPO's regional transportation plan. CARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight (8) years but can be updated every four (4) years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. (Urban Crossroads, 2017c, p. 29) The Southern California Association of Governments (SCAG) *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)* is applicable to the Project area.

11. CARB's Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model year 2017 through 2025. The program combines the control of smog, soot and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, the new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions. The program also requires car manufacturers to offer for sale an increasing number of zero-emission vehicles (ZEVs) each year, including battery electric, fuel cell, and plug-in hybrid electric vehicles. In December 2012, CARB adopted regulations allowing car manufacturers to comply with California's GHG emissions requirements for model years 2017-–2025 through compliance with the EPA GHG requirements for those same model years.

12. Executive Order B-30-15, Senate Bill 32 (SB 32), and Assembly Bill 187 (AB 187)

On April 29, 2015, Governor Edmund G. Brown Jr. issued Executive Order B-30-15, which documents the governor's goal to reduce GHG emissions in California to 40 percent below 1990 levels by 2030. The 2030 target serves as a benchmark goal on the way to achieving the GHG reductions goal offered by former Governor Schwarzenegger via Executive Order S-3-05 (i.e., 80 percent below 1990 GHG emissions levels by 2050). (Urban Crossroads, 2017c, p. 28)

On September 8, 2016, Governor Brown signed SB 32, which requires CARB to ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the 1990 statewide greenhouse gas level no later than December 31, 2030. Per SB 32, CARB is to achieve this 2030 GHG reduction target by "adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions[.]" See California Health & Safety Code Section 38566. The SB 32 GHG reduction mandate is the same as the GHG reduction included in Executive Order B-30-15 of 40 percent below 1990 levels by 2030. CARB is the process of preparing the 2030 Target Scoping Plan Update, which is intended to build upon and leverage the framework for achieving California's GHG reduction mandate established in the initial Scoping Plan and its first update, and to define the state's climate change priorities for the next 14 years and beyond.

AB 197 is a companion to, and was enacted on the same day as, SB 32 (i.e., September 8, 2016). AB 197 adds two non-voting members to the CARB board, establishes certain qualifications for CARB board membership, and creates a six-member Joint Legislative Committee on Climate Change Policies to determine facts and make recommendations to the Legislature regarding California climate change policy. Under AB 197, the CARB Chair is required to appear before this committee on an annual basis and present annual information regarding GHG emissions, toxic air contaminants, and criteria pollutants generated by all economic sectors covered by the Scoping Plan. AB 197 further authorizes the committee to establish an expert panel to independently analyze the state's climate change policies. In addition, AB 197 requires CARB to make available on its website, and updated annually, all GHG emissions, criteria pollutants, and toxic air contaminant information broken down to a local level for stationary sources and sub-county level for mobile sources. AB 197 also obligates CARB, when adopting rules and regulations that achieve emission reductions beyond statewide GHG emission limits to consider "social costs" and to prioritize (a) emissions reductions from large stationary sources of GHG emissions, and (b) direct emission reductions from mobile sources. Finally, AB 197 requires each Scoping Plan update to identify for each of its emission reduction measures (i) the range of air pollution reductions and GHG emissions reductions projected to result from each measure, and (ii) the cost-effectiveness, including avoided social costs, of each measure.

13. California Title 24

Title 24 of the California Code of Regulations, known as the California Building Standards Code or just "Title 24," contains the regulations that govern the construction of buildings in California.

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods. The latest revisions (2016 Building Energy Efficiency Standards) became effective on January 1, 2017. The 2016 Building Energy Efficiency Standards are 28 percent more efficient than the previous Building Energy Efficiency Standards for residential construction and 5 percent more efficient than the previous Standards for non-residential construction. (Urban Crossroads, 2017c, p. 21)

Part 11 of the Title 24 is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality." The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC). Unless otherwise noted in the regulation, all newly constructed buildings in California are subject of the requirements of the CALGreen Code. (Urban Crossroads, 2017c, pp. 21-22)

4.6.2 METHODOLOGY FOR ESTIMATING GREENHOUSE GAS EMISSIONS

The California Emissions Estimator Model (CalEEMod), developed by CAPCOA in conjunction with the SCAQMD, was used to quantify GHG emissions from Project-related construction and operational activities. The 2016 version of the CalEEMod, released on October 14, 2016, was used in the Project analysis. (Urban Crossroads, 2017c, p. 38) Inputs and outputs from the model runs for both Project-related construction and operational activities are provided in Appendix 3.1 of *Technical Appendix F1*.

A life-cycle analysis (LCA), which assesses economy-wide GHG emissions from construction (i.e., the processes in manufacturing and transporting all raw materials used in the project development and infrastructure) and operation, was not conducted for the Project due to the lack of scientific consensus on LCA methodology. A LCA depends on emission factors or econometric factors that are not well established for all processes as of the date this EIR was written (2017). Additionally, SCAQMD recommends analyzing a project's direct and indirect GHG emissions generated within California in-lieu of a LCA because the life-cycle effects from a project that could occur outside of California might not be very well understood or documented and would be infeasible to mitigate. (Urban Crossroads, 2017c, p. 38)

A. Methodology for Estimating Project-Related Construction Emissions

The Project's construction-related GHG emissions were calculated using the same methodology, construction schedule information, and equipment fleet information that were used to calculate construction-related criteria air pollutant emissions, and as previously described in detail in EIR Subsection 4.2, *Air Quality* (Urban Crossroads, 2017c, p. 38). Refer to EIR Subsection 4.2 and *Technical Appendix F1* for a detailed description of the methodology used to calculate the Project's construction-related GHG emissions.

In accordance with the SCAQMD recommendations, the Project's construction-related GHG emissions were quantified, amortized over a 30-year period, and then added to the sum of the Project's annual, operational GHG emissions (Urban Crossroads, 2017c, pp. 38-39)

B. Methodology for Estimating Project-Related Operational Emissions

The Project's operational GHG emissions were calculated using the same methodology that was used to calculate operational criteria air pollutant emissions, and as previously described in detail in EIR Subsection 4.2, *Air Quality* (Urban Crossroads, 2017c, pp. 39-43). Refer to EIR Subsection 4.2 and *Technical Appendix F1* for a detailed description of the methodology used to calculate the Project's operational GHG emissions.

4.6.3 BASIS FOR DETERMINING SIGNIFICANCE

In order to assess the significance of a proposed Project's environmental impacts, it is necessary to identify quantitative or qualitative thresholds that, if exceeded, would constitute a finding of significance. As discussed above in Subsection 4.6.1, while estimated Project-related GHG emissions can be calculated, because of the small quantity in proportion to worldwide sources of GHG, the direct impacts of Project-related emissions on GCC and global warming cannot be determined on the basis of available science. There is no evidence at this time that would indicate that the emissions from a project the size of the proposed Project would directly or indirectly affect the global climate.

AB 32 states, in part, that "*[g]lobal warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California.*" Because global warming is the result of GHG emissions, and GHGs are emitted by innumerable sources worldwide, the proposed Project has no potential to result in a direct impact to GCC; rather, Project-related contributions to GCC, if any, only have potential significance on a cumulative basis. Therefore, the analysis below focuses on the Project's potential to contribute to GCC in a cumulatively considerable manner.

The CEQA Guidelines indicate that a project would result in a significant impact on climate change if a project were to:

> *a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or*

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

The above-listed thresholds are derived directly from Section VII of Appendix G to the CEQA Guidelines and address potential project effects on GCC. Neither the CEQA Statute nor the CEQA Guidelines prescribe specific methodologies and significance criteria for determining the significance of GHG emissions impacts. The CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate thresholds consistent with the manner in which other impact categories are handled in CEQA. CEQA case law has upheld local agencies' discretion to determine the significance of GHG emissions impacts.

The City of San Bernardino has not adopted a numerical threshold for determining the significance of GHG emissions; however, the City has discretion to select an appropriate significance criterion used by other agencies, based on substantial evidence. The SCAQMD adopted a numerical GHG emissions threshold for industrial projects for which SCAQMD is the lead agency. The threshold adopted by SCAQMD, 10,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) per year, is a widely-accepted threshold used by numerous lead agencies in the South Coast Air Basin (SCAB) and was established based on the recommendations of the CAPCOA in a report titled "CEQA and Climate Change" (dated January 2008), which serves as a resource for public agencies as they establish agency procedures for reviewing GHG emissions from projects under CEQA. The CAPCOA report provides three recommendations for evaluating a development project's GHG emissions. When establishing their significance threshold, SCAQMD selected the CAPCOA non-zero approach which establishes a numerical threshold based on capture of approximately 90 percent of emissions from future development (Approach 2, Threshold 2.5). A 90 percent emission capture rate means that 90 percent of total emissions from all new or modified projects would be subject to evaluation under CEQA. Based on SCAQMD's research of 1,297 major, industrial source point (i.e., stationary) emission sources in the SCAB, SCAQMD found that source point industrial facilities that generate at least 10,000 $MTCO_2e$ per year produce approximately 90 percent of the carbon dioxide equivalent emissions in the SCAB per year. As such, SCAQMD established their significance criterion at 10,000 $MTCO_2e$ as that threshold would capture 90 percent of total emissions from future industrial development in accordance with CAPCOA recommendations. (CAPCOA, 2008, pp. 46-47; SCAQMD, 2008, pp. 3-5)

Based on the foregoing, the City of San Bernardino selects SCAQMD's industrial threshold of 10,000 $MTCO_2e$ as the threshold of significance for the Project's GHG emissions. If the Project would emit less than 10,000 $MTCO_2e$ of GHGs per year, the Project would not be considered a substantial GHG emitter. On the other hand, if the Project's GHG emissions would exceed 10,000 $MTCO_2e$ per year, the Project would be considered a substantial source of GHG emissions. The SCAQMD's industrial threshold was selected by the City because the proposed Project's operating characteristics, which include a large building with loading bays and fenced truck courts that are expected to house businesses that serve mid-stream functions in the goods movement chain between manufacturers and consumers, are characteristic of an industrial land use more so than any other land use type, including commercial and/or residential. Furthermore, evaluating the Project's GHG emissions against SCAQMD's industrial threshold will provide a conservative analysis, as SCAQMD only intended their threshold

be used to evaluate stationary source GHG emissions, while the analysis presented in this Subsection and *Technical Appendix F1* applies the threshold to all of the GHG emissions related to the Project (stationary source, mobile source, area source, or other). (Urban Crossroads, 2017c, pp. 29-30)

4.6.4 IMPACT ANALYSIS

Threshold a) Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The Project's calculated annual GHG emissions are summarized on Table 4.6-4, *Project Annual GHG Emissions*. As shown in Table 4.6-4, the Project would generate approximately 18,515.33 $MTCO_2e$ per year, of which approximately 85 percent (15,785.9 $MTCO_2e$) would be generated by mobile sources (i.e., passenger cars and trucks) and the other 15 percent would be generated by building operation, including but not limited to energy and water usage and waste disposal. The Project would generate GHG emissions that exceed the SCAQMD significance criterion of 10,000 $MTCO_2e$ per year; therefore, the Project's GHG emissions could have a cumulatively considerable impact on the environment.

Table 4.6-4 Project Annual GHG Emissions

Emission Source	Emissions (metric tons per year)			
	CO_2	CH_4	N_2O	Total CO_2E
Annual construction-related emissions amortized over 30 years	66.23	0.01	--	66.38
Area	0.08	2.30E-04	0.00	0.09
Energy	866.22	0.05	0.01	870.69
Mobile Sources (Trucks)	13,796.06	0.51	0.00	13,808.78
Mobile Sources (Passenger Cars)	1,989.84	0.05	0.00	1,991.05
On-Site	210.67	0.07	0.00	212.31
Waste	203.19	12.01	0.00	503.40
Water Usage	801.91	8.07	0.20	1,062.63
Total CO_2E (All Sources)	**18,515.33**			

See Appendix 3.1 of *Technical Appendix F1* for model outputs.
Source: (Urban Crossroads, 2017c, pp. Table 3-1)

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

The City of San Bernardino does not have a Climate Action Plan, and there are no other local/regional plans, policies, or regulations that address GHG reduction in the City of San Bernardino. Thus, the analysis under this threshold evaluates the Project's potential to conflict with AB 32, SB 32, and other applicable state-wide plans, policies, and regulations related to GHG emissions.

As previously discussed in Subsection 4.6.1E, CARB identified measures in its *Scoping Plan* that would reduce GHG emissions in accordance with the GHG emissions mandate of AB 32. Thus, development projects that are consistent with the CARB's *Scoping Plan* would not conflict with AB 32's mandate to reduce state-wide GHG emissions. Table 4.6-5, *CARB Scoping Plan Consistency*, presents the 39 recommended actions identified in the CARB *Scoping Plan*. Of the 39 measures identified, those that would be applicable to the Project and its implementing actions consist primarily of actions related to transportation, electricity and natural gas use, water use, green building design, and industrial uses. A summary of the Project's consistency with the CARB *Scoping Plan* recommended actions is presented on the following pages and also summarized in Table 4.6-5. (Urban Crossroads, 2017c, pp. 31-35)

- Transportation: Actions T-1, T-2, T-3, and T-4 are related to legislative and public awareness activities required of the State of California and regional planning activities required of metropolitan planning organizations, which are not within the purview of the Project. Actions T-5 and T-6 address operations at ports; because the Project is not located within a port, these actions are not applicable to the Project. Action T-7 requires existing trucks/trailers to be retrofitted with the best available technology and/or CARB-approved technology. The Project would not conflict with this action; however, fleet operators would have the responsibility for demonstrating consistency with this action. Action T-8 requires the creation of a regulatory and/or incentive program to encourage the use of hybrid vehicles and is outside the purview of the Project. Action T-9 addresses a high-speed rail system and is not applicable to the Project. Accordingly, the Project would not conflict with or preclude implementation of the CARB *Scoping Plan* transportation actions.

- Electricity and Natural Gas & Green Buildings: Actions E-1, CR-1, and GB-1 target regulatory and building practices to increase energy efficiency. The Project would comply with or surpass the incumbent Title 24 Energy Efficiency standards and would not conflict with these *Scoping Plan* actions. Actions E-2 and E-3 concern electric utilities and are not applicable to development proposals like the Project. Action E-4 is related to public awareness and incentive programs to promote the use of photovoltaic solar electricity systems. The Project's building is designed to support photovoltaic cells, should they be installed in the future, and the Project would not conflict with Action E-4.

Table 4.6-5 CARB Scoping Plan Consistency

ID #	Sector	Strategy Name	Applicable to Project?	Will Project Conflict with Implementation?
T-1	Transportation	Pavley I and II – Light-Duty Vehicle GHG Standards	NO	NO
T-2	Transportation	Low Carbon Fuel Standard (Discrete Early Action)	NO	NO
T-3	Transportation	Regional Transportation-Related GHG Targets	NO	NO
T-4	Transportation	Vehicle Efficiency Measures	NO	NO
T-5	Transportation	Ship Electrification at Ports (Discrete Early Action)	NO	NO
T-6	Transportation	Goods-movement Efficiency Measures	NO	NO
T-7	Transportation	Heavy Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action)	NO	NO
T-8	Transportation	Medium and Heavy-Duty Vehicle Hybridization	NO	NO
T-9	Transportation	High Speed Rail	NO	NO
E-1	Electricity and Natural Gas	Increased Utility Energy efficiency programs More stringent Building and Appliance Standards	YES	NO
E-2	Electricity and Natural Gas	Increase Combined Heat and Power Use by 30,000GWh	NO	NO
E-3	Electricity and Natural Gas	Renewable Portfolio Standard	NO	NO
E-4	Electricity and Natural Gas	Million Solar Roofs	YES	NO
CR-1	Electricity and Natural Gas	Energy Efficiency	YES	NO
CR-2	Electricity and Natural Gas	Solar Water Heating	NO	NO
GB-1	Green Buildings	Green Buildings	YES	NO
W-1	Water	Water Use Efficiency	YES	NO
W-2	Water	Water Recycling	NO	NO
W-3	Water	Water System Energy Efficiency	YES	NO
W-4	Water	Reuse Urban Runoff	NO	NO
W-5	Water	Increase Renewable Energy Production	NO	NO
W-6	Water	Public Goods Charge (Water)	NO	NO
I-1	Industry	Energy Efficiency and Co-benefits Audits for Large Industrial Sources	YES	NO
I-2	Industry	Oil and Gas Extraction GHG Emission Reduction	NO	NO
I-3	Industry	GHG Leak Reduction from Oil and Gas Transmission	NO	NO
I-4	Industry	Refinery Flare Recovery Process Improvements	NO	NO
I-5	Industry	Removal of Methane Exemption from Existing Refinery Regulations	NO	NO
RW-1	Recycling and Waste Management	Landfill Methane Control (Discrete Early Action)	NO	NO
RW-2	Recycling and Waste Management	Additional Reductions in Landfill Methane – Capture Improvements	NO	NO
RW-3	Recycling and Waste Management	High Recycling/Zero Waste	NO	NO
F-1	Forestry	Sustainable Forest Target	NO	NO
H-1	High Global Warming Potential Gases	Motor Vehicle Air Conditioning Systems (Discrete Early Action)	NO	NO
H-2	High Global Warming Potential Gases	SF_6 Limits in Non-Utility and Non-Semiconductor Applications (Discrete Early Action)	NO	NO
H-3	High Global Warming Potential Gases	Reduction in Perfluorocarbons in Semiconductor Manufacturing (Discrete Early Action)	NO	NO
H-4	High Global Warming Potential Gases	Limit High GWP Use in Consumer Products (Discrete Early Action, Adopted June 2008)	NO	NO
H-5	High Global Warming Potential Gases	High GWP Reductions from Mobile Sources	NO	NO
H-6	High Global Warming Potential Gases	High GWP Reductions from Stationary Sources	NO	NO
H-7	High Global Warming Potential Gases	Mitigation Fee on High GWP Gases	NO	NO
A-1	Agriculture	Methane Capture at Large Dairies	NO	NO

Source: (Urban Crossroads, 2017c, Table 2-5)

Action CR-2 is related to public awareness and incentive programs required of the State of California to promote solar water heaters; this action is not applicable to the Project. Based on the foregoing, the Project would not conflict with or preclude implementation of the CARB *Scoping Plan* electricity and natural gas or green building actions.

- Water Use: Only Actions W-1 and W-3 are applicable to development proposals like the Project; however, because the Project would not exceed the audit threshold for these actions, the Project is considered consistent with Actions W-1 and W-3 and no specific action or activity is required of the Project. Based on the foregoing, the Project would not conflict with or preclude implementation of the CARB *Scoping Plan* water use actions.

- Industrial Use: All but one of the CARB *Scoping Plan* industrial actions are related to oil and gas extraction, refining, and/or transmission and are not applicable to the Project. The Project would not exceed the audit threshold for the one applicable action, Action I-1, and; therefore, is not considered a large emitter of GHGs. Accordingly, the Project would not conflict with Action I-1. Based on the foregoing, the Project would not conflict with or preclude implementation of the CARB *Scoping Plan* industrial use actions.

- Agriculture: The Project does not include agricultural uses and the Project site does not contain agricultural uses under existing conditions. Therefore, Agriculture Action A-1 is not applicable to the Project and the Project would not conflict with or preclude implementation of the CARB *Scoping Plan* agriculture actions.

The Project also would comply with a number of regulations, policies, plans, and policy goals that would further reduce GHG emissions, including the following regulations that are particularly applicable to the Project and that would assist in the reduction of GHG emissions:

- Senate Bill 375 (SB 375). In accordance with the mandate of SB375, SCAG prepared their *2016-2040 RTP/SCS* with the goal of reducing regional per capita vehicle miles traveled and associated mobile source GHG emissions. The Project would incorporate measures related to building design, landscaping, and energy systems to promote energy efficiency and minimize the generation of GHGs. The Project would not result in an inconsistency with the *2016-2040 RTP/SCS* goals related to GHG emissions. (Urban Crossroads, 2017c, pp. 30-31)

- Pavley Fuel Efficiency Standards (AB 1493). Establishes fuel efficiency ratings for model year 2009-2016 passenger cars and light trucks. AB 1493 is applicable to the Project because model year 2009-2016 passenger cars and light duty truck vehicles traveling to-and-from the Project site are required to comply. The CARB anticipates that implementation of the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 30 percent in 2016 compared to emissions that occurred prior to AB 1493's enactment.

- Title 24 California Code of Regulations (Building Standards Code). Establishes energy efficiency requirements for new (and altered) construction. The Project is required to comply with these regulations during the design and construction phase.

- Title 17 California Code of Regulations (Low Carbon Fuel Standard). Requires carbon content of fuel sold in California to be 10 percent less by 2020. Because the Low Carbon Fuel Standard applies to any transportation fuel that is sold, supplied, or offered for sale in California, and to any person who, as a regulated party, is responsible for a transportation fuel in a calendar year, all vehicles accessing the Project site will be required to comply with the Standard.

- California Water Conservation in Landscaping Act of 2006 (AB 1881). Required local agencies to adopt the Department of Water Resources updated Water Efficient Landscape Ordinance or equivalent to ensure efficient landscapes in new development and reduced water waste in existing landscapes by January 1, 2010. The Project is required to comply with the City of San Bernardino's adopted water efficient landscape requirements and would therefore be consistent with the requirements of AB 1881.

Based on the foregoing analysis, the Project would not conflict with SB 32's mandate to reduce emissions to 40 percent below 1990 levels by 2030. According to research conducted by the Lawrence Berkeley National Laboratory and supported by the CARB, California, under its existing regulatory policies and the CARB *Scoping Plan*, is on track to meet the GHG emissions reductions target for 2030. (Urban Crossroads, 2017c, p. 36)

There are no other plans, policies, or regulations that have been adopted for the purpose of reducing the emissions of GHGs that are applicable to the proposed Project. Although Executive Order S-3-05 documented former Governor Arnold Schwarzenegger's goal of reducing California's GHG emissions to 80 percent below 1990 levels by the year 2050, Executive Order S-3-05 does not require local agencies to take any action to meet its reduction targets. No statutes or regulations have been adopted to translate the 2050 GHG reduction goals into comparable, scientifically-based emission reduction targets. In other words, rendering a significance determination relative to Executive Order S-3-05 would be speculative because they establish goals 33 years into the future; no agency with GHG subject matter expertise has adopted regulations to achieve these statewide goals at the project-level; and, available analytical models cannot presently quantify all project-related emissions in those future years. Further, due to the technological shifts anticipated and the unknown parameters of the regulatory framework in 2050, available GHG models and the corresponding technical analyses are subject to limitations for purposes of quantitatively estimating the Project's emissions in 2050. Additionally, it should be noted that approximately 85% of the Project's GHG emissions are calculated to be from mobile sources (i.e., automobiles traveling to and from the Project site), and it is not possible to achieve increased vehicle efficiencies at a project-level beyond what is already calculated, because engine and fuel efficiencies that influence vehicle tailpipe emissions are within the control of State and federal agencies, and are not within the control of local agencies like the City of San Bernardino or the Project

Applicant. Accordingly, any conclusion regarding the Project's potential to conflict with GHG reduction targets for the year 2050 would be speculative.

As described on the preceding pages, the Project would not conflict with the State's ability to achieve the State-wide GHG reduction targets defined in AB 32 and SB 32, and would be consistent with applicable policies and plans related to GHG emissions reduction. Therefore, the Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and would result in a less-than-significant impact.

4.6.5 CUMULATIVE IMPACT ANALYSIS

GCC occurs as the result of global emissions of GHGs. Climate change is a global phenomenon and the significance of GHG emissions is inherently cumulative in nature. An individual project such as the proposed Project does not have the potential to result in direct and significant GCC-related effects in the absence of cumulative sources of GHGs. The CEQA Guidelines also emphasize that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis (See CEQA Guidelines § 15130[f]). To date, the vast majority of other states and nations have not followed California's lead in mandating GHG emission reductions across a broad spectrum of economic sectors and have not enacted regulations similar to those adopted in California. Moreover, many regulatory measures incorporated into the analysis presented herein are regional or statewide in nature and do not provide a mechanism that guarantees GHG emission reductions on a cumulative basis. The City of San Bernardino has no jurisdictional control or responsibility for GHG reductions in other parts of California (and certainly not in the context of global action), which all contribute to climate change. In addition, the City does not have jurisdiction to enforce statewide implementation of all of the applicable GHG-reducing regulatory programs with which the Project (and other statewide projects) must comply. Although many other agencies with the necessary jurisdiction are currently taking action to reduce GHG emissions, the City cannot assure that these measures would ultimately be implemented or sufficient to address climate change. In light of these considerations, as well as the global nature of climate change, the Project's incremental contribution to the global GHG emission inventory is conservatively assumed to be cumulatively considerable and this cumulative impact is significant and unavoidable.

4.6.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a): Significant Cumulatively Considerable Impact. The Project is calculated to generate approximately 18,515.33 $MTCO_2e$ annually, which would exceed the SCAQMD screening threshold of 10,000 $MTCO_2e$ for greenhouse gas emissions. As such, the Project would generate greenhouse gas emissions that could have a significant cumulatively considerable impact on the environment.

Threshold b): Less-than-Significant Impact. The Project would be consistent with the CARB Scoping Plan and would not conflict with the greenhouse gas emission reduction mandates of AB 32 or SB 32. In addition, the Project would be consistent with applicable regulations, policies, plans, and policy goals that would further reduce greenhouse gas emissions in California.

4.6.7 MITIGATION

Mitigation Measures (MM) 4.2-2 through 4.2-5 in EIR Subsection 4.2, *Air Quality*, would apply and would reduce the Project's GHG emissions to the maximum practical extent.

In addition, the Project's construction activities are required by law to comply with Title 24 California Code of Regulations (California Building Standards Code) and Title 20 California Code of Regulations (Appliance Energy Efficiency Standards). These regulations establish energy efficiency requirements for new (and altered) buildings and appliances, which reduce greenhouse gas emissions.

4.6.8 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold a): Significant and Unavoidable Cumulatively Considerable Impact. Required compliance with the California Code of Regulations Titles 20 and 24, and the application of MM 4.2-2 through 4.2-5 would reduce Project-related greenhouse gas emissions; however, these measures would not substantially reduce Project-related mobile source emissions, which comprise approximately 85 percent of the Project's total greenhouse gas emissions. Mobile source emissions are regulated by State and federal laws pertaining to vehicle engines and fuel, and are outside of the control of the Project Applicant, future Project occupants, and the City of San Bernardino. CEQA Guidelines § 15091 provides that mitigation measures must be within the responsibility and jurisdiction of the Lead Agency in order to be implemented. No other mitigation measures are available that are feasible for the Project Applicant to implement and for the City of San Bernardino to enforce that have a proportional nexus to the Project's level of impact.

4.7 HAZARDS AND HAZARDOUS MATERIALS

The analysis in this Subsection is based on the following technical report:

- *Phase I Environmental Site Assessment* prepared by Terracon Consultants, Inc. and dated December 29, 2016 (Terracon Consultants, Inc., 2016)

All references used in this Subsection are included in Section 7.0, *References*.

A. Definition of Toxic Substances and Hazardous Waste

For the purposes of this EIR, the term "toxic substance" is defined as a substance which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may present an unreasonable risk of injury to human health or the environment. Toxic substances include chemical, biological, flammable, explosive, and radioactive substances.

"Hazardous material" is defined as a substance which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may: 1) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, disposed of, or otherwise mismanaged; or 2) cause or contribute to an increase in mortality or an increase in irreversible or incapacitating illness. Hazardous waste is defined in the California Code of Regulations, Title 22, §66261.3. The defining characteristics of hazardous waste are: ignitability (oxidizers, compressed gases, and extremely flammable liquids and solids), corrosivity (strong acids and bases), reactivity (explodes or generates toxic fumes when exposed to air or water), and toxicity (materials listed by the United States Environmental Protection Agency (USEPA) as capable of inducing systemic damage to humans or animals). Certain wastes are called "Listed Wastes" and are found in the California Code of Regulations, Title 22, §§66261.30 through 66261.35. Wastes appear on the lists because of their known hazardous natures or because the processes that generate them are known to produce hazardous wastes (which are often complex mixtures).

4.7.2 EXISTING CONDITIONS

A. Physical Setting

The Project site is approximately 1,000 feet above mean sea level (AMSL). The site is relatively flat with a general gradient towards the west-southwest. The closest surface water is the Santa Ana River which is adjacent to the southern boundary of the Project site. The geology/hydrogeology formation consists of Pleistocene-Holocene sedimentary rocks comprised of unconsolidated and semi-consolidated alluvium, lake, playa, and terrace deposits. (Terracon Consultants, Inc., 2016, pp. 4-5) Research of historic high groundwater levels indicates that the minimum historic depth to groundwater at the site is approximately 10 ± feet. No groundwater or free water was encountered during the geotechnical investigation conducted by SoCalGeo. Based on SoCalGeo's subsurface exploration, the static groundwater at the Project site is considered to be present at a depth in excess of 50 ± feet. (SoCalGeo , 2016a,pp. 7 and 17)

The on-site alluvium soils are identified as 60.6 acres of Tujunga gravelly loamy sand (TvC), 0.6 acres of Psamments, Fluvents and Frequently flooded soils (Ps), and 0.5 acres of Grangeville fine sandy loam (Gr). Soils in the Project's off-site roadway improvement area consist of 3.1 acres of Gr, and a negligible amount of TvC (0.7 acres). The TvC soil is determined to be negligible due to having a small offsite impact area. (SoCalGeo , 2016a, pp. 6-7)

B. Historical Use of the Project Site

To develop a history of the previous uses of the site and surrounding area and to help identify recognized environmental conditions (RECs) associated with past uses, Terracon reviewed readily available historical United States Geological Survey (USGS) topographic maps and selected historical aerial photographs (at approximately 10 to 15 year intervals) (Terracon Consultants, Inc., 2016, p. 5).

The property adjoining the site to the north consisted of undeveloped land and a road and residences from at least 1896 through the late 1930s when agricultural use began. By the late 1950s, agricultural use had ceased and additional residences were developed. The north-adjoining driving range was developed in the mid-2000s adjacent to the current golf cart maintenance building. S. Waterman Avenue abutted the site to the east by the late 1930s as did agricultural land. Residences were developed in the late 1940s and were cleared for commercial development by the mid-1960s. The existing commercial buildings east of S. Waterman Avenue were developed by the late 2000s. The Santa Ana River is located south of the Project site. The property adjoining the site to the west consisted of undeveloped land from at least 1896 and was developed with agricultural use by the late 1930s. The existing flood control channel (East Twin Creek) and the San Bernardino Water Reclamation Plant, located west of the Project site, were visible in late 1950s aerial photographs and have remained relatively unchanged through present-day. (Terracon Consultants, Inc., 2016, pp. i-ii)

C. Records Review

Regulatory database information was provided to Terracon by EDR, a contract information services company. The purpose of the records review was to identify RECs associated with the Project site and surrounding area. Facility listings identified on federal and state/tribal databases within the ASTM-required search distances from the approximate site boundaries were searched. Database definition, descriptions, and the database search report are included in *Technical Appendix G1*. In addition to the ASTM-required listings, Terracon reviewed other federal, state, local, and proprietary databases provided in the database form. A list of the additional reviewed databases is contained in the regulatory database report included in EIR *Technical Appendix G1*. (Terracon Consultants, Inc., 2016, p. 8)

The Project site and other identified facilities within 500 feet of the Project site are discussed below.

- San Bernardino Golf Club (Project site): The Project site was listed in the regulatory database report as a Facility and Manifest Data (HAZNET), and San Bernardino County Permitted (San Bernardino County Permit) facility. The South Coast Air Quality Management District (SCAQMD) online Facility Information Database lists a permit for

storage and dispensing gasoline from 1990 through 2014 with the permit listed as active. According to the owner representative, the facility was equipped with underground storage tanks (USTs) in the location of the current above ground storage tank (AST) before 1998. Based on Terracon's review of the report, one 550-gallon diesel UST and one 550-gallon gasoline UST were removed from the site on November 18, 1998. Confirmation samples collected from the bottom of the UST's excavation pit, the side walls of the excavation, and from stockpiled material were analyzed. Based on the findings from the confirmation sampling activities, the San Bernardino County Fire Department granted closure to the facility on November 19, 1998. Based on a review of the closure report and regulatory closure status, the former USTs do not appear to represent an REC to the site at this time. A copy of the closure report and regulatory closure report and regulatory closure letter are included in Appendix C of EIR *Technical Appendix G1*. (Terracon Consultants, Inc., 2016, pp. 10-11)

- Sepulveda Building Materials: Sepulveda Building Materials located approximately 140 feet east, cross-gradient of the Project site, is listed in the regulatory database report as an AST, HAZNET, and San Bernardino County Permit facility. Based on a review of the listing, waste streams generated at the facility were reported as other organic solids in years 2007, 2011, and 2014. Based on Terracon's review of the AST listing, the size, location and material stored in the AST are not reported. Based on the absence of regulatory release listings and the anticipated depth to groundwater in the site vicinity, the Sepulveda Building Materials listings does not appear to represent a REC to the site. (Terracon Consultants, Inc., 2016, p. 11)

- Structural Materials Company: Structural Materials Company located approximately 140 feet east, cross-gradient of the Project site, is listed in the regulatory database report as a San Bernardino County Permit facility. Based on Terracon's review of the listing, expired permits for hazardous materials 1-3 chemicals special, special generator, and special handler are listed for the facility. Based on the absence of regulatory release listings and the anticipated depth to groundwater in the site vicinity, Structural Materials Company does not appear to represent an REC to the site. (Terracon Consultants, Inc., 2016, p. 11)

- Roofers Asphalt Equipment Company: Roofers Asphalt Equipment Co., located approximately 140 feet east, cross-gradient of the Project site, was listed in the regulatory database report as a historical underground storage tank (HIST UST) facility. Based on Terracon's review of the listing, the facility was equipped with one 10,000-gallon diesel UST in 1969 and one 6,000-gallon gasoline UST in 1981. Additional information pertaining to the historical USTs was not provided in the regulatory databases listings. Based on the absence of regulatory release listings and the anticipated depth to groundwater in the site vicinity, Roofers Asphalt Equipment Co. does not appear to represent an REC to the site at this time. (Terracon Consultants, Inc., 2016, pp. 11-12)

- Leonard Ojena. Leonard Ojena, located approximately 140 feet east, cross-gradient of the Project site, in a topographic up-gradient position, was listed in the regulatory database report as a Statewide Environmental Evaluation and Planning System (SWEEPS UST) and Facility Inventory System Underground Storage Tank (CA FIS UST) facility. Based on Terracon's review of the listing, this facility was equipped with three USTs. Based on the absence of regulatory release listings and the anticipated depth to groundwater in the site vicinity, Leonard Ojena does not appear to represent an REC to the site. (Terracon Consultants, Inc., 2016, p. 12)

- Meadowbrook Dairy. The dairy, located approximately 470 feet northeast, cross-gradient of the Project site, is listed in the San Bernardino County Permit database. Based on the distance and depth to groundwater, the dairy does not appear to be a REC, a Controlled Recognized Environmental Condition (CREC) or Historical Recognized Environmental Condition (HREC) to the Project site. (Terracon Consultants, Inc., 2016, p. 10)

Based upon regulatory status, apparent topographic gradient, and/or distance from the site, Terracon concluded that the remaining facilities listed in the database report do not appear to represent RECs to the Project site at this time (Terracon, 2016, p. 12).

D. Local Area Knowledge

Terracon reviewed the California Department of Conservation Division of Oil, Gas, and Geothermal Resource Well Finder website (DOGGR) and concluded that there are no active or plugged oil production wells located at the Project site or adjoining properties. The portion of San Bernardino that the Project site is located is known by Terracon to be an area potentially affected by groundwater contamination originating at the former Norton Air Force Base (NAFB). Therefore, Terracon reviewed regulatory files for the groundwater contamination. Based on the review of the most recent plume maps produced for the facility, it was determined that there is no impact to groundwater beneath the Project site. Therefore, Terracon determined that the former NAFB does not appear to represent a REC to the Project site at this time. The pertinent NAFB most recent groundwater monitoring report is included in Appendix C of *Technical Appendix G1*. (Terracon Consultants, Inc., 2016, p. 13)

E. Site and Adjoining Property Reconnaissance

The Project site is developed with an 18-hole golf course/country club referred to as the San Bernardino Public Golf Club. Terracon conducted site and adjoining property reconnaissance on November 29, 2016. During site reconnaissance Terracon observed the following site improvements: a club house with locker rooms, a restaurant, an office, an electric cart storage building, asphalt-paved parking lots, driveways, and paved cart paths. Operations at the time of site reconnaissance consisted of retailing golf goods and food, golf cart storage, and golf cart washing. (Terracon Consultants, Inc., 2016, p. 14)

1. Site Reconnaissance

Site Operations, Processes, and Equipment:

- Golf Cart Wash-down Area or Carwashes: During the site reconnaissance, Terracon observed a wash-down area for golf carts located north of the golf cart storage building. The wash-down area consists of drains which feed to a sump. The water from the sump is pumped through a filtration system and is discharged onto the driving range. The sediment from the drains is cleaned weekly and disposed of in the solid waste disposal dumpster. The sump is pumped out approximately once a year. Based on the type of vehicles being washed and visual site observations, the golf cart wash-down area and sump do not appear to represent an REC to the Project site. (Terracon Consultants, Inc., 2016, p. 16)

Aboveground Chemical and Waste Storage:

- Aboveground Storage Tanks: During the site reconnaissance, Terracon observed a 1,000-gallon split tank AST which contained 500-gallons of unleaded fuel and 500-gallons of diesel fuel. The tank was located north of the golf cart storage building and south of the on-site maintenance building. The tank was observed to be installed inside a secondary containment and indications of releases were not observed at the time of the reconnaissance. Based on visual site observations, Terracon concluded that the AST does not appear to represent an REC to the Project site at this time. (Terracon Consultants, Inc., 2016, p. 16)

- Grease Traps: During the site reconnaissance, Terracon observed a grease trap west of the club house. The grease trap is reportedly associated with the kitchen in the club house. From the grease trap the wastewater enters the western septic tank. The grease trap is serviced 1-3 times per year. Based on the non-suspect operations associated with the grease trap, Terracon concluded that the trap does not appear to represent an REC to the Project site at this time. (Terracon Consultants, Inc., 2016, p. 17)

- Septic Tanks and/or Leach Fields: During site reconnaissance, the owner's representative reported to Terracon that two septic tanks and two leach fields are located on the Project site. The septic tanks are located west and south of the club house building and are reportedly 750-gallons and 500-gallons respectively. The leach field from the western tank extends north along the west side of the building and the leach field from the southern tank extends west along the south side of the building. The septic system reportedly handles the kitchen and the men's and women's bathrooms associated with the clubhouse. Based on the non-suspect use of the septic systems and leach fields, Terracon concluded that these features do not appear to represent an REC to the Project site at this time. (Terracon Consultants, Inc., 2016, p. 17)

- Interior Floor Drains: During the site reconnaissance, Terracon observed interior floor drains in the restrooms and kitchen of the club house. Hazardous materials were not observed to be stored in the vicinity of the drains. Also, Terracon did not observe staining or other indications of releases in the vicinity of the drains. Based on visual observation,

Terracon concluded that the interior floor drains do not appear to represent an REC to the Project site at this time. (Terracon Consultants, Inc., 2016, p. 17)

Electrical Transformers/PCBs:

- Transformers and/or Capacitators. At the time of site reconnaissance, Terracon observed a pad mounted transformer on the eastern portion of the Project site. Information concerning PCB content of the transformer was not observed at the time of site reconnaissance. In addition, Terracon did not observe staining or other indications of a release. Based on site observations, Terracon concluded that the pad mounted transformer does not appear to represent an REC to the site at this time. (Terracon Consultants, Inc., 2016, p. 17)

Releases or Potential Releases:

- Trash, Debris and/or Other Waste Materials: At the time of site reconnaissance, Terracon observed one solid waste disposal dumpster serviced by Burrtec Waste Industries, Inc. located northeast of the golf cart storage building. Terracon did not observe hazardous materials and staining or indications of releases in or around the dumpster at the time of the reconnaissance. Based on visual site observations, Terracon concluded that the solid waste disposal dumpster does not appear to represent an REC to the site at this time. (Terracon Consultants, Inc., 2016, p. 17)

Other Notable Site Features:

- Surface Water Bodies: At the time of site reconnaissance, Terracon observed three surface water ponds on the central portion of the site. Based on an interview with the owner's representative, the ponds are filled from groundwater pumped on the site and are used to charge the sprinkler and irrigations system for the golf course. Based on visual site observations, and the source of the water, Terracon concluded that the surface water ponds do not appear to represent and REC to the site at this time. (Terracon Consultants, Inc., 2016, p. 18)

- Wells: At the time of site reconnaissance, Terracon observed groundwater production wells on the southeast corner, northeast corner, parking lot, and western portion of the Project site. The wells are sealed at the surface and are used as production wells for drinking water for the City of Riverside. Based on the surface finish of the wells and the use as a source for drinking water, Terracon concluded that this feature does not appear to represent an REC to the site at this time. (Terracon Consultants, Inc., 2016, p. 18)

2. Adjoining Properties

- North. The property adjoining the Project site to the north, from the east to west, consists of a driving range, an asphalt-paved parking lot, the golf cart maintenance building and Dumas Street followed by residences and vacant land (200-24098 Dumas Street). (Terracon Consultants, Inc., 2016, p. 18) Portions of this area are within the Project's off-site roadway improvement area, including two residential structures.

- East. S. Waterman Avenue abuts the Project site to the east followed by the Inland Regional Center (1365 S. Waterman Avenue), asphalt-paved parking lots, Sepulveda Building Materials (1485 S. Waterman Avenue), and Structural Materials Company (1515 S. Waterman Avenue). (Terracon Consultants, Inc., 2016, p. 18)

- South. A flood control district service road followed by the Santa Ana River abuts the Project site to the south. (Terracon Consultants, Inc., 2016)

- West. A flood control canal (referred to in this EIR as Twin Creek) abuts the Project site to the west followed by the San Bernardino Reclamation Plant (399 Chandler Place) (Terracon Consultants, Inc., 2016, p. 18)

Terracon did not observe any RECs associated with the adjoining properties (Terracon Consultants, Inc., 2016, p. 18)

F. Airports and Airstrips

A Comprehensive Land Use Plan (CLUP) and Airport Master Plan have not been adopted for the San Bernardino International Airport (SBIA) (City of San Bernardino, 2005a, p. 5.6-15). The Project site is located within 2.0 miles of the SBIA and approximately 0.33 miles northwest of the R.I. San Bernardino G/L Helistop-Heliport located at E. Carnegie Drive, San Bernardino, CA.

G. Emergency Response Plan or Emergency Evacuation Plan

The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route. Section 19.30.200, *Access*, of the City of San Bernardino Municipal Code regulates that a tentative parcel map shall provide at least two different standard routes for ingress and egress. However, the City provides an exception to this standard if the tentative parcel map provides one standard route but the standard route must be a roadway that is dedicated to the City; has a minimum paved width of 24 feet; and is designed to utilize separate roadways or streets, or a common street that provides access from opposite directions (provided that the access from each direction utilizes an independent street system). The purpose of these routes is to permit accessibility to fire fighting and other public equipment and to permit the orderly evacuation in the event of a flood, fire, or other emergency. Prior to recordation of the final map, adequate security shall be provided to ensure construction of the required improvements before any certificate pf occupancy is issued. (City of San Bernardino, 2005a, p. 5.6-30)

H. Fire Hazard Zones

According to the City's Municipal Code Chapter 19.15, the City designates identifies three foothill fire zones with different degrees of hazard based on slope, type of fuel present and natural barriers. Fire Zone A is identified as an Extreme Hazard that includes areas with slopes of 30% or greater, Fire Zone B is identified as a High Hazard that includes area with slopes between 15% and 30% or greater, Fire Zone C is identified as a Moderate Hazard that includes slopes between 0% and 15%, and Fire Zone C, Abutting Wildlands, includes those lots on the perimeter of a tract that area adjacent to wildlands. As identified in General Plan Figure S-9, *Fire Hazards Zones*, the Project site is not located in an area identified by the General Plan as a Fire Hazard Area. (City of San Bernardino, 2005b)

4.7.3 APPLICABLE ENVIRONMENTAL REGULATIONS

Various federal and State programs regulate the use, storage, and transportation of hazardous materials. Regulations are used to reduce or mitigate the danger that hazardous substances may pose to San Bernardino residents, businesses, and visitors, both in normal day-to-day conditions and as a result of a regional disaster, such as earthquake or major flood. Several of the exiting federal and State programs are briefly summarize below. (Terracon Consultants, Inc., 2016, p. 5.6-1)

A. United States Environmental Protection Agency (USEPA)

The USEPA is responsible for enforcing federal regulations that affect public health or the environment. The primary federal laws and regulations related to hazardous materials include: The Resource Conservation and Recovery Act (RCRA); the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); and the Superfund Act and Reauthorization Act (SARA). Federal regulations pertaining to hazardous materials and wastes are contained in the Code of Federal Regulations (40 CFR). RCRA, which was enacted in 1976, is the principal federal law that regulates the generation, management, and transportation of hazardous materials and hazardous wastes. Other specific areas covered by the amendment include regulation of carcinogens; listing of hazardous wastes; permitting for hazardous waste facilities; and leaking underground storage tanks. The USEPA maintains lists of the facilities that generate or transport large quantities of hazardous materials. CERCLA, enacted in 1980, is a federal law enacted to address abandoned hazardous substance facilities. This act is also referred to as the Superfund Act, and the sites listed under it are referred to as Superfund sites. In 1986, Congress passed the SARA. The SARA required Superfund actions to consider the standards and requirements found in other State and federal environmental laws and regulations; provided new enforcement authorities and settlement tools; increased State involvement in every phase of the Superfund program; and increased the focus on human health problems posed by hazardous waste sites. SARA also required the EPA to revise the Hazard Ranking System (HRS) to ensure that it accurately assessed the relative degree of risk to human health and the environment posed by uncontrolled hazardous waste sites that may be placed on the National Priorities List (NPL).

B. Emergency Planning and Community Right-To-Know Act (EPCRA)

The primary purpose of the Federal Emergency and Community Right-To-Know Act (EPCRA) of 1986 is to inform communities and citizens of chemical hazards in their areas. Sections 311 and 312 of EPRCA require businesses to report the locations and quantities of chemicals stored on-site to state and local agencies. These reports help communities prepare to respond to chemical spills and similar emergencies. (City of San Bernardino, 2005a, pp. 5.6-1)

The EPA maintains and publishes a database that contains information on toxic chemical releases and other waste management activities that are reported annually by certain industry groups and federal facilities. The database is referred to as the Toxics Release Inventory (TRI). TRI reports provide accurate information about potentially hazardous chemicals and their uses in an attempt to give the community more power to hold companies accountable and to make informed decisions about how such chemicals should be managed. (City of San Bernardino, 2005a. p. 5.6-1)

C. Hazardous Materials Disclosure Programs

Both the Federal government and the State of California require all businesses that handle more than a specified amount of hazardous materials or extremely hazardous materials, termed a reporting quantity, to submit a Hazardous Materials Business Plan (HMBP) to its local Certified Unified Program Agencies (CUPA).

D. State Regulations

The California Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Boards (RWQCBs) are the primary state agencies charged with regulating hazardous materials in California. The RWQCBs are authorized by the State Water Resources Control Board (SWRCB) to enforce the provisions of the Porter-Cologne Water Quality Control Act of 1969. The Porter-Cologne Water Quality Control Act gives the RWQCBs authority to require water quality investigations and remediation, if necessary, if groundwater or surface water of the State is threatened. The DTSC is authorized by the USEPA to regulate the management of hazardous waste.

California's hazardous materials laws incorporate federal standards but are often more stringent than comparable federal laws. The primary laws regulating hazardous materials in California include the California Hazardous Waste Control Law (HWCL), the state equivalent of RCRA, and the Carpenter-Presley-Tanner Hazardous Substance Account Act (HSAA), the state equivalent of CERCLA. State hazardous materials and waste laws are contained in the California Health and Safety Code and the California Water Code, and these regulations are contained in the California Code of Regulations, Titles 22 and 26.

The HMBP program was established in 1986. A HMBEP is a written set of procedures and information created to help minimize the effect and extent of a release or threatened release of a hazardous material. The purpose of the HMBP program is to prevent or minimize the damage to public health and safety and the environment, from a release or threatened release of hazardous materials. It also satisfies

community right-to-know laws. This is accomplished by requiring businesses that handle hazardous materials in quantities equal to or greater than 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of compressed gas, or extremely hazardous substances above the threshold planning quantity to prepare a hazardous materials plan (40 CFR, Part 355, Appendix A) (Cal OES, 2017)

According to California Health and Safety Code Section 22500:

> *"(a) The Legislature declares that, in order to protect the public health and safety and the environment, it is necessary to establish business and area plans relating to the handling and release or threatened release of hazardous materials. The establishment of a statewide environmental reporting system for these plans is a statewide requirement. Basic information on the location, type, quantity, and health risks of hazardous materials handled, used, stored, or disposed of in the state, which could be accidentally released into the environment, is required to be submitted to firefighters, health officials, planners, public safety officers, health care providers, regulatory agencies, and other interested persons. The information provided by business and area plans is necessary in order to prevent or mitigate the damage to the health and safety of persons and the environment from the release or threatened release of hazardous materials into the workplace and environment.*
>
> *(b) The Legislature further finds and declares that this article and Article 2 (commencing with Section 25531) do not occupy the whole area of regulating the inventorying of hazardous materials and the preparation of hazardous materials response plans by businesses, and the Legislature does not intend to preempt any local actions, ordinances, or regulations that impose additional or more stringent requirements on businesses that handle hazardous materials. Thus, in enacting this article and Article 2 (commencing with Section 25531), it is not the intent of the Legislature to preempt or otherwise nullify any other statute or local ordinance containing the same or greater standards and protections." (Health and Safety Code Section 25500-25519)* (California Legislative Counsel Bureau, 2015)

E. Local Regulations

1. South Coast Air Quality Management District (SCAQMD) Rule 1403

South Coast Air Quality Management District (SCAQMD) Rule 1403 establishes survey requirements, notification, and work practice requirements to prevent asbestos emissions from emanating during building renovation and demolition activities. Rule 1403 requires notification of the SCAQMD prior to commencing any demolition or renovation activities if asbestos containing materials (ACMs) are present or suspected. Rule 1403 also sets forth specific procedures for the removal of asbestos, and requires that an on-site representative trained in the requirements of Rule 1403 be present during the stripping, removing, handling, or disturbing of ACM.

2. *Southern California Hazardous Waste Management Authority (SCHWMA)*

San Bernardino County is a member of the Southern California Hazardous Waste Management Authority (SCHWMA) and works on a regional level to solve hazardous waste problems. The Hazardous Materials Division (HMD) of the San Bernardino County Fire Department is designated by the State Secretary for Environmental Protection as the CUPA for the County of San Bernardino in order to focus the management of specific environmental programs at the local government level to address the disposal, handling, processing, storage and treatment of local hazardous materials and waste products. (City of San Bernardino, 2005a, p. 5.6-2)

3. *Hazardous Materials Disclosure Programs*

According to the San Bernardino Fire Department HMD guidelines, the preparation, submittal and implementation of a business plan is required by any business that handles hazardous material or a mixture containing a hazardous material in quantities equal to, or greater than, those outlined below:

- Any businesses that uses, generates, processes, produces, treats, stores, emits, or discharges a hazardous material in quantities at or exceeding 55 gallons, 500 pounds, or 200 cubic feet (compressed gas) at any one time in the course of year.
- All hazardous waste generators, regardless of quantity generated.
- Any business that handles, stores, or uses Category I or II pesticides, as defined by Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), regardless of the amount.
- Any business that handles DOT Hazard Class I (explosives). Found in 49 CFR regardless of amount.
- Any business that handles extremely hazardous substances (EHSs) in quantities exceeding the "Threshold Planning Quantity" (T.P.Q.) Extremely Hazardous Substances are designated pursuant to the Emergency Planning and Community Right to Know Act Section 302, and are listed in 40 CFE Part 355.
- Any businesses that are subject to the Emergency Planning and Community Right to Know Act (EPCRA), also known as SARA Title III. Generally, EPCRA includes facilities that handle hazardous substances above thresholds planning quantities.
- Any business that handles radioactive material that listed in Appendix B of Chapter 1 of 10 CFR. (City of San Bernardino, 2005a, pp. 5-6-3 and 5.6-4)

4. *Certified Unified Program Agency (CUPA)*

The Hazardous Materials Division of the San Bernardino County Fire Department is designated by the State Secretary for Environmental Protection as the CUPA for the County of San Bernardino in order to focus the management of specific environmental programs at the local government level. The CUPA is charged with the responsibility of conducting compliance inspections for over 7000 regulated facilities in San Bernardino County. As a CUPA, the San Bernardino County Fire Department manages six hazardous material and hazardous waste programs. The CUPA program is designed to consolidate, coordinate, and uniformly and consistently administer permits, inspection activities, and enforcement

activities throughout San Bernardino County. This approach strives to reduce overlapping and sometimes conflicting requirements of different governmental agencies independently managing these programs. (City of San Bernardino, 2005a)

❑ Hazardous Materials Release Plan and Inventory (Business Plan)

The purpose of the CUPA program is to provide information regarding hazardous materials at facilities to emergency responders and to the general public, along with coordinating the reporting of releases and spill response among businesses to local, state, and federal government authorities. Facilities are required to disclose all hazardous materials and wastes above certain designated quantities which are used, stored, or handled at their facility. In San Bernardino County, the Business Emergency/Contingency Plan ("Business Plan") is also used to satisfy the contingency plan requirement for hazardous waste generators. Any business subject to any of the CUPA permits is required to file a Business Emergency/Contingency Plan using the California Environmental Reporting System (CERS). Businesses that handle hazardous materials are required by law to provide an immediate verbal report of any release or threatened release of hazardous materials, if there is a reasonable belief that the release or threatened release poses a significant present or potential hazard to human health and safety, property, or the environment. (San Bernardino County Fire, 2016)

❑ Hazardous Waste Generation and On-Site Treatment

As part of the CUPA, the Hazardous Materials Division implements the Hazardous Waste Inspection Program. The purpose of this program is to ensure that all hazardous wastes generated by San Bernardino County facilities are properly managed. (San Bernardino County Fire, 2016)

❑ Aboveground Petroleum Storage Act (APSA)/Spill Prevention, Control, and Countermeasure Plan (SPCC Plan)

Facilities that have cumulative aboveground storage capacities of petroleum products at or exceeding 1,320 gallons are subject to the Aboveground Petroleum Storage Act (APSA). Facilities that are subject to APSA must prepare a Spill Prevention, Control, and Countermeasure Plan (SPCC Plan) in accordance with the oil pollution prevention guidelines in the Federal Code of Regulations (40 CFR 112). (San Bernardino County Fire, 2016)

Facilities handling petroleum or any other hazardous material require a Business Plan. Both petroleum and non-petroleum aboveground storage tanks are subject to California Fire Code requirements of the authority having fire code jurisdiction. Where San Bernardino County Fire is the fire prevention authority, ASTs may require plan check approval from the Community Safety Division. (San Bernardino County Fire, 2016)

❑ Underground Storage Tanks (UST)

The Hazardous Materials Division oversees the UST Program throughout San Bernardino County. The purpose of this program is to ensure that hazardous substances are not released into the groundwater

and/or the environment from UST systems. Specialists annually inspect tank system components and the associated monitoring equipment, as well as inventory records, to ensure that the UST systems comply with applicable laws and regulations. (San Bernardino County Fire, 2016)

- **California Accidental Release Program**

The goal of the San Bernardino County California Accidental Release Prevention (CalARP) program is to reduce risks of regulated substances involving regulated substances through the evaluation of hazards and consequences and the development of Risk Management Plans (RMPs) and Prevention Programs. (San Bernardino County Fire, 2016)

- **Hazardous Materials Management Plans and Inventory Statements under California Fire Code**

The Uniform Fire Code (UFC) has a provision for the local fire agency to collect information regarding hazardous materials at facilities for purposes of fire code implementation. Due to the demands of local needs, and the significant differences in the purposes and thresholds of UFC information, San Bernardino County Fire unequivocally supports its local fire agencies in their requests for Hazardous Materials Management Plans and Hazardous Material Information Statements. Many fire agencies accept the Business Plan submitted in the California Environmental Reporting System (CERS) towards meeting a portion of this requirement. Some fire agencies require information which is not in the business emergency/contingency plan in order to implement their local fire prevention programs. Local fire agencies also have separate permitting and plan check requirements from the CUPA for the storage and use of hazardous materials. (San Bernardino County Fire, 2016)

4.7.4 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact associated with hazards and hazardous materials if the Project or any Project-related component would:

a. *Create significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials;*

b. *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous material into the environment;*

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

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?*

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 for people residing or working in the project area;

f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area; or

g. Impair implementation of or physically interfere with an emergency response plan or emergency evacuation plan.

4.7.5 IMPACT ANALYSIS

Threshold a) Would the Project create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials?

Threshold b) Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous material into the environment?

A. Impact Analysis for Existing Site Conditions

During site reconnaissance, Terracon observed a golf cart wash down area and sump, one 1,000-gallon two-compartments gasoline and diesel AST, two septic tanks and leach fields, interior floor drains, one floor-mounted transformer, one solid waste disposal dumpster, and one grease trap. During Terracon's field reconnaissance in November 2016, no evidence of REC's or Controlled RECs (CRECs) were identified on the Project site. (Terracon Consultants, Inc., 2016, pp. ii-iii)

The properties adjoining the site to the north consist of a driving range, asphalt paved parking, a golf cart maintenance building, vacant land, residences, and Dumas Street. S. Waterman Avenue abuts the site to the east followed by the Inland Regional Center (1365 S. Waterman Avenue), asphalt-paved parking lots, Sepulveda Building Materials (1485 S. Waterman Avenue), and Structural Materials Company (1515 S. Waterman Avenue). A flood control district service road abuts the site to the south followed by the Santa Ana River. The property adjoining the site to the west consists of a flood control canal (Twin Creek) followed by the San Bernardino Water Reclamation Plant (399 Chandler Place). Terracon did not observe any indications of RECs in connection with the adjoining properties. (Terracon Consultants, Inc., 2016, pp. ii-iii)

To implement the proposed Project, existing on-site improvements would be demolished and removed. With mandatory compliance with applicable hazardous materials regulations that require the proper removal and disposal of substances and materials, implementation of the Project would not expose construction workers, the public, or the environment to significant hazardous materials associated with the existing conditions of the Project site.

B. Impact Analysis for Temporary Construction-Related Activities

Heavy equipment (e.g., dozers, excavators, tractors) would be operated on the Project site during construction of the Project. This heavy equipment may be fueled and maintained by petroleum-based substances such as diesel fuel, gasoline, oil, and hydraulic fluid, which are considered hazardous if improperly stored or handled. In addition, materials such as paints, adhesives, solvents, and other substances typically used in building construction would be temporarily located on the Project site during construction activities. Improper use, storage, or transportation of hazardous materials can result in accidental releases or spills, potentially posing health risks to workers, the public, and the environment. This is a standard risk on all construction sites, and there would be no greater risk for improper handling, transportation, or spills associated with the proposed Project than would occur on any other similar construction site. Construction contractors would be required to comply with all applicable federal, state, and local laws and regulations regarding the transport, use, and storage of hazardous construction-related materials, including but not limited requirements imposed by the USEPA, DTSC, SCAQMD, San Bernardino Fire Department, and the Santa Ana RWQCB. With mandatory compliance with applicable hazardous materials regulations, the Project would not create a significant hazard to construction workers, the public, or the environment through the routine transport, use, or disposal of hazardous materials during the Project's construction phase. Thus, the Project's potential to create a significant hazard to construction workers, the public, or the environment through the routine transport, use, or disposal of hazardous materials would be less than significant and no mitigation is required.

C. Impact Analysis for Long-Term Operation of the Project

The building's future user(s) is not yet known but this EIR assumed that the building would operate 24-hours per day and be occupied by a high cube warehouse user as permitted by the City of San Bernardino's "Industrial Light (IL)" land use and zoning designation. (City of San Bernardino, 2005a, Table LU-2) Because the specific businesses or tenants that would occupy the Project's proposed building are not known at this time, it is possible that hazardous materials could be used during the course of daily operations at the high cube logistics warehouse. Future users would be required to comply with all federal, state, county, and local hazardous materials regulations. Per the requirements of the California Health and Safety Code (HSC), Chapter 6.95, Sections 25500 - 25532, a Hazardous Materials Business Emergency Plan (HMBEP) must be prepared by any business that handles specified amounts of hazardous materials or a mixture containing a hazardous material. Businesses that are involved in the transport, use, and/or disposal of hazardous waste are required to submit a business plan to the Hazardous Materials Division (HMD) of the San Bernardino County Fire Department.

If businesses that use or store hazardous materials occupy the Project site, the business owner(s) and operator(s) would be required to comply with all applicable federal, state, and local regulations to ensure proper use, storage, use, emission, and disposal of hazardous substances (as described above). With mandatory regulatory compliance, the Project is not expected to pose a significant hazard to the public or the environment through the routine transport, use, storage, emission, or disposal of hazardous materials, nor would the Project increase the potential for accident conditions which could

result in the release of hazardous materials into the environment. With mandatory regulatory compliance, potential hazardous materials impacts associated with long-term operation of the Project are regarded as less than significant and no mitigation is required.

Threshold c) Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The nearest school to the Project site is the University of Phoenix-San Bernardino Learning Center which is located approximately 0.25 mile southeast of the Project site at 451 E. Vanderbilt Way #100 in the City of San Bernardino. As described above under the analysis for Thresholds (a) and (b), the transport of hazardous substances or materials to-and-from the Project site during construction and long-term operational activities would be required to comply with applicable federal, State, and local regulations to preclude substantial public safety hazards. With mandatory compliance with applicable hazardous materials regulations, the Project would not create a significant hazard associated with the emission of hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Therefore, impacts would be less than significant and no mitigation is required.

Threshold d) Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

The Project site is not listed on a list of hazardous materials sites pursuant to Government Code Section 65962.5 (CalEPA, 2017). No Impact would occur.

Threshold 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 for people residing or working in the project area?

Threshold f) For a project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the project area?

The Project site is located within 2.0 miles of the San Bernardino International Airport (SBIA) (formerly the Norton Air Force Base). No airport land use compatibility plan has been prepared for the SBIA. Because the Project site is located approximately 2.0 miles southwest of the SBIA and is not in the direct flight path of airport operations, the Project would have no potential to affect SBIA flight operations and would not create a safety hazard for future workers on-site.

The Project site is located approximately 0.33 miles northwest of the R.I. San Bernardino G/L Helistop-Heliport which is located at E. Carnegie Drive, San Bernardino, CA. The Project has no potential to interfere with operation of a private airstrip or heliport and would not create an air operations safety hazard for future workers on-site. Furthermore, the Project does not include an air travel component

(e.g., runway, helipad, etc.) that could interfere with air traffic patterns at the helipad. Accordingly, the Project would have no potential to affect operations at any nearby private airstrip or heliport and would not create a safety hazard for future workers on-site.

Because of the long-term operation of SBIA, many of the existing, surrounding land uses are industrial or commercial. The General Plan Update has retained the land use designations for industrial around the airport which would prohibit any new residential uses that could be affected by the airport. (City of San Bernardino, 2005b, p. 5.6-23) The proposed Project does not include residential uses. Because the proposed Project would not create any safety hazards associated with an airport land use plan, a public airport, public use airport, or private airstrip, impacts would be less than significant and no mitigation is required.

Threshold g) Would the Project impair implementation of or physically interfere with an emergency response plan or emergency evacuation plan?

The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route. During construction and long-term operation, the proposed Project would be required to maintain adequate emergency access for emergency vehicles as required by the City of San Bernardino. As part of the City's discretionary review process, the City will review the Project's application materials to ensure that appropriate emergency ingress and egress would be available to-and-from the Project site and the Project's proposed building. Because the proposed Project would not interfere with an adopted emergency response or evacuation plan, impacts would be less than significant and no mitigation is required.

Threshold h) Would the Project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

As identified in General Plan Figure S-9, *Fire Hazards Zones*, the Project site is not located in an area identified by the General Plan as a Fire Hazard Area. (City of San Bernardino, 2005b) The Project site is located in an area that is urban in nature; however, the Santa Ana River wash is located south of the Project site and Twin Creek is located west of the Project site. Vegetation in the wash and along Twin Creek is flammable. However, the proposed high cube logistics warehouse building is required to be set back from this area at an adequate distance to ensure fire safety. In addition, the proposed Project would not introduce wildfire hazards such as non-irrigated landscaping. As such, the Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. Thus, no impact would occur.

4.7.6 CUMULATIVE IMPACT ANALYSIS

A. Hazardous Materials

Similar to the proposed Project, any other developments in the area proposing the construction of uses for the potential for use, storage, or transport of hazardous materials would be required to comply with the same federal, state, and local regulations as the proposed Project, which would preclude potential adverse impacts related to hazardous materials. Because the Project and nearby cumulative development would not result in adverse impacts related to handling, transport, storage, and treatment of hazardous materials due to mandatory compliance with federal, state, and local regulations that require that minimum, adequate safety standards are met, there is no potential for a cumulative impact to occur related to hazardous materials, including under routine and accident conditions.

B. Safety Hazards Associated with Airports and Airstrips

Because the Project site is located approximately 2.0 miles southwest of the SBIA and is not in the direct flight path of airport operations, the Project would have no potential to affect SBIA flight operations and would not create a safety hazard for future workers on-site.

C. Emergency Response Plan or Emergency Evacuation Plan

The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route; thus, there is no potential for the Project to contribute to any cumulative impacts associated with an adopted emergency response plan or emergency evacuation plan. The Project, as well as every other development project in the vicinity of the Project site, would be required to maintain adequate emergency access for emergency vehicles as required by the City of San Bernardino.

D. Wildland Fires

The Project would not be developed in a Fire Hazards Zone and would not introduce wildfire hazards. Additionally, as the surrounding area continues to develop, lands that are currently vacant would be developed in a manner consistent with jurisdictional requirements for fire protection, and would generally decrease the fire hazard potential in the local area. As such, within the cumulative context of the Project vicinity, fire hazards are anticipated to decline over time, and the Project's contribution to cumulative wildfire potential would be less than cumulatively considerable.

4.7.7 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Thresholds a) and b): Less-than-Significant Impact. Construction and operation of the Project would involve the potential transport, use, and disposal of hazardous materials. However, during Project construction and operation, mandatory compliance to federal, state, and local regulations would ensure that the proposed Project would not create a significant hazard to the environment.

Threshold c): Less-than-Significant Impact. The nearest school to the Project site is the University of Phoenix-San Bernardino Learning Center which is located approximately 0.25 mile southeast of the

Project site at 451 E. Vanderbilt Way #100 in the City of San Bernardino. The transport of hazardous substances or materials to-and-from the Project site during construction and long-term operational activities would be required to comply with applicable federal, State, and local regulations to preclude substantial public safety hazards. With mandatory compliance with applicable hazardous materials regulations, the Project would not create a significant hazard associated with the emission of hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Threshold d): No Impact. The Project site is not listed on a list of hazardous materials sites pursuant to Government Code Section 65962.5

Thresholds e) and f): Less-than-Significant Impact. Because the Project site is located approximately 2.0 miles southwest of the San Bernardino International Airport (SBIA) and is not in the direct flight path of airport operations, the Project would have no potential to affect SBIA flight operations and would not create an air operations safety hazard for future workers on-site. The Project has no potential to interfere with operation of a private airstrip or heliport and would not create an air operations safety hazard for future workers on-site.

Threshold g): Less-than-Significant. The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route. During construction and long-term operation, adequate emergency access would be required to be provided for emergency vehicles. Accordingly, implementation of the Project would not impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan.

Threshold h): No Impact. The Project would not be developed in a Fire Hazards Zone and would not introduce wildfire hazards.

4.7.8 MITIGATION

No potentially significant impacts associated with hazards and hazardous materials would occur as a result of the proposed Project; therefore, no mitigation is required.

4.8 HYDROLOGY / WATER QUALITY

The analysis in this Subsection is based in large part on the following two technical reports. These and other reference sources cited in the Subsection are included in Section 7.0, *References*.

- *Preliminary Hydrology Calculations,* prepared by Thienes Engineering, Inc. (herein, Thienes), dated October 28, 2016, Revised March 2017, and appended to this EIR as *Technical Appendix H1* (Thienes, 2017a).

- *Water Quality Management Plan (WQMP),* prepared by Thienes Engineering, Inc, dated March 23, 2017, and appended to this EIR as *Technical Appendix H2* (Thienes, 2017b).

4.8.1 EXISTING CONDITIONS

A. Regional Drainage System

The California Porter-Cologne Water Quality Control Act (Section 13000 et seq. of the California Water Code), and the Federal Water Pollution Control Act Amendment of 1972 (also referred to as the Clean Water Act (CWA)) require that comprehensive water quality control plans be developed for all waters in the State of California. In order to accomplish this, the California State Water Resources Control Board divides the state into planning regions resulting in nine Regional Water Quality Control Boards (RWQCBs).

As shown on Figure 4.8-1, *RWQCB Region 8 Basin Plan Map,* the City of San Bernardino, including the Project site, lies within the Santa Ana River Basin (Region 8) of the RWQCB. Region 8 extends from the San Bernardino and San Gabriel Mountains in the north and east to Newport Bay along the southern California coast. The Santa Ana River Basin is geographically the smallest region, at 2,800 square miles. The Santa Ana River is the largest stream system in southern California and the region's main surface body. The tributaries of the Santa Ana River located in the vicinity of San Bernardino that contribute flow to the main stem of the River include: Lytle Creek, East Twin Creek, and San Timoteo Creek. (City of San Bernardino, 2005b, pp. 5.7-4 and 5.7-5) The Santa Ana River is located to the south of the Project site and East Twin Creek is located to the west of the Project site.

B. Local Drainage System

Storm drains and flood control facilities within the City of San Bernardino include natural and man-made channels, storm drains, street waterways, natural drainage courses, dams, basins, and levees. The San Bernardino County Flood Control District has established design criteria for both major and local drains within the City. Major storm drains are systems using 36-inch or larger pipes (or equivalent channels) and are identified on the comprehensive storm drain plans. (City of San Bernardino, 2005b, p. 5.7-5)

C. Project Site Drainage Patterns

1. On-Site Drainage

The drainage pattern of the Project site under existing conditions is depicted on Figure 4.8-2, *Existing Condition Hydrology Map*. Under existing conditions, the Project site is primarily a golf course comprised of mostly grass, with the exception of the golf course access road, parking area, and associated structures. As illustrated on Figure 4.8-2, runoff from the southerly two-thirds of the site generally drains southwesterly towards the Santa Ana River via several natural drainage courses. The existing condition 100-year peak flow rates towards the Santa Ana River are 10.9 cubic feet per second (cfs), 9.9 cfs, and 16.6 cfs. Runoff from the existing drive aisle, the parking lot, clubhouse, and areas west of the clubhouse drain westerly towards East Twin Creek. The 100-year peak flow rate for this area is approximately 18.8 cfs. This drainage area comprising the Project site is tabled to the Santa Ana River and is identified as area 65A-8 on the storm drain improvement plan (refer to Figure 3-14, *Storm Drain Improvement Plan*) (Thienes, 2017a, p. n.p.)

2. Off-Site Drainage

As shown on Figure 4.8-2, *Existing Condition Hydrology Map*, and Figure 4.8-3, *Off-Site Hydrology Map*, under existing conditions, portions of the golf course extending off site and large residential lots located north of the golf course, drain on to the Project site. An area north of the Project site drains to a low point near the Project site's northerly property line, southwest of the existing golf course parking lot. Higher runoff eventually spills over to the Project site. The 100-year peak flow rate for this area is approximately 7.0 cfs. Runoff from other existing residential lots located north of the golf course generally drain from east to west towards the area where the Project's future interim access road to Dumas Street is proposed. Located at this location is a small v-channel that conveys runoff southerly onto the existing golf course. The 100-year peak flow rate at this location is approximately 29.7 cfs. The off-site area north of Dumas Street drains westerly towards East Twin Creek. Under existing conditions, the 100-year peak flow rate for this off-site area is approximately 47.8 cfs. (Thienes, 2017a, p. n.p.)

As discussed in EIR Section 3.0, *Project Description*, as a reasonable consequence of the Project, the City of San Bernardino is likely to require that the interim off-site roadway access be replaced in the future with a permanent roadway in a different alignment. As such, two options for a future permanent alignment and the potential impacts on off-site drainage are also evaluated in this EIR.
Site and Watershed Description

The Santa Ana RWQCB's *Santa Ana River Basin Water Quality Control Plan* is the governing water quality plan for the region that sets forth goals and objectives for protecting water quality within the region. The CWA requires all states to conduct water quality assessments of their water resources to identify water bodies that do not meet water quality standards. Water bodies that do not meet water quality standards due to excessive concentrations of pollutants are placed on a list of impaired waters pursuant to Section 303(d) of the CWA.

Receiving Waters for the Project site and watershed include the following:

- Twin Creek Channel
- Santa Ana River, Reach 5
- Santa Ana River, Reach 4
- Santa Ana River, Reach 3
- Prado Dam
- Santa Ana River, Reach 2
- Santa Ana River, Reach 1
- Pacific Ocean

Applicable Total Maximum Daily Loads (TMDLs) include:

- Twin Creek Channel: None
- Santa Ana River, Reach 5: None
- Santa Ana River, Reach 4: None
- Santa Ana River, Reach 3: Pathogens, Nitrate
- Prado Dam: Pathogens
- Santa Ana River, Reach 2: None
- Santa Ana River, Reach 1: None
- Pacific Ocean: None

303(d) list impairments include:

- Twin Creek Channel: None
- Santa Ana River, Reach 5: None
- Santa Ana River, Reach 4: Pathogens
- Santa Ana River, Reach 3: Copper, Lead, Pathogens
- Prado Dam: None
- Santa Ana River, Reach 2: Indicador Bacteria
- Santa Ana River, Reach 1: None
- Pacific Ocean: None

There are no Environmentally Sensitive Areas (ESA) and no Hydrologic Conditions of Concern applicable to the Project site (Thienes, 2017b, Form 3-3, Watershed Description).

D. Groundwater

The City of San Bernardino is underlain by extensive groundwater resources associated with the Upper Santa Ana Valley Groundwater Basin. Within this Basin, the Project site lies within the Bunker Hill Sub-basin (Bunker Hill-B) within the Upper Santa Ana Valley Groundwater Basin. Recharge of the Bunker Hill Sub-basin historically resulted from infiltration of rain and snow melt runoff from the San Gabriel and San Bernardino Mountains, with the Santa Ana River and its major tributaries contributing more than 60% of the total recharge to the groundwater system. (City of San

Bernardino, 2005b, p. 5.7-13) The City established percolation basins in several locations in the northern portion of the City to capture mountain runoff and facilitate further recharge to the Bunker Hill Sub-basin (City of San Bernardino, 2005b, p. 5.7-19). The City of San Bernardino Municipal Water Department (SBMWD) owns and operates 60 groundwater wells within the Bunker Hill Sub-basin, and relies on the Sub-basin as its primary source of potable water (City of San Bernardino, 2005b, 5.7-14 and 5.15-1). (Santa Ana RWQCB, 2008, Ch. 3 and Figure 3-3a)

E. City of Riverside Public Utilities/Water Department Facilities

1. On-Site Warren 4 Well and Rice-Thorne Pipeline

As discussed in EIR Section 3.0, *Project Description*, according to the City of Riverside Public Utilities/Water Department (RPU), under existing conditions, there are several RPU water wells and pipelines that are present on the Project site and in the Project's proposed off-site roadway improvement area. The RPU is proposing to abandon and replace the existing Warren 4 well and approximately 1,250 linear feet (LF) of the existing Rice-Thorne pipeline in the Warren Tract within the City of San Bernardino that are located within the limits of the Project site. A new well (Warren 4) and a realigned section of 24-inch Rice-Thorne pipeline would be constructed as part of the proposed Project. (RPU, n.d.) As discussed in EIR Section 3.0, *Project Description*, TPM No 19814 proposes a 20-foot wide access road along the west and south boundaries of the Project site to provide third-party access to water wells on the site.

The existing Warren 4 well is part of the Waterman system which produces potable water out of the Bunker Hill Basin. The existing Warren 4 well is located approximately 255 feet west of S. Waterman Avenue and was originally drilled by the City of Riverside in 1948 to a depth of 1,102 feet below ground surface (bgs) and screened from 1,008 to 1,102 feet bgs. Warren 4 is a naturally developed 20-inch diameter well and discharges to the Waterman Transmission Main (TM). The static water level for Warren 4 is estimated to be about 130-feet bgs and the pumping water level is estimated to be 200-feet bgs. The existing Warren 4 well's pumping water level is 230-feet bgs. The well provides high water quality to the Waterman TM. RPU is planning to locate the Warren 4R replacement well on-site approximately 1,200 feet northwest of the existing well and approximately 840 feet southeast of the existing Thorne 12 well. (RPU, n.d.)

The existing Rice-Thorne pipeline conveys non-potable groundwater from the Bunker Hill Basin to the Riverside Canal via gravity flow. It is also used to convey blow-off water from the Warren 1 well and serve as a drain for the Waterman TM when needed. The existing 18-inch/30-inch portion of the Rice-Thorne pipeline was installed in 1940. The approximately 1,250 feet portion to be relocated runs west by northwest across the Project site and is located within the footprint of the Project's proposed building and thus would need to be relocated. (RPU, n.d.)

2. Other On-Site Water Wells

RPU wells that are present within the Project site include the Thorne 5 (non-potable, inactive), Thorne 6 (non-potable, inactive), Thorne 7 (non-potable inactive), Thorne 8 (non-potable, inactive),

Thorne 9 (monitoring, active), Thorne 10 (non-potable, active), Thorne 11 (non-potable, active), Thorne 12 (potable, active), Warren 2 (potable, inactive), Warren 3 (potable, inactive), and Warren 4 (potable, active) wells. Also located on the Project site are segments of the Thorne pipeline (supply main, active), Warren 3 and 4 pipeline (supply main, active), and the Rice-Thorne Pipeline (non-potable TM). Under existing conditions, the Thorne 10 and 11 wells are used to irrigate the on-site golf course. The existing 36-inch RCP segment of the Waterman TM was installed in 1946 and is a major water supply line to the City of Riverside. The water line runs along S. Waterman Avenue and partially onto the existing San Bernardino Public Golf Course. (RPU, n.d.)

3. Off-Site Water Wells

The existing Warren 1 well is an active potable well located on San Bernardino County Flood Control property between the southern boundary of the Project site and the Santa Ana River. The Warren 1 well discharges to the Waterman TM and blows-off to the Rice Thorne pipeline. Thorne 3 is an active irrigation well that is used for monitoring purposes. Thorne 3 is located along the Flood Control levee, outside of the southwest corner of the Project site. There is an existing 24-inch water line along Dumas Street with a capacity of 8,460 gallons per minute (GPM) at a maximum velocity of 6-feet per second (FPS). (RPU, n.d.)

F. 100-Year Flood Hazard Area

The Federal Emergency Management Agency (FEMA) defines the 1% annual flood (100-year flood), also known as the base flood, as the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH. AO, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

According to the most recent FEMA Flood Insurance Rate Map, Panels 06071C8683J and 8684J, dated September 2, 2016, as shown on Figure 4.8-4, *FEMA Flood Insurance Rate Map Panels 06071C8683J and 8684J*, portions of the Project lie within Zones A, AE, X-shaded (500-year floodplain) and the Regulatory Floodway. No Base Flood Elevations are determined by FEMA for Zone A. For Floodway Areas in Zone AE, the floodway is the channel of a stream plus any adjacent floodplain areas that are to be kept free of encroachment so that the 1% annual chance of flood can be carried without substantial increases in flood heights. Zone X is defined by FEMA as an area of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1-foot or with drainage areas less than 1-square mile; and areas protected by levees from 1% annual chance flood.

G. Flooding and Inundation

Seismically induced inundation refers to flooding that occurs when water retention structures (e.g., dams) fail due to an earthquake. The Seven Oaks Dam is located on the Santa Ana River in the upper Santa Ana Canyon. The Project site is located approximately 10.5 miles southwest of the Seven Oaks Dam (Google Earth, 2017). The dam is designed to provide 350-year flood protection

and withstand an earthquake of 8-plus magnitude. During flood conditions, it creates a lake 500 feet deep extending three miles back into the canyon. In the unlikely event of dam failure, an inundation zone for the Seven Oaks Dam has been determined. As shown in Figure 4.8-5, *Seven Oaks Dam Inundation Area*, in the unlikely event of a dam failure, the southeastern portion of the City of San Bernardino would be affected, including the Project site. (City of San Bernardino, 2005b p. 5.7-9 and Figure 5.7-2).

Seismically induced inundation can also occur if strong ground shaking causes structural damage to aboveground water storage reservoirs (City of San Bernardino, 2005b, p. 5.7-9). The nearest aboveground water storage reservoirs are located at the San Bernardino Water Reclamation Facility (WRF) located east of the Project site and east of East Twin Creek, within 0.25 mile of the Project site.

H. Sieche, Tsunami, and Mudflow

The Project site is not at risk to be affected by a seiche, tsunami, or mudslide. A seiche is a free or standing-wave oscillation of the surface of water in an enclosed or semi-enclosed basin that is initiated chiefly by local changes in atmospheric pressure, aided by winds, tidal currents, and earthquakes. No enclosed water bodies are located near the Project site. A tsunami is a series of ocean waves generated by sudden displacements in the sea floor, landslide, or volcanic activity. In the deep ocean, the tsunami wave may only be a few inches high. The Pacific Ocean is not located near the Project site. A mudflow is a mass of fine-grained earth materials mixed with water that flows from a hillside, stream, ravine, canyon, or other sloping feature. Mudflows typically occur near hills and mountains and no hills or mountains are located near the Project site.

4.8.2 APPLICABLE POLICIES AND REGULATIONS

A. Water Quality Regulations

1. Federal Safe Drinking Water Act (SDWA)

The Federal Safe Drinking Water Act (SDWA) is the federal law that protects public drinking water supplies throughout the nation. The SDWA gives the Environmental Protection Agency (EPA) the authority to set drinking water standards, such as the National Primary Drinking Water regulations (NPDWRs or primary standards). The NPDWRs protect drinking water quality by limiting the levels of specific contaminants that are known to occur or have the potential to occur in water and can adversely affect public health. (City of San Bernardino, 2005b p. 5.7-1)

2. Clean Water Act (CWA)

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. Under the CWA, the federal EPA has implemented pollution control programs such as setting wastewater standards for industry and water quality standards for all contaminants in surface water. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a

National Pollutant Discharge Elimination System (NPDES) permit program to control discharges is obtained. The EPA defines point sources as discrete conveyances such as pipes or man-made ditches. Industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

In California, water quality standards are established by the nine RWQCBs. The Project site is located in the Santa Ana region, and the Santa Ana RWQCB's Santa Ana River Basin Water Quality Control Plan is applicable to the Project site and vicinity.

The provisions of the CWA applicable to the proposed Project are as follows, which also apply to all construction sites of over one acre in size:

- CWA Section 401 requires federal agencies to obtain a Water Quality Certification from states, territories, and Indian tribes before issuing permits that would result in increased pollutant loads to a water body. A Section 401 certification can be issued only if increased pollutant loads would not cause or contribute to exceedances of water quality standards; and

- CWA Section 402 authorizes the NPDES permit program that covers point sources of pollution discharging to a water body. The NPDES program also requires operators of construction sites one acre or larger to prepare a Stormwater Pollution Prevention Plan (SWPPP) for construction activities and obtain authorization to discharge stormwater under an NPDES construction stormwater permit. The NDPES program also requires certain land uses (e.g., industrial uses) to prepare a SWPPP for operational activities and to implement a long-term water quality sampling and monitoring program, unless an exemption has been granted. On April 1, 2014, the California State Water Resources Control Board adopted an updated NPDES permit for storm water discharge associated with industrial activities (referred to as the "Industrial General Permit"). The new Industrial General Permit, which is more stringent than the previous Industrial General Permit, became effective on July 1, 2015.

B. National Pollutant Discharge Elimination System (NPDES)

The CWA prohibits anyone from discharging "pollutants" through a "point source" into a "water of the United States" unless they have a NPDES permit. The term "pollutant" broadly includes any type of industrial, municipal, and agricultural waste discharged into water. Point sources are discharges from publicly owned treatment works (POTWS), discharges from industrial facilities, and discharges associated with urban runoff. Pollutant contributors come from direct and indirect sources. Direct sources discharge directly to receiving waters, whereas indirect sources discharge directly to a POTW, which in turn discharges to receiving waters. (City of San Bernardino, 2005b, p. 5.7-1)

The NPDES has a variety of measures designed to minimize and reduce pollutant discharges. All counties with a storm drain system that serve a population of 50,000 or more, as well as construction

sites of one acre or more in size, must file for and obtain an NPDES permit. Another measure is the EPAs Storm Water Phase II Final Rule. The Phase II Final rule requires an operator of a regulated small MS4 to develop, implement, and enforce a program (e.g., Best Management Practices (BMPs), ordinance, or other mechanism) to reduce pollutants in post-construction runoff for their MS4 from new development and redevelopment projects that result in land disturbance of greater than or equal to one acre. (City of San Bernardino, 2005b, p. 5.7-1)

C. Water Quality Control Plan

In the State of California, the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) are responsible for implementing the California Porter-Cologne Quality Control Act (California Water Code), which regulates water quality. The Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) gives direction on the beneficial uses of the state waters within Region 8, describes the water quality that must be maintained to support such uses, and provides programs, projects, and other actions necessary to achieve the standards established in the Basin Plan. The Santa Ana River RWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements to persons, such as individuals, communities, or businesses whose waste discharges may affect water quality. These requirements are state Waste Discharge Requirements to discharge to land, or federally delegated NPDES permits for discharges to surface water. (City of San Bernardino, 2005b, p. 5.7-2) (Santa Ana RWQCB, 2008)

D. National Flood Insurance Program

The National Flood Insurance Act and the Flood Disaster Act mandated the Federal Emergency Management Agency (FEMA) to evaluate flood hazards. FEMA provides Flood Insurance Rate Maps (FIRM) for local and regional planners to promote sound land use and floodplain development. FIRM only identify potential flood areas based on the conditions at the time of the study. Special Flood Hazard Areas (SFHAs) are those areas subject to inundation by a base flood, which FEMA sets as a 100-year flood. The 100-year recurrence interval represents only the long-term average period between floods of a specific period. The base flood is used by federal agencies, as well as most county and State agencies to administer floodplain management programs. The goals of floodplain management are to reduce losses caused by flood while protecting the natural resources and functions of the floodplain. The basis of floodplain management is the concept of the floodway. FEMA defines the floodway as the channel or a river or other watercourse, and the adjacent land areas that must be kept free of encroachment in order to discharge the base flood without cumulatively increasing the water surface elevation more than a certain height. The intention is not to preclude development, but to assist communities in managing sound development in areas of potential flooding. (City of San Bernardino, 2005b, pp. 5.7-2 and 5.7-3)

4.8.3 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to hydrology/water quality if the Project or any Project-related component would:

a. Violate any water quality standards or waste discharge requirements;

b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course or a stream or river, in a manner which would result in substantial erosion or siltation on- site or off-site;

d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site;

e. 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;

f. Otherwise substantially degrade water quality;

g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Hazard Insurance Rate Map or other flood hazard delineation map;

h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows;

i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam; or

j. Expose people or property to inundation by seiche, tsunami, or mudflow.

4.8.4 IMPACT ANALYSIS

Threshold a) Would the Project violate any water quality standards or waste discharge requirements?

Demolition of the existing golf course features and construction of the proposed Project would involve grading, paving, utility installation, building construction, and landscaping installation, which would result in the generation of potential water pollutants. Storm water pollutants can also be expected from long-term operation of the Project, including but not limited to oil and grease deposits on the paved surfaces of the Project site that can be carried off in storm water. Water pollutants expected to occur from construction and operation of the Project include pathogens, phosphorous, nitrogen, sediment, metals, oil and grease, trash/debris, pesticides/herbicides, and organic compounds (Thienes, 2017b, Form 2.3-1). As such, impacts to water quality have the potential to occur during construction and operation of the Project in the absence of any protective or avoidance measures.

Pursuant to the Santa Ana RWQCB and the City of San Bernardino, the Project would be required to comply with the requirements of the City of San Bernardino and the NPDES Areawide Stormwater Program. The Project would be required to be consistent with the Project's WQMP, the San Bernardino County's Municipal Storm Water Management Program and the intent of the NPDES Permit for San Bernardino County and the incorporated cities of San Bernardino County within the Santa Ana Region. (Thienes, 2017b, p. n.p.) Mandatory compliance with the Project's WQMP and its best management practices (BMPs), the San Bernardino County's Municipal Storm Water Management Program and the NPDES Permit, would ensure that the Project would not violate any water quality standards or waste discharge requirements during construction of the Project or long-term operation of the Project. Therefore, impacts would be less than significant and no mitigation beyond mandatory compliance with these requirements is necessary.

Threshold b) Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

The Project site is underlaid by the Bunker Hill Groundwater Basin. Although under existing conditions, the golf course is pervious, it also requires irrigation from the same groundwater table it feeds. Further, although the Project site as proposed would be mostly impervious, stormwater would be captured by the on-site storm drain system and directed to an onsite detention basin and the Santa Ana River, where percolation into the same groundwater table would occur. Thus, groundwater supplies would not be adversely affected and the groundwater table would not be lowered.

A new well (Warren 4R) and a realigned section of 24-inch Rice-Thorne pipeline would be constructed as part of the proposed Project. The existing Warren 4 well is part of the Waterman system which produces potable water out of the Bunker Hill Basin. The new Warren 4R well would replace the existing Warren 4 well, which is proposed to be abandoned, and which would have a net neutral effect on the groundwater basin. (RPU, n.d.) The existing Rice-Thorne pipeline conveys non-potable groundwater from the Bunker Hill Basin to the Riverside Canal via gravity flow. The approximately 1,250-foot portion of the pipeline to be relocated as part of the proposed Project runs west by northwest across the property and would have no effect on the groundwater table itself. (RPU, n.d.)

The Thorne 5, Thorne 6, Thorne 7, Thorne 8, Thorne 9, Thorne 10, Thorne 11, Warren 2 and Warren 3 wells located on the Project site also are proposed to be abandoned by the RPU. Thorne 10 and Thorne 11 wells are currently used to irrigate the golf course. Because the irrigation water not consumed by the golf course landscaping percolates back into the groundwater table, the abandonment of these wells would have no measurable effect on the groundwater table. The Thorne 5, Thorne 6, Thorne 7, and Thorne 8 wells are non-potable and inactive and the Warren 2 and Warren

3 wells are potable and inactive. Because these six wells are inactive, their abandonments would have no effect on the groundwater table. Thorne 9 is a monitoring well and because it is only used for monitoring purposes, its abandonment also would have no effect on the groundwater table. According to the RPU, the proposed Project would have a less-than-significant impact on recharge to the Bunker Hill Basin and to the RPU's ability to extract their existing water rights (RPU, 2017).

Threshold c) Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course or a stream or river, in a manner which would result in substantial erosion or siltation on- site or off-site?

A. On-Site Drainage Pattern

As illustrated on Figure 4.8-6 *Proposed Condition Hydrology Map*, upon development of the proposed Project runoff from the northerly half of the building coverage area and northerly truck yards would drain westerly through the truck yard to catch basins located near the westerly property line. A storm drain is proposed convey this runoff along with flow from the northerly parking area southerly to the proposed water quality/detention basin located in the southwest corner of the Project site. The 100-year peak flow rate for this area is approximately 79.7 cfs. Runoff from the southerly half of the building coverage area, the majority of the easterly parking lot and the truck yard south of the building would drain westerly to catch basins located at the southwesterly corner of the Project site. At this location, a storm drain would convey runoff to the water quality basin. The 100-year peak flow rate is approximately 53.3 cfs.

All runoff from the Project site would ultimately drain to the basin at the southwest corner of the Project site. The total 100-year peak flow rate in the site's post-development condition, including the basin, is approximately 130.2 cfs. A proposed storm drain would convey runoff to the Santa Ana River, along with the runoff from the off-site properties to the north of the Project site that runs on to the Project site in the existing condition. A swale is proposed around the northerly portion of the Project site to convey this off-site runoff to the proposed corrugated metal pipes (CMP) risers located near the easterly property line. At this location, a storm drain would convey off-site runoff directly to the Santa Ana River without comingling with the Project site's storm water. The 100-year peak flow rate for off-site areas at this location is approximately 38.8 cfs (30.4 cfs + 8.4 cfs). The total discharge from the proposed storm drain will be 80.9 cfs. This entire area (offsite and onsite) is tabled to the Santa Ana River both under the existing condition and the proposed condition; thus, the drainage pattern would not be substantially altered. (Thienes, 2017a, p. n.p.)

The water quality/detention basin's proposed storm drain outlet to the Santa Ana River would be constructed entirely on-site. The outlet location would be installed behind the levee along the Santa Ana River. The Project's storm drain design would allow the Project site's runoff to generally disperse in this area of the water quality/detention basin and behind the levee as it does in the existing condition. (Thienes, 2017a, p. n.p.)

The proposed Project would not adversely affect downstream storm drain facilities. Under existing conditions, the total peak flow for the Project site is 56.2 cfs, whereas the proposed discharge from the basin is 42.1 cfs, which is a 25% reduction of the existing condition total peak flow. (Thienes, 2017a, p. n.p.) Because the total peak flow for the Project site would be reduced from existing conditions, the Project would install an onsite water quality/detention basin that would reduce peak flow to less than occurs under the existing condition, and the Project would be required to comply with the BMPs in the Project's WQMP, the potential for the Project to result in substantial erosion or siltation on- or off-site is less than significant and no mitigation is required. Refer to Figure 4.8-7, *BMP Site Map.*

B. Off-Site Drainage Pattern

North of the Project site, the proposed access road (Dumas Street) would interrupt the existing sheet flow drainage pattern. However, a double 6-foot by 1-foot reinforced concrete box (RCB) is proposed to be constructed near Dumas Street as part of the proposed Project that would allow the drainage pattern from this area to continue to East Twin Creek as it does under existing conditions. Dumas Street is proposed to be constructed with two low flow catch basins to collect the required water quality volume. This runoff would be conveyed to the on-site water quality basin for treatment. Thienes modeled off-site areas separately because these flows are designed to be intercepted prior to entering the Project site. A separate storm drain system would convey runoff easterly to the Santa Ana River without comingling with the Project site's runoff. The drainage pattern would not be substantially altered that would result in substantial erosion or siltation; the impact off-site would thus be less than significant.

As discussed in EIR Section 3.0, under both future permanent access roadways Option 1 and Option 2, a culvert would be proposed at Dumas Street to allow the stormwater flow to continue to flow easterly and catch basins would be installed north of Dumas Street to collect runoff in the street for water quality treatment while allowing the offsite flow to continue east via a culvert. Therefore, under each possible future permanent roadway option evaluated in this EIR, the drainage pattern would not be substantially altered that would result in substantial erosion or siltation, thus, the impact off-site would be less than significant.

Threshold d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?

As discussed above in Threshold (c), the drainage pattern of the site and surrounding area would not be substantially altered by the proposed Project. Under existing conditions, the total peak flow for the Project site to the Santa Ana River is 56.2 cfs, whereas discharge from the Project's proposed detention/water quality basin to the Santa Ana River would be 42.1 cfs, which is a 25% reduction of the existing condition total peak flow. Because the Project would maintain the Project site's drainage pattern to the Santa Ana River and decrease the rate of surface runoff, the Project has no potential to

substantially increase the rate or amount of surface runoff in a manner that could result in flooding on- or off-site. Impacts would be less than significant and no mitigation is required.

Threshold e) Would the Project 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?

A. On-Site Drainage

As discussed in the analysis for Thresholds (c) and (d), the total peak flow for the Project site to the Santa Ana River is 56.2 cfs, whereas the discharge rate from the proposed Project's detention/water quality basin is calculated to be 42.1 cf, which is a 25% reduction of the existing condition total peak flow. Therefore, because the Project would decrease the rate of surface runoff to the Santa Ana River, and the Project would implement BMPs pursuant to the Project's WQMP, the Project would not contribute runoff water which would exceed the capacity of the existing and planned stormwater systems or provide substantial additional sources of runoff, are less than significant and no mitigation is required.

B. Off-Site Drainage

The Project's proposed off-site access road (Dumas Street) would interrupt the existing sheet flow drainage pattern. However, a double 6-foot by 1-foot reinforced concrete box (RCB) is proposed to be constructed near Dumas Street as part of the proposed Project that would allow the drainage pattern from this area to continue to East Twin Creek as it does under existing conditions. Dumas Street is proposed to be constructed with two low flow catch basins to collect the required water quality volume. This runoff would be conveyed to the on-site water quality basin for treatment. Thienes modeled off-site areas separately because these flows are designed to be intercepted prior to entering the Project site. A separate storm drain system would convey runoff easterly to the Santa Ana River without comingling with the Project site's runoff.

As discussed in EIR Section 3.0, under both future permanent access roadways Option 1 and Option 2, a culvert would be proposed at Dumas Street to allow the stormwater flow to continue to flow easterly and catch basins would be installed north of Dumas Street to collect runoff in the street for water quality treatment while allowing the offsite flow to continue east via a culvert.

Threshold f) Would the Project otherwise substantially degrade water quality?

There are no conditions associated with the proposed Project that would otherwise result in the substantial degradation of water quality beyond what is described in Thresholds (a) and (c). Therefore, the Project would have a less-than-significant impact to otherwise substantially degrade water quality and no mitigation is required.

Threshold g) Would the Project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Hazard Insurance Rate Map or other flood hazard delineation map?

The proposed Project does not include housing. Therefore, there is no potential to place housing within a 100-year flood hazard area. No impact would occur as a result of the Project.

Threshold h) Would the Project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

According to the most recent FEMA Flood Insurance Rate Map, Panels 06071C8683J and 8684J, dated September 2, 2016, as shown on Figure 4.8-4, *FEMA Flood Insurance Rate Map Panels 06071C8683J and 8684J*, a portion of the Project site along the southern boundary of the Project site and adjacent to the Santa Ana River, lies with Zone AE within the 100-year floodplain.

The Project's conceptual grading plan, included as part of Tentative Parcel Map No. 19814 (SUB 16-08) identifies the existing FEMA floodplain line south of the Project's proposed warehouse building and south of the truck trailer parking area. Also, the FEMA floodplain line is located south of the Project's proposed water quality/detention basin. One location of the truck trailer parking lot is proposed directly adjacent to the existing FEMA floodplain line. As shown on the Project's grading plans, a gravity curb is proposed to direct flows away from the truck trailer area and downslope of the Project's development footprint. In addition, as shown on the Project's conceptual grading plan, the building pad of the proposed warehouse building would be constructed above the base flood elevation of the 100-year floodplain. Therefore, because the Project would not place structures within a 100-year flood hazard structures which would impede or redirect flows, impacts would be less than significant and no mitigation is required.

Threshold i) Would the Project expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

The Project site is located approximately 10.5 miles southwest of the Seven Oaks Dam and is considered to be within the Dam's inundation area. Therefore, the Project site has the potential to be exposed to flooding as a result of the failure of the Seven Oaks Dam (associated with the Santa Ana River), but this hazard risk would be no different than the risk to other nearby developments in the inundation area under existing conditions. Furthermore, the City of San Bernardino General Plan EIR concludes that the development of industrial uses within the dam inundation area would not expose people or structures to a significant risk of loss, injury, or death due to flooding as a result of a failure of the Seven Oaks Dam because the Dam is designed to withstand a catastrophic seismic event (an earthquake measuring up to 8.0 on the Richter scale) and industrial uses, such as proposed by the Project, would not introduce a substantial number of people within the dam inundation area. Therefore, because the proposed Project would not expose people or structures to a significant risk of

loss, injury, or death involving flooding, including flooding as a result of a levee or dam, impacts would be less than significant and no mitigation is required.

Threshold j) Would the Project expose people or property to inundation by seiche, tsunami, or mudflow?

The Project site is more than 50 miles from the Pacific Ocean; therefore, there is no potential for the Project to expose people or property to inundation from a tsunami. The nearest large body of water to the Project site is Lake Arrowhead which is located more than 13 miles northeast of the Project site. Therefore, due to the distance from Lake Arrowhead to the Project site, a seiche in Lake Arrowhead would have no potential to impact people or property on the Project site. Although East Twin Creek and the Santa Ana River are located adjacent to the Project site, they are not enclosed or semi-enclosed basins that would be conducive to reverberation and creation of a seiche. In addition, there are no substantial hillsides on the Project site, and any mudflow that may enter the Santa Ana River, located adjacent to the Project site, would likely originate in the San Bernardino Mountains and thereby be dissipated by the time it reaches the location of the Santa Ana River as it is located adjacent to the Project site. Thus, because the Project would not expose people or property to inundation by seiche, tsunami, or mudflow, no impact would occur and no mitigation is required.

4.8.5 CUMULATIVE IMPACT ANALYSIS

A. Water Quality

During construction, the proposed Project and any other project under construction or land use that generates water quality pollutants within the Santa Ana River Basin (Region 8) of the RWQCB would have the potential to result in a cumulative water quality impact, including erosion and sedimentation. Pursuant to the requirements of the Santa Ana RWQCB, all construction projects that disturb one or more acres of land are required to obtain a NPDES Permit and obtain coverage for construction activities. In addition, the Project, as well as other development in the Project's cumulative development area, would be required to comply with the requirements of the San Bernardino County Municipal Storm Water Management Program. The Project, as well as all other cumulative development in the Santa Ana River Basin (Region 8) of the RWQCB, would also be required to comply with the Santa Ana RWQCB's *Santa Ana River Basin Water Quality Control Plan*. With compliance to these mandatory regulatory requirements, the proposed Project's contribution to water quality impairments would not be cumulatively considerable and no mitigation is required,

Similar to the proposed Project, all other cumulative development within Santa Ana River Basin (Region 8) of the RWQCB, would be required to comply with a site-specific WQMP and incorporate site-specific BMPs into site design as necessary to ensure that runoff does not contribute to water quality violations. With implementation of the Project as designed, including the proposed water quality/detention basin, and mandatory compliance with the Project's WQMP (*Technical Appendix H2*), the Project's surface water runoff would not contribute to a violation of water quality standards

or waste discharge requirements or exacerbate an existing violation. Accordingly, the Project's long-term operational impacts to water quality would not be cumulatively considerable and no mitigation is required.

B. Groundwater Supply

As discussed under Threshold (b) above, the Project would have no adverse impact on the Bunker Hill Groundwater Basin. Thus, the Project has no potential to cause a cumulatively considerable impact to groundwater supply and no potential to contribute to a lowering of the groundwater table.

C. Drainage

The proposed Project's drainage plan would generally maintain the existing drainage pattern of the Project site and area immediately north of the Project site that runs on to the Project site under existing conditions. All drainage would continue to be ultimately discharged to the Santa Ana River as occurs under existing conditions. All runoff from the site would be treated by the Project's water quality/detention basin and BMPs which are designed to remove sediment from storm water runoff. Accordingly, the Project's design and the Project's compliance with its WQMP and associated BMPs, would ensure that the Project's potential to cause on or off-site erosion and siltation would not be cumulatively considerable and no mitigation is required.

D. Flood Hazards

The Project's design would reduce storm water runoff rates from existing conditions. Because the proposed Project would not increase flooding potential either on- or off-site, impacts associated with flooding would not be cumulatively considerable and no mitigation is required.

E. Other Hydrology Hazards

The proposed Project would not introduce a substantial number of people within the Seven Oaks Dam inundation area. In addition, the proposed Project would not expose people or property to inundation by seiche, tsunami, or mudflow. Therefore, the Project's impacts to subject people or property to other hydrology hazards would not be cumulatively considerable.

4.8.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a): Less-than-Significant Impact. Mandatory compliance with the Project's Water Quality Management Plan (WQMP) and its best management practices (BMPs), the San Bernardino County's Municipal Storm Water Management Program and the National Pollutant Discharge Elimination System (NPDES) Permit, would ensure that the Project would not violate any water quality standards or waste discharge requirements during construction of the Project or long-term operation of the Project.

Threshold b): Less-than-Significant Impact. The Project would not adversely affect the groundwater table. Stormwater runoff would be routed to a water quality/detention basin and the Santa Ana River, where percolation into the groundwater table would occur.

Threshold c): Less-than Significant Impact. The Project proposes to install a storm drain system to direct site runoff to a water quality/detention basin before discharge to the Santa Ana River that would reduce peak flow compared to existing conditions. In addition, the Project would be required to comply with best management practices (BMPs) specified in the Project's Water Quality Management Plan (WQMP). As such, the Project would not result in substantial erosion or siltation on-or off-site.

Threshold d): Less-than-Significant Impact. The Project proposes to install a storm drain system that would reduce peak flow discharge to the Santa Ana River compared to existing conditions. Thus, the proposed Project would not substantially increase the rate or amount of surface runoff in a manner that could result in flooding on- or off-site.

Threshold e): Less-than-Significant Impact. The Project's proposed storm drain system is designed to direct on-site runoff to an on-site detention/water quality basin, from which water would be discharged into the Santa Ana River at a peak flow rate that is approximately 25% less than the peak flow rate under existing conditions. Water that runs onto the Project site under existing conditions from off-site is proposed to be routed around the Project site and not comingled with Project site runoff. In addition, the Project would be required to comply with BMPs specified in the Project's WQMP. As such, the Project would not 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.

Threshold f): No Impact. There are no conditions associated with the proposed Project that would otherwise result in the substantial degradation of water quality beyond what is described in Thresholds (a) and (c).

Threshold g): No Impact. The proposed Project does not include housing. Therefore, there is no potential for the Project to place housing within a 100-year flood hazard area.

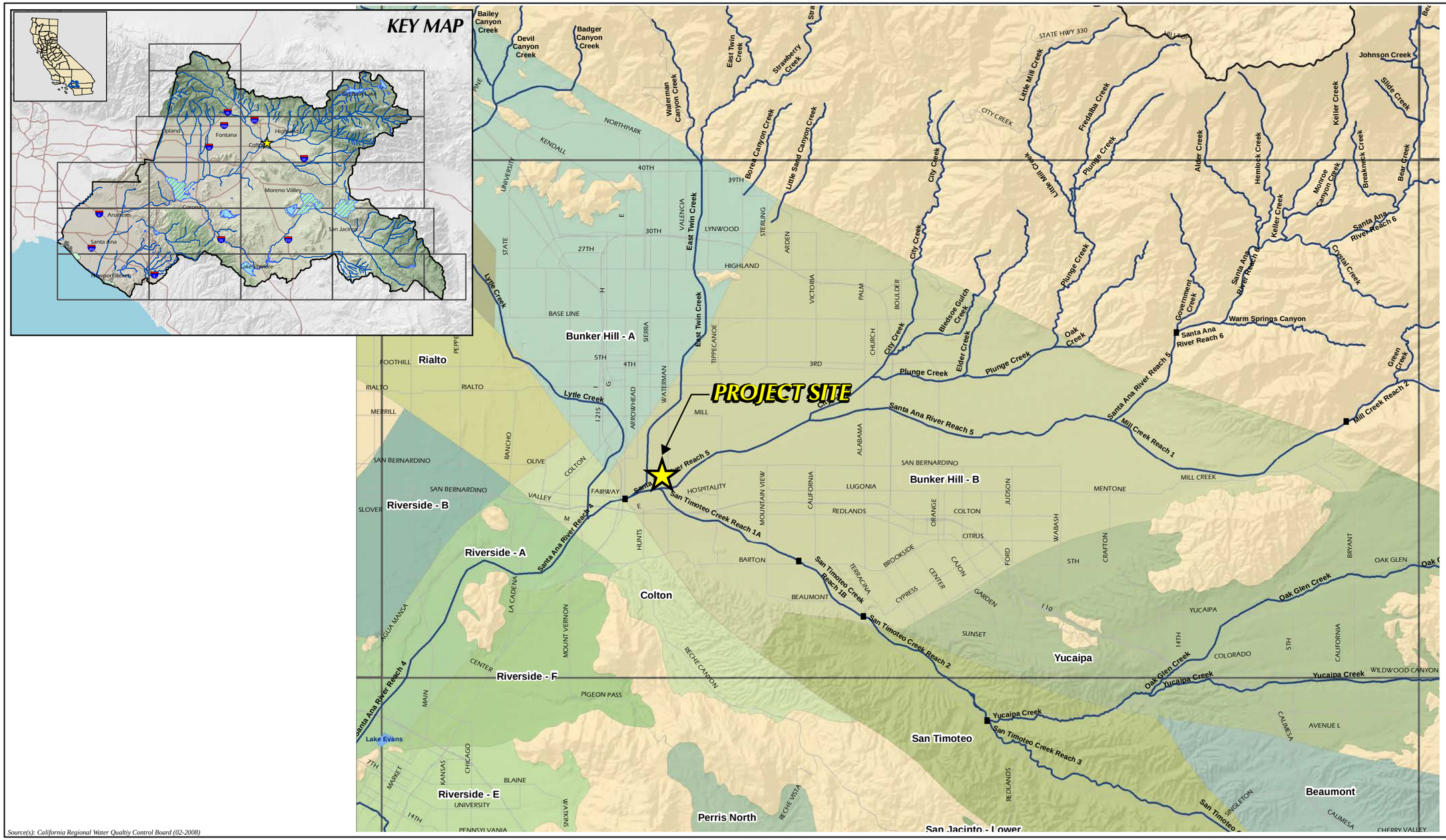
Threshold h:) Less-than-Significant Impact. The 100-year floodplain line is located adjacent to and south of the proposed building's truck trailer parking lot. In addition, the Project's proposed building pad would be constructed above the base flood elevation of the 100-year floodplain. Therefore, the Project would not place structures within a 100-year flood hazard area which would impede or redirect flood flows.

Threshold i): Less-than-Significant Impact. The proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of a levee or the Seven Oaks Dam.

Threshold j: No Impact. The Project would not expose people or property to inundation by seiche, tsunami, or mudflow.

4.8.7 MITIGATION

No potentially significant impact associated with hydrology/water quality would occur as a result of the proposed Project; therefore, no mitigation is required.



Source(s): California Regional Water Quality Control Board (02-2008)

NOT TO SCALE

Figure 4.8-1

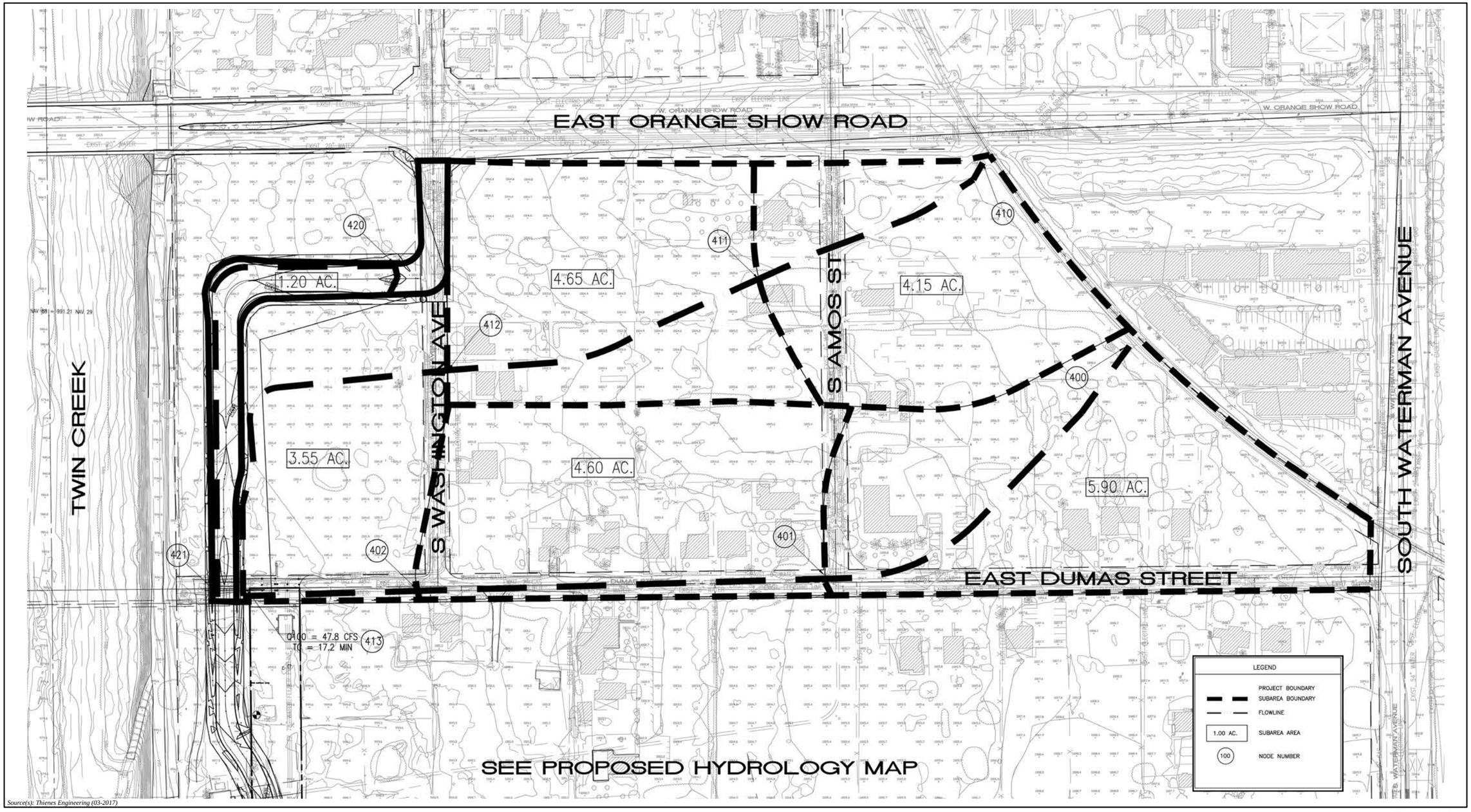
RWQCB REGION 8 BASIN PLAN MAP

Source(s): Thienes Engineering (03-2017)

Figure 4.8-2

NOT TO SCALE

EXISTING CONDITION HYDROLOGY MAP

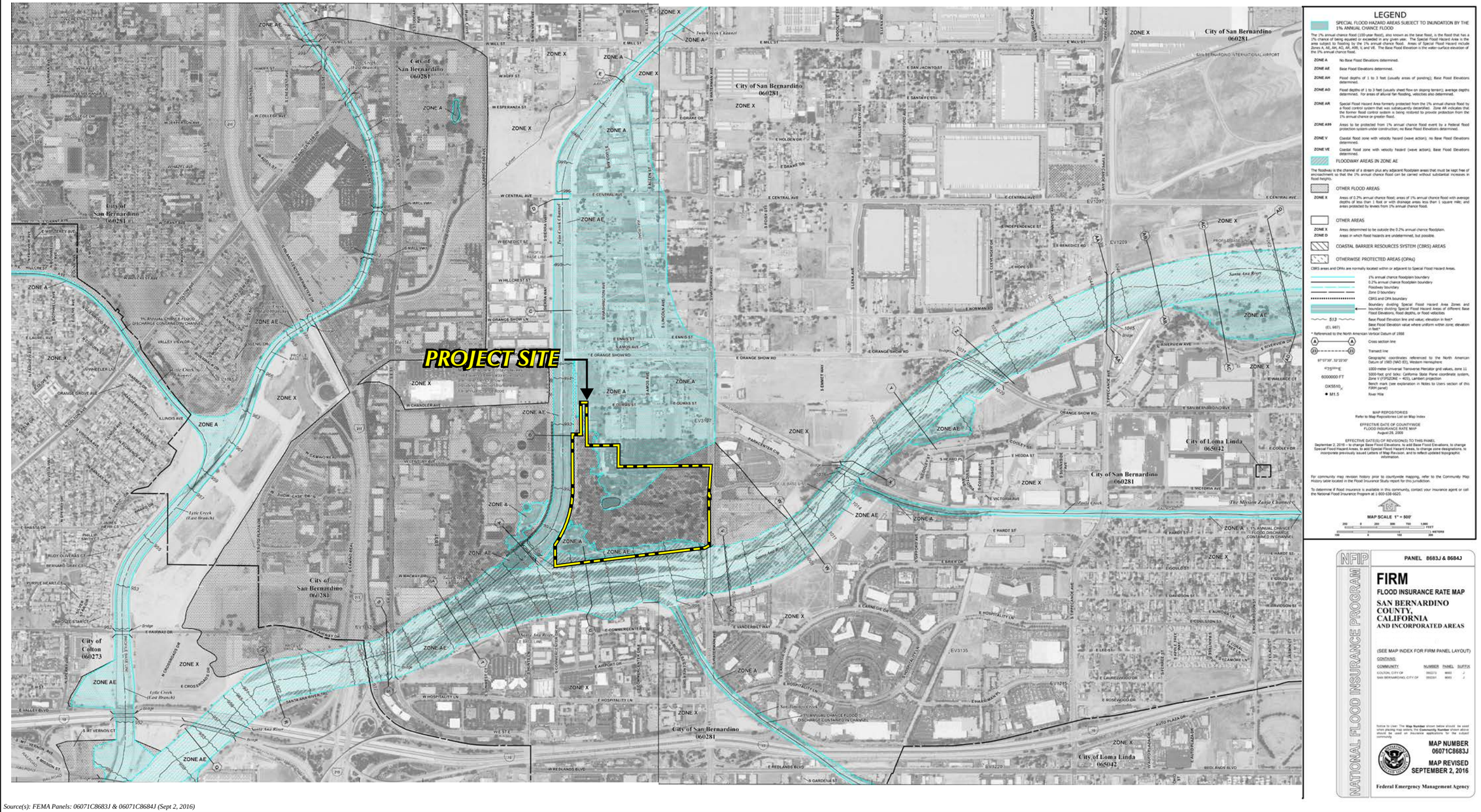


Source(s): Thienes Engineering (03-2017)

Figure 4.8-3

NOT TO SCALE

OFF-SITE HYDROLOGY MAP



Source(s): FEMA Panels: 06071C8683J & 06071C8684J (Sept 2, 2016)

Figure 4.8-4

FEMA FLOOD INSURANCE RATE MAP PANELS 06071C8683J AND 8684J

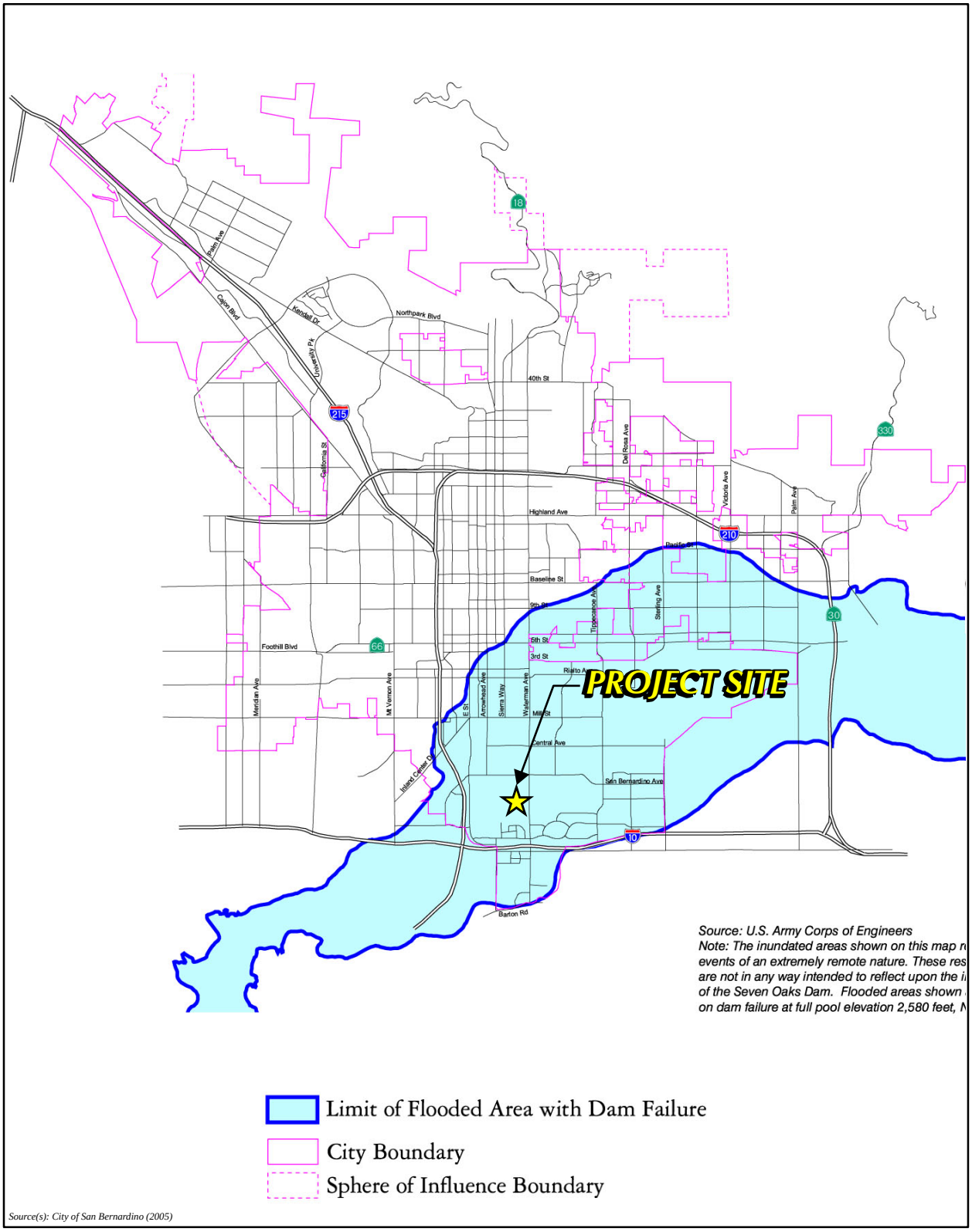
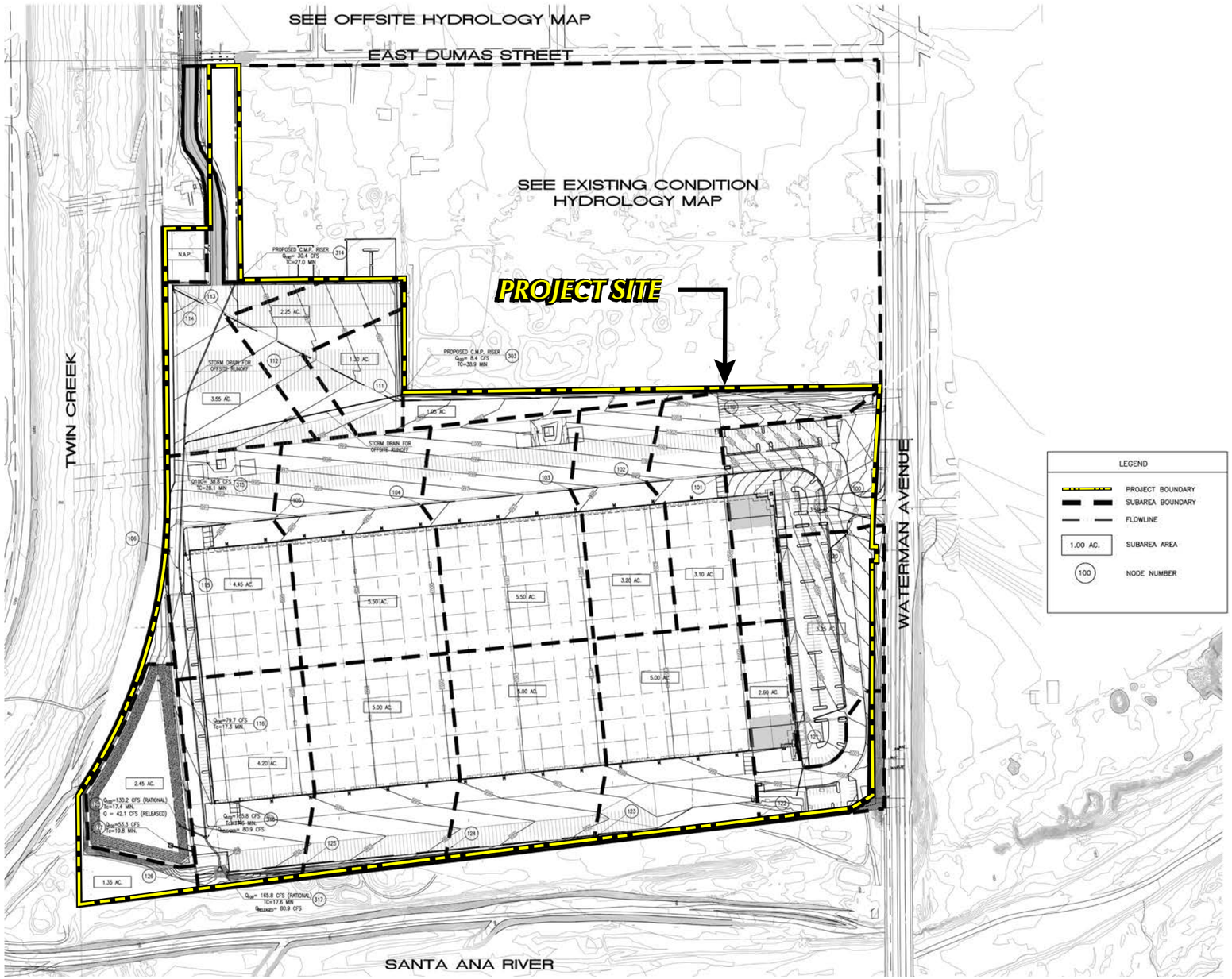


Figure 4.8-5

NOT TO SCALE

SEVEN OAKS DAM INUNDATION AREA

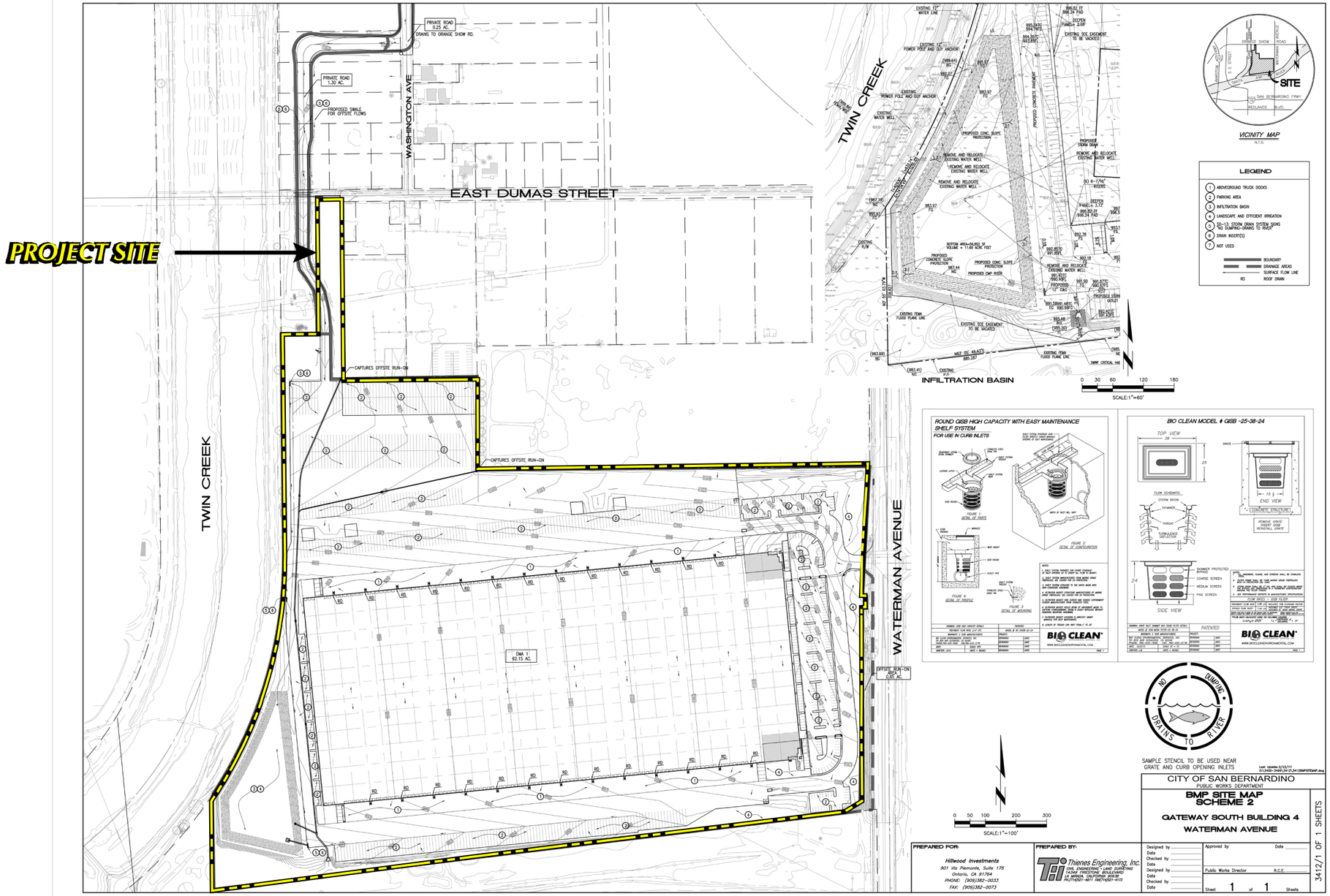


Source(s): Thienes Engineering (03-2017)

Figure 4.8-6

NOT TO SCALE

PROPOSED CONDITION HYDROLOGY MAP



Source(s): Thienes Engineering (03-2017)

Figure 4.8-7

BMP SITE MAP

4.9 LAND USE / PLANNING

This Subsection discusses the Project's consistency with applicable land use and planning policies adopted by the City of San Bernardino and other governing agencies for the purpose of reducing adverse effects on the physical environment. Information used to support the analysis in this Subsection was obtained from the 2005 San Bernardino General Plan (City of San Bernardino, 2005a), and the 2005 San Bernardino General Plan Update and Associated Specific Plans EIR (City of San Bernardino, 2005b). Both the 2005 General Plan, and General Plan Update and Associated Specific Plans EIR are herein incorporated by reference pursuant to CEQA Guidelines § 15150, and are available for review at the City of San Bernardino Community Development Department located at 300 North D Street, 3rd Floor, San Bernardino, CA 92418, as well as on the City of San Bernardino's website noted in Section 7.0, *References*.

4.9.1 EXISTING CONDITIONS

A. Existing Land Use and Development

The majority of the Project site is currently developed and operating as the San Bernardino Public Golf Club with the physical address of 1494 S. Waterman Avenue, San Bernardino, CA. The 18-hole golf course comprises the majority of the central and southern portion of the site. Site improvements associated with the golf course are located north of the fairways and include a clubhouse/restaurant, parking lot, maintenance building, and a golf course driving range. The entry driveway for the golf course is accessible from S. Waterman Avenue. Several Southern California (SCE) transmission lines transect the central portion of the site from east to west.

Existing land uses in the immediate vicinity of the Project site are depicted on Figure 2-1, *Surrounding Land Uses and Development*, in EIR Section 2.0, *Environmental Setting*, and summarized below.

North: Properties located north of the site are designated "Industrial-Industrial light" by the San Bernardino General Plan. Directly north of the Project site is a golf driving range. North of the driving range is land developed with scattered residences and the First Presbyterian Church and its associated infrastructure, all with access via E. Dumas Street. Located north of a small portion of the Project site is Dumas Street. Dumas Street is currently an unimproved roadway. North of Dumas Street is vacant undeveloped land, S. Washington Avenue, land developed with scattered residential homes, truck trailer parking lots, S. Amos Street, and the Atchison, Topeka, and Santa Fe Railway (ATSF).

South: Properties located directly south of the site are designated "Public Facility/Quasi-Public - Publicly Owned Flood Control (PFC)" by the San Bernardino General Plan and consist of the Santa Ana River and Wash. The San Timoteo Wash joins the Santa Ana River and Wash southeast of the Project site. South of the Santa Ana River and Wash and the San Timoteo Wash is the Santa Ana River Trail. South of the Santa Ana River Trail is land developed with office and commercial uses.

East: S. Waterman Avenue forms the eastern boundary of the Project site. East of S. Waterman Avenue are commercial and office uses and a portion of the Santa Ana River and Wash.

West: Property located directly west of the site is designated "Public Facility/Quasi-Public -Publicly Owned Flood Control (PFC) and consist of East Twin Creek and an associated unpaved trail that traverses along the bank of the channel. West of East Twin Creek is the San Bernardino Water Reclamation Facility (WRF).

4.9.2 APPLICABLE LAND USE AND PLANNING POLICIES

A. San Bernardino General Plan

1. Land Use Element

The Land Use Element designates the general distribution and intensity of land uses and provides general development guidelines and policy direction for the use and development of land within the planning area. The Land Use Element provides development standards related to each land use category, and general plan policy level direction for an array of land-use related issues. It designates general site development standards and the distribution, location, and extent of land uses, such as housing, business, industry, open space, natural resources, recreation, and public/quasi-public uses. (City of San Bernardino, 2005a, pp. 1-11, and 2-1 through 2-2)

2. Housing Element

The Housing Element assesses the City's current and projected housing needs, and sets out policies and proposals for the improvement of housing and the provision of adequate sites for housing to meet the needs of all economic segments of the City. (City of San Bernardino, 2005a, pp. 1-11, 3-1) Under existing conditions, the majority of the Project site is developed with the San Bernardino Public Golf Club. The Project does not propose any housing.

3. Economic Development

The Economic Development Element addresses the economic outlook and opportunities in the community and presents strategies to enhance the City's financial health. The purpose of the Economic Development Element is to guide the City in expanding the local economy, which provides jobs, attracts and retains businesses, supports diverse and vibrant commercial areas, and brings in sufficient revenue to support local programs and services. (City of San Bernardino, 2005a,p p. 1-11, 4-1)

4. Community Design Element

The Community Design Element assesses the aesthetic qualities of the community and provides design guidelines to help improve the community's image. The Community Design Element addresses the following aesthetic issues: a) community wide design issues, b) district or neighborhood aesthetic consideration, and c) individual land use design considerations. (City of San Bernardino, 2005a, pp. 1-11, 5-1)

5. Circulation Element

The Circulation Element identifies the general location and extent of existing and proposed major transportation facilities, including major roadways, rail, transit systems, and airports. The main purpose of the Circulation Element is to design and improve a circulation system to meet the current and future needs of all its residents. (City of San Bernardino, 2005a, pp. 1-11, 6-2)

6. Public Facilities and Services Element

The Public Facilities and Services Element identifies the City's goals, policies, and programs concerning the provision of public facilities and services, including: fire protection and emergency services, police services, schools, community centers, libraries and cultural facilities. (City of San Bernardino, 2005a, p. 7-1)

7. Parks, Recreation, and Trails Element

The Parks, Recreation, and Trails Element provides policy guidance that addresses the acquisition, development, maintenance, and improvement of the City's parks, community centers, and trails. The Parks and Recreation Element is closely linked with the Land Use, Circulation, and Natural Resources Elements. (City of San Bernardino, 2005a, pp. 1-11, 8-1)

8. Utilities Element

The Utilities Element provides guidance for the City's infrastructure and utilities, which include: wastewater collection and treatment, water transmission, distribution storage, and treatment, storm drains and flood control, solid waste collection and disposal, electricity, natural gas, telecommunications, and geothermal resources. (City of San Bernardino, 2005a, pp. 1-11, 9-1, 9-2)

9. Safety Element

The Safety Element addresses: geologic and seismic, hazardous materials, wind and fire, aviation, and flooding issues in the community. The Safety Element includes policies that address ways to minimize any economic disruption and accelerate the City's recovery following a disaster. (City of San Bernardino, 2005a, pp. 1-11, 10-1)

10. Historical and Archaeological Element

The Historical and Archaeological Element addresses the enhancement and preservation of the City's historic resources. The Historical and Archaeological Element is closely linked with the Land Use and Natural Resources Elements. Together, these Elements address the preservation and enhancement of the City's historical resources. (City of San Bernardino, 2005a, p. 1-11, 11-1)

11. Natural Resources and Conservation Element

The Natural Resources and Conservation Element provides guidance for the preservation, use, and enhancement of the City's natural resources, which include: biological resources, natural features,

mineral resources, and air quality. The goals and policies in this Element are intended to maintain, improve, or preserve the quality and supply of the City's natural resources. (City of San Bernardino, 2005a, pp. 1-11, 12-1).

12. Energy and Water Conservation Element

The Energy and Water Conservation Element addresses the efficient use and conservation of the City's valuable energy and water resources. This Element is closely linked with the Land Use, Natural Resources, Public Facility, and Utility Elements. (City of San Bernardino, 2005a, p. 1-11,13-1).

13. Noise Element

The Noise Element provides policy guidance that addresses the generation, mitigation, avoidance, and the control of excessive noise. The Noise Element is closely linked with the Land Use and Circulation Elements as well as the Development Code, which contains the City's noise standards. (City of San Bernardino, 2005a, pp. 1-11, 14-1)

B. Existing General Plan/Zoning Land Uses

The City currently utilizes a single map system that combines the General Plan and Zoning maps. The existing General Plan Land Use Plan and Zoning Map consist of 39 land use designations grouped under five broad categories: Residential, Commercial, Industrial, Other, and Open Space. There are two existing overlays: The Hillside Management Overlay and the Foothill Fire Zone Overlay. These overlays are located in the mountainous areas of the City and do not pertain to the Project site. (City of San Bernardino, 2005b, p. 5.8-2)

As shown on Figure 2-2, *Existing General Plan Land Use Designations*, in EIR Section 2.0, *Environmental Setting*, the General Plan designates the majority of the Project site for "Open Space-Public/Commercial Recreation (PCR)" with intended uses as intensive recreational uses, such as golf courses, sports complexes, and fair grounds, as approved through the public review process. A small area in the northwest portion of the Project site is designated "Industrial-Industrial Light (IL)." The City of San Bernardino accommodates a full spectrum of industrial related employment uses, such as manufacturing, distribution, research and development, office, and mineral extraction, at a range of intensities to meet the demand of current and future residents. In addition to the uses described in Table LU-2, *Land Use Designations*, in the San Bernardino General Plan, other uses such as parks and other public/institutional uses that are determined to be compatible with and oriented towards the needs of industrial users may also be allowed. The "Industrial-Industrial Light (IL)" land use designation allows for a maximum intensity floor-to-area ratio (FAR) of .75 and intended uses consisting of a variety of light industrial uses, including warehousing/distribution, assembly, light manufacturing, research and development, mini-storage, and repair facilities conducted within enclosed structures as well as supporting retail and personal uses. (City of San Bernardino, 2005a, Table LU-2)

As shown on Figure 2-3, *Existing Zoning Designations*, in EIR Section 2.0, *Environmental Setting*, the majority of the Project site is zoned "Open Space – Public/Commercial Recreation (PCR)" and a small area in the northwest portion of the Project site is zoned "Industrial - Industrial Light (IL)"

C. Existing Development Code

The City's Development Code is the primary tool for implementing the General Plan and provides development standards, identifies allowed uses, and specifies other regulations. The Development Code provides detailed guidance for development based on and consistent with land use policies established in the General Plan. (City of San Bernardino, 2005b , p. 5.8-2)

D. Existing Specific Plans

Specific plans are documents that provide focused guidance and regulation for defined areas of the City. San Bernardino has six approved specific plans governing land use development in designated areas throughout the City. The proposed Project is not located within a Specific Plan area.

E. Sphere of Influence

The Sphere of Influence (SOI) is comprised of 6,829 acres, or 11 square miles, of unincorporated County territory. The County of San Bernardino has jurisdiction over these areas and the County's General Plan Land Use Plan provides land use designations for the SOI. As shown on *San Bernardino General Plan Update and Associated Specific Plans EIR* Figure 3.1-2, *City Boundaries and Sphere of Influence*, the Project site is not located within the boundaries of the City's SOI. (City of San Bernardino, 2005b, p. 5.8-5 and Figure 3.1-2)

F. San Bernardino International Airport (SBIA)

The San Bernardino International Airport and Trade Center (SBIA) is located in the southeastern edge of the City. The SBIA is comprised of two portions: 1) the airport and related facilities of the former Norton Air Force Base, and 2) the Trade Center, which encompasses the non-airport portions of the property. The Airport contains approximately 1,350 acres and the Trade Center portion of the SBIA is composed of two noncontiguous areas of the former Norton Air Force Base totaling approximately 652 acres. A Comprehensive Land Use Plan (CLUP) and the Airport Master Plan for the SBIA are not adopted as of the General Plan Update or the existing conditions of the proposed Project. (City of San Bernardino, 2005b, pp. 5.8-5 and 5.8-9) Because no CLUP has been prepared for the SBIA, there can be no CLUP consistency analysis conducted for the proposed Project.

In addition, Sections 11010 of the Business and Professions Code and Sections 1102.6, 1103.4, and 1353 of the Civil Code require buyer notification/disclosure for lands within the airport influence area, a 2.0-mile radius from the airport runways. (City of San Bernardino, 2005b, pp. 5.8-5 and 5.8-9) The Project site is located approximately 1.75 miles southwest of the SBIA.

G. *Southern California Association of Government's (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)*

As discussed in EIR Section 2.0, *Environmental Setting*, the Southern California Association of Governments (SCAG) is a Joint Powers Authority under California state law, established as an association of local governments and agencies that voluntarily convene as a forum to address regional issues. Under federal law, SCAG is designated as a Metropolitan Planning Organization (MPO) and under state law as a Regional Transportation Planning Agency and a council of governments. The agency develops long-range regional transportation plans including sustainable communities strategy and growth forecast components, regional transportation improvement programs, regional housing needs allocations and a portion of the South Coast Air Quality Management District (SCAQMD). (SCAG, 2017)

On April 4, 2016, SCAG adopted the *2016-2040 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS)* with goals to: 1) align the plan investments and policies with improving regional economic development and competitiveness; 2) maximize mobility and accessibility for all people and goods in the region; 3) ensure travel safety and reliability for all people and goods in the region; 4) preserve and ensure a sustainable regional transportation system; 5) maximize the productivity of the transportation system; 6) protect the environment and health of SCAG residents by improving air quality and encouraging active transportation (e.g. bicycling and walking); 7) actively encourage and create incentives for energy efficiency, where possible; 8) encourage land use and growth patterns that facilitate transit and active transportation; and 9) maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies (SCAG does not yet have an agreed-upon security performance measure). (SCAG, 2016a, p. 64)

SCAG refers to the region's network for moving goods as their "goods movement system," which relies on a complex infrastructure that supports multiple modes of transportation. The *2016-2040 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS)* contains an appendix entitled, *Transportation System/Goods Movement*, which is applicable to the Project because of its proposed development of a high-cube logistics warehouse building. The goods movement system in the SCAG region is comprised of deep-water seaports (San Pedro Bay Ports (Ports of Los Angeles and Long Beach) and Heueme), land ports, air cargo facilities, railroads, warehouse and distribution centers, roads (including interstates, highways, and local roads) and a primary highway freight system (PHFS) that covers about 1,477 miles of highway in the SCAG region. In southwestern San Bernardino County, I-215, I-15, I-10, and SR-60 are identified as part of the PHFS. The goods movement system provides the backbone for the flow of goods between businesses and consumers. (SCAG, 2016b, pp. 2-4)

Because the Project site is located within the SCAG region, an analysis of the Project's consistency with SCAG's goals is provided in Subsection 4.9.4. In addition, the Project's consistency with the *2016-2040 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS)* is also analyzed in EIR Sections 4.2, *Air Quality* and 4.11, *Transportation/Circulation.*

H. South Coast Air Quality Management District Air Quality Management Plan (SCAQMD AQMP)

California Health & Safety Code § 40702 et seq., the California Clean Air Act, requires that an Air Quality Management Plan (AQMP) be developed and then updated every three years for air basins with non-attainment status. As discussed in EIR Section 4.2 *Air Quality*, the Project site is located in the South Coast Air Basin (SCAB). The SCAB is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD), the agency charged with bringing air quality in the SCAB into conformity with federal and state air quality standards. Air quality within the SCAB is regulated by the SCAQMD and standards for air quality are documented in the SCAQMD's 2016 AQMP. (SCAQMD, 2016c).

The SCAQMD AQMP is a plan for the regional improvement of air quality. Projects such as the proposed Project relate to the air quality planning process through the growth forecasts that were used as inputs into the regional transportation model. If a proposed project is consistent with these growth forecasts, and if all available emissions reduction strategies are implemented as effectively as possible on a project-specific basis, then the project is consistent with the AQMP. The proposed Project's consistency with the AQMP is discussed generally below in Subsection 4.9.4 and in more detail in EIR Subsection 4.2, *Air Quality*.

4.9.3 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to land use/planning if the Project or any Project-related component would:

a. *Physically divide an established community;*

b. *Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or*

c. *Conflict with any applicable habitat conservation plan or natural community conservation plan?*

4.9.4 IMPACT ANALYSIS

Threshold a) Would the Project physically divide an established community?

Under existing conditions, the majority of the Project site is developed and operating as the San Bernardino Public Golf Club. The 18-hole golf course comprises the majority of the central and southern portion of the site. Site improvements associated with the golf course are located north of the golf course and an entry driveway is accessible from S. Waterman Avenue. Directly adjacent properties are comprised of the Santa Ana River, East Twin Creek, S. Waterman Avenue, and a golf driving range. North of the off-site driving range are scattered residences. The Project site is either surrounded by roadways, water features, or industrial commercial development. The nearest

established communities are located west of I-215 and south of I-10. Under existing conditions, there is no established community that is not already physically divided from the Project site via an existing roadway.

In addition to the Project site bordering East Twin Creek on the west and the Santa Ana River on the south, both of which are designated by the General Plan as Public Facility/Quasi-Public-Publicly Owned Flood Control (PFC), development to the north of the Project site is either developed or planned with "Industrial-Industrial Light" land uses, and development to the east of the Project site and east of S. Waterman Avenue are either developed or planned with "Industrial-Office Industrial Park (OIP).

The Project proposes the demolition of existing structures and the construction and operation of one high cube logistics warehouse building with associated improvements. Based on the existing and planned developments surrounding and in the immediate vicinity of the Project site, the Project would effectively serve as an extension of the existing and planned development patterns surrounding and in the immediate vicinity of the Project site and therefore would not physically divide an established community. Therefore, impacts would be less than significant and no mitigation is required.

Threshold b) Would the Project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Provided below is a discussion of the proposed Project's consistency with the land use and planning policy documents described above in Subsection 4.9.2 that are applicable to the proposed Project.

A. Consistency with San Bernardino General Plan

As shown on Figure 2-2, *Existing General Plan Land Use Designations*, in EIR Section 2.0, *Environmental Setting*, the General Plan designates the majority of the Project site for "Open Space-Public/Commercial Recreation (PCR)" with intended uses as intensive recreational uses, such as golf courses, sports complexes, and fair grounds, as approved through the public review process. A small area in the northwest portion of the Project site is designated "Industrial-Industrial Light (IL)."

The project's proposed warehouse use is not consistent with the "Open Space-Public/Commercial Recreation (PCR)" General Plan land use designation. As discussed in EIR Section 3.0, *Project Description*, the Project seeks a General Plan Amendment (GPA 16-09) to change the General Plan land use designation on the portion of the Project site currently designated Open Space-Public/Commercial Recreation (PCR) to "Industrial – Industrial Light (IL)" so that the entire Project site is designated "Industrial Light (IL)." Refer to Figure 3-4, *General Plan Amendment (GPA 16-09)* for a depiction of the existing land use designations and the proposed land use designation.

As shown on Figure 2-3, *Existing Zoning Designations*, in EIR Section 2.0, *Environmental Setting*, the majority of the Project site is zoned "Open Space – Public/Commercial Recreation (PCR)" and a small

area in the northwest portion of the Project site is zoned "Industrial - Industrial Light (IL)." The Project's proposed warehouse building is not consistent with the City's "Open Space-Public/Commercial Recreation (PCR)" zoning designation. As discussed in EIR Section 3.0, *Project Description*, the Project seeks a Development Code Amendment (DCA 16-11) to change the zoning designation on the portion of the Project site currently designated "Open Space– Public/Commercial Recreation (PCR)" so that the entire Project site is zoned "Industrial - Industrial Light (IL)."

Although the Project would not be consistent with the existing General Plan land use and zoning designations, such an inconsistency would only be considered significant if it were to result in significant, adverse effects to the environment. As discussed and shown on Figures 2-1 through Figure 2-4 of EIR Section 2.0, *Environmental Setting*, under existing conditions, the Project site is surrounded and development in the immediate vicinity of the Project site, is comprised of land developed or planned with industrial, commercial, or public facilities. Therefore, as discussed and as shown in the above-mentioned exhibits, the Project would be developed consistent with the development patterns of the existing and planned land uses surrounding and in the immediate vicinity of the Project site.

Although implementation of the proposed Project would result in significant environmental impacts, such effects are addressed in each appropriate Subsection of this EIR, and mitigation is proposed to reduce impacts to a less-than-significant level.

B. Consistency with SCAGs RTP/SCS

Development of the proposed Project would not conflict with the applicable goals of *SCAG's 2016-2040 RTP/SCS*. The RTP/SCS's *Transportation System/Goods Movement* appendix is applicable to the Project because the Project is located in the SCAG region and the Project proposes one high cube logistics warehouse building for intended uses consisting of a variety of light industrial uses, including warehousing/distribution. Because the Project site is located within the SCAG region, an analysis of the Project's consistency with SCAG's goals is provided in Table 4.9-1, *Analysis of Consistency with SCAG 2016-2040 RTP/SCS Strategy Goals*. In addition, the Project's consistency with the *2016-2040 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS)* is also analyzed in EIR Sections 4.2, *Air Quality* and 4.11, *Transportation/Circulation*.

Table 4.9-1 Analysis of Consistency with SCAG 2016-2040 RTP/SCS Strategy Goals

2016 RTP/SCS GOAL	GOAL STATEMENT	PROJECT CONSISTENCY DISCUSSION
G1	Align the plan investments and policies with improving regional economic development and competitiveness.	No inconsistency identified. This policy would be implemented by cities and the counties within the SCAG region as part of comprehensive local and regional planning efforts.
G2	Maximize mobility and accessibility for all people and goods in the region.	No inconsistency identified. The Project Site is located approximately 74 miles from the Ports of LA/Long Beach. As such, development of the Site as a high cube

		logistics warehouse building would efficiently facilitate the regional movement of goods from their arrival into the United States at the Ports, to their delivery to the end consumers. EIR Section 4.11, *Transportation/ Circulation*, evaluates Project-related traffic impacts and specifies the mitigation measures that would be imposed to ensure that roadway and intersection improvements needed to accommodate Project traffic volumes are implemented concurrent with proposed development. Project trucks would be required to travel on designated truck routes in the City of San Bernardino to ultimately reach the state highway system to facilitate goods movement throughout the region.
G3	Ensure travel safety and reliability for all people and goods in the region.	No inconsistency identified. As disclosed in Threshold (d) in EIR Section 4.11, *Transportation/Circulation*, there is no component of the Project that would result in a substantial safety hazard to motorists. Furthermore, EIR Section 4.11 specifies specific mitigation measures that would be implemented by the Project to ensure that the roadway and intersection improvements meet safety standards and operate as efficiently as possible.
G4	Preserve and ensure a sustainable regional transportation system.	No inconsistency identified. This policy would be implemented by cities and the counties within the SCAG region as part of the overall planning and maintenance of the regional transportation system. The Project would have no adverse effect on such planning or maintenance efforts.
G5	Maximize the productivity of our transportation system.	No inconsistency identified. This policy would be implemented by cities and the counties within the SCAG region as part of the overall planning and maintenance of the regional transportation system. The Project would have no adverse effect on such planning or maintenance efforts.
G6	Protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking).	No inconsistency identified. An analysis of the Project's environmental impacts is provided throughout this EIR and mitigation measures are specified where warranted. Air quality is addressed in EIR Section 4.2, *Air Quality*, and mitigation measures are recommended to reduce, to the extent feasible, the Project's air quality impacts. Additionally, and as discussed in EIR Section 4.8, *Greenhouse Gas Emissions*, the Project would incorporate measures related to building design, landscaping, and energy systems to promote the efficient use of energy.
G7	Actively encourage and create incentives for energy efficiency, where possible.	No inconsistency identified. This policy provides guidance to City staff to establish local incentive programs to encourage and promote energy efficient development. Additionally, and as discussed in EIR

		Section 4.8, *Greenhouse Gas Emissions*, the Project would incorporate various measures related to building design, landscaping, and energy systems to promote the efficient use of energy.
G8	Encourage land use and growth patterns that facilitate transit and active transportation.	No inconsistency identified. This policy provides guidance to City staff to establish a local land use plan that facilitates the use of transit and non-motorized forms of transportation.
G9	Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies (SCAG does not yet have an agreed upon security/performance measure.	No inconsistency identified. This policy provides guidance to City staff to monitor the transportation network and to continue to coordinate with other agencies as appropriate.

Source: (SCAG, 2016a, p. 64)

C. Consistency with SCAQMD AQMP

The SCAQMD *Final 2016 AQMP* is the applicable air quality plan for the Project area and the SCAQMD has established two criteria for determining consistency with the *Final 2016 AQMP* pursuant to Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD's CEQA Air Quality Handbook. Refer to EIR Section 4.2, *Air Quality*, for a comprehensive analysis of the Project's consistency with the SCAQMD AQMP. The air quality conditions presented in the *Final 2016 AQMP* are based in part on the growth forecasts identified by SCAG in its *2016-2040 RTP/SCS*. The *2016-2040 RTP/SCS* anticipates that development in the various incorporated and unincorporated areas within the SCAB will occur in accordance with the adopted general plans for these areas. Development projects that propose to increase the intensity and/or use on an individual property may result in increased stationary area source emissions and/or vehicle source emissions when compared to the *Final 2016 AQMP* assumptions. If a project does not exceed the growth projections in the applicable local general plan, then the project is considered to be consistent with the growth assumptions in the AQMP.

Under existing conditions, a majority of the Project site designated for "Open Space-Public/Commercial Recreation (PCR)" land uses by the City of San Bernardino General Plan; a small portion of the site is designated for "Industrial-Industrial Light (IL)" land uses. The General Plan Amendment proposed by the Project would designate the entire Project site for "Industrial-Light (IL)" land uses. Accordingly, the Project would develop the site with more intense land uses than anticipated by the *Final 2016 AQMP*. However, under CEQA, an inconsistency with the AQMP is only significant if the inconsistency results in a significant environmental impact, such as an exceedance of operational-source emissions thresholds established by the local air district.

As discussed in EIR Subsection 4.2, the Project's construction and operational regional criteria pollutant emissions would exceed the applicable the SCAQMD daily emissions thresholds. Accordingly, the Project's inconsistency with the growth projections contained in the *Final 2016 AQMP*, and the resulting Project-related emissions that exceed daily emissions thresholds would result

in a significant environmental impact. Thus, the Project would not be consistent with the *Final 2016 AQMP* and result in a significant land use/planning impact.

Threshold c) Would the Project conflict with any applicable habitat conservation plan or natural community conservation plan?

The County of San Bernardino has not adopted any habitat conservation plans in or near the City of San Bernardino. The City's Development Code addresses the development standards and uses for specific areas within the City. (City of San Bernardino, 2005b, p, 5.8-41) As such, the proposed Project has no potential to conflict with any applicable habitat conservation plan or natural community conservation plan, because no such applicable plans exist. Accordingly, no impact would occur.

4.9.5 CUMULATIVE IMPACT ANALYSIS

Because the focus of this EIR Subsection is on the proposed Project's consistency with plans and policies, there is no interactive effect on such issues with other pending development projects in the City of San Bernardino or surrounding areas, including all of the cumulative projects listed in Table 4.0-1, *Cumulative Development Land Use Summary* in EIR Section 4.0, *Environmental Analysis*, with the exception of the Project's inconsistency with the *Final 2016 AQMP* as it relates to emissions of air pollutant emissions beyond those projected by the AQMP. All development projects in the SCAB, including the proposed Project, that would result in development that is more air-pollutant intensive than projected by the local jurisdiction's General Plan, would exceed the growth projections of the *Final 2016 AQMP*, leading to significant cumulative effects associated with the SCAQMD's ability to attain the *AQMP's* air quality goals. Thus, the Project's inconsistency with the *Final 2016 AQMP* is considered to be a cumulatively considerable land use/planning impact.

4.9.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a): No Impact. There are no components of the proposed Project that would result in the physical division of an established community. Therefore, no impact would occur as a result of the Project.

Threshold b): Significant Direct and Cumulatively Considerable Impact. The Project would be inconsistent with the growth projections for the Project site assumed by the *Final 2016 AQMP*, and the inconsistency would result in a significant environmental impact due to long-term criteria pollutant emissions. Because the *Final 2016 AQMP* is a long-range plan intended to reduce impacts to the environment, the Project's inconsistency is regarded as a significant direct and cumulatively considerable land use/planning impact.

Threshold c): No Impact. Because no adopted habitat conservation plans are applicable to the Project site, the Project would not conflict with an adopted habitat conservation plan. Therefore, no impact would occur as a result of the Project.

4.9.7 MITIGATION

Refer to EIR Section 4.2, *Air Quality*, for mitigation measures that apply to air pollutant emissions that are pertinent to the Project's inconsistency with the SCAQMD's *Final 2016 AQMP*.

4.9.8 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold b): Significant and Unavoidable Impact. Because the SCAQMD's daily significance thresholds for air pollutants would be exceeded during the Project's operation even after the implementation of feasible mitigation measures, the Project would not fully mitigate its significant conflict with the *Final 2016 AQMP*. A majority of the Project's operational air emissions would be from mobile sources (vehicle tailpipe emissions) stemming from vehicle engines and fuel sources, that are not within the purview of the City of San Bernardino to control or enforce, and are beyond the control of the Project Applicant. Thus, no feasible mitigation is available to lessen this impact to below a level of significance.

4.10 NOISE

This Subsection addresses the environmental issue of noise. The information contained herein is based in part on information contained in the technical study prepared by Urban Crossroads, Inc. titled, *Gateway South Building 4, Noise Impact Analysis, City of San Bernardino,* dated June 1, 2017 and appended to this EIR as *Technical Appendix I1* (Urban Crossroads, Inc., 2017d). All references used in this Subsection as listed in EIR Section 7.0, *References*.

4.10.1 NOISE FUNDAMENTALS

A. Noise Definitions

Noise is simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise sources by discriminating against very low and very high frequencies of the audible spectrum. dBA are adjusted to reflect only those frequencies which are audible to the human ear. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates ten times greater than before, which is perceived by the human ear as being roughly twice as loud. The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA at approximately 100 feet, which can cause serious discomfort. Another important aspect of noise is the duration of the sound and the way it is described and distributed in time. (Urban Crossroads, Inc., 2017d, pp. 11-12)

B. Noise Descriptors

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most commonly used figure is the equivalent level (Leq). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (Leq) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period and is commonly used to describe the “average” noise levels within the environment. (Urban Crossroads, Inc., 2017d, p. 10)

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Day-Night Average Noise Level (LDN) and the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The LDN and CNEL are weighted averages of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The LDN time of day corrections include the addition of 10 decibels to dBA Leq sound levels at night between 10:00 p.m. and 7:00 a.m. The CNEL time of day corrections require the addition of 5 decibels to dBA Leq sound levels in the evening from 7:00 p.m. to 10:00 p.m., in addition to the corrections for the LDN. These additions are made to account for the noise sensitive time periods during the evening and night hours

when sound appears louder. LDN and CNEL do not represent the actual sound level heard at any particular time, but rather represent the total sound exposure. The City of San Bernardino relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources, and therefore, this analysis uses the CNEL noise level to apply the more conservative evening hour corrections to the 24-hour noise levels. (Urban Crossroads, Inc., 2017d, p. 12)

C. Sound Propagation

When sound propagates (spreads) over a distance, it changes in level and frequency content. The manner in which noise reduces distance depends on the following factors.

1. Geometric Spreading

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (Urban Crossroads, Inc., 2017d, p. 12)

2. Ground Absorption of Noise

The propagation path of noise from a highway to a receptor is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receptor, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receptor such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (Urban Crossroads, Inc., 2017d, p. 11)

3. Atmospheric Effects

Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also increase noise levels. (Urban Crossroads, Inc., 2017d, p. 13)

4. Shielding

A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receptor. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only have an "out of sight, out of mind" effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearby residents. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The Federal Highway Administration (FHWA) does not consider the planting of vegetation to be a noise abatement measure. (Urban Crossroads, Inc., 2017d, p. 13)

D. Land Use Compatibility with Noise

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages state and local government to regulate land development in such a way that noise-sensitive land uses are either not located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (Urban Crossroads, Inc., 2017d, p. 14)

E. Community Response to Noise

A variety of reactions is expected from people exposed to any given noise environment. Surveys show that about 10% of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of 1 dBA is associated with approximately 2% more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. Despite this variability in behavior on an individual level, the population as a whole can be expected to exhibit the following responses to changes in noise levels. An increase or decrease of 1 dBA cannot be perceived except in carefully controlled laboratory experiments, a change of 3 dBA are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (Urban Crossroads, Inc., 2017d, p. 14)

Periodic exposure to high noise levels in short duration, such as project construction, is typically considered an annoyance and not impactful to human health. It would take several years of exposure to high noise levels to result in hearing impairment. (Urban Crossroads, Inc., 2017d, p. 15)

F. Vibration

According to the Federal Transit Administration (FTA) T*ransit Noise Impact and Vibration Assessment*, vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency. (Urban Crossroads, Inc., 2017d, pp. 15-16)

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings, but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal, and is most frequently used to describe the effect of vibration on the human body. Decibel notation (VdB) is commonly used to measure RMS. Decibel notation (VdB) serves to reduce the range of numbers used to describe human response to vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receivers for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment. (Urban Crossroads, Inc., 2017d, p. 16)

The background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. (Urban Crossroads, Inc., 2017d, p. 16)

4.10.2 REGULATORY SETTING

Following are federal, state, and local regulations related to noise that are applicable to the proposed Project.

A. OSHA Requirements

The Occupational Safety and Health Administration (OSHA) requires hearing protection be provided by employers in workplaces where the noise levels may, over long periods of exposure to high noise levels, endanger the hearing of their employees. Standard 29 CFR, Part 1910 indicates the noise levels under which a hearing conservation program is required to be provided to workers exposed to high noise levels. (Urban Crossroads, Inc., 2017d, pp. 24-25)

B. State of California Noise Requirements

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 which is to be prepared according to guidelines adopted by the Governor's Office of Planning and Research (OPR). The purpose of the Noise Element is to limit the exposure of the community to excessive noise levels. (Urban Crossroads, Inc., 2017d, p. 19) The City of San Bernardino General Plan's Noise Element is discussed below.

C. State of California Green Building Standards Code

The 2016 State of California's Green Building Standards Code contains mandatory measures for non-residential building construction in Section 5.507 on Environmental Comfort. These noise standards are applied to new construction in California for the purpose of controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within a noise contour of an airport, freeway, railroad, and other areas where noise contours are not readily available. If the development falls within an airport or freeway 65 dBA CNEL noise contour, the combined sound transmission class (STC) rating of the wall and roof-ceiling assemblies must be at least 50. For those developments in areas where noise contours are not readily available and the noise level exceeds 65 dBA Leq for any hour of operation, a wall and roof-ceiling combined STC rating of 45, and exterior windows with a minimum STC rating of 40 are required (Section 5.507.4.1). (Urban Crossroads, Inc., 2017d, p. 19)

D. City of San Bernardino General Plan Noise Element

The *City of San Bernardino General Plan Noise Element* identifies several policies to minimize the impacts of excessive noise levels in the City. To protect City of San Bernardino residents from excessive noise levels, the Noise Element contains the following three goals:

14.1 Ensure that residents are protected from excessive noise through careful land planning.

14.2 Encourage the reduction of noise from transportation-related noise sources such as motor vehicles, aircraft operations, and railroad movements.

14.3 Protect residents from the negative effects of "spill over" or nuisance noise.

The noise policies specified in the *City of San Bernardino Noise Element* provide guidelines to satisfy these goals. To ensure that residents are not exposed to excessive noise levels (Goal 14.1), General Plan Policies 14.1.1 to 14.1.4 indicate that sensitive land uses such as housing, health care facilities, schools, libraries, and religious facilities should not experience exterior noise levels greater than 65 dBA LDN for exterior areas and 45 dBA LDN for interior areas. This more conservative CNEL descriptor was used in the Project's Noise Impact Analysis (*Technical Appendix I1*), and therefore, the exterior noise level criteria of 65 dBA CNEL and interior noise level criteria of 45 dBA CNEL are applied to sensitive land uses for purposes of analysis in this EIR. (Urban Crossroads, Inc., 2017d, p. 20)

Table 4.10-1, *Land Use Compatibility for Community Noise Exposure*, is a land use compatibility chart presented in the General Plan for community noise prepared by the California Office of Noise Control that identifies *normally acceptable*, *conditionally acceptable*, and *clearly acceptable*, exterior noise levels for various land uses (City of San Bernardino, 2005a, p. 20, p. 14-4). As shown on Table 4.10-1, an ambient noise level of up to 75 dBA is considered *normally acceptable* for industrial and manufacturing uses.

E. San Bernardino Municipal Code

The City of San Bernardino maintains several policies in its Municipal Code Noise Control Ordinance to control the negative effects of nuisance noise. The City's Municipal Code, Chapter 19.20, *Property Development Standards*, contain exterior and interior noise level standards for residential land uses. Municipal Code, Section 8.54.060, states when such noises are an accompaniment and effect of a lawful business, commercial or industrial enterprise carried on in an area zoned for that purpose…these activities shall be exempt (Section 8.54.060(B)).

The City of San Bernardino Municipal Code also sets restrictions to control noise impacts associated with construction. Section 8.54.070 of the City's Noise Control Ordinance states: *No person shall be engaged or employed, or cause any other person to be engaged or employed, in any work of construction, erection, alteration, repair, addition, movement, demolition, or improvement to any building or structure except within the hours of 7:00 a.m. and 8:00 p.m.* While the City establishes limits to the hours during which construction activity may take place, it does not identify specific noise level limits for construction noise levels. (Urban Crossroads, Inc., 2017d, p. 24)

F. Vibration Standards

The City of San Bernardino Municipal Code, Section 19.20.030.28 indicates: *No vibration associated with any use shall be permitted which is discernible beyond the boundary line of the property*; however, no specific vibration standards are identified. Municipal Code Section 15.68.020 states a requirement that the ground vibration generated does not cause a displacement of the earth greater than .033 of one inch as measured at any point radially in any plane from the foundation as determined by the City Engineer. (City of San Bernardino, 2017) (Urban Crossroads, Inc., 2017d, p. 25)

G. San Bernardino International Airport Noise Standards

The San Bernardino International Airport (SBIA) is located approximately 1.75 miles northeast of the Project site. The Project site is located within the 65 to 70 dBA CNEL noise level contour boundary of the SBIA. The *City of San Bernardino General Plan Noise Element*, Table N-3, indicates that any industrial (manufacturing) buildings within the 65 to 70 dBA CNEL noise level contour boundary must satisfy an interior noise level standard of 65 dBA CNEL. (Urban Crossroads, Inc., 2017d, p. 26)

4.10.3 EXISTING NOISE SETTING

A. Noise Measurement Locations

To assess the existing noise level environment, 24-hour noise level measurements were taken by Urban Crossroads on July 6, 2016, at eight sensitive receiver locations in the Project study area. Figure 4.10-1, *Noise Measurement Locations*, shows the locations of the noise level measurement locations in relation to the Project site. Hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. (Urban Crossroads, Inc., 2017d, p. 33)

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby sensitive receiver locations allows for a comparison of the before and after Project noise levels and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels. (Urban Crossroads, Inc., 2017d, p. 33)

B. Existing Ambient Noise Conditions

The noise measurements presented below focus on the average or equivalent sound levels (Leq). The Leq represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 4.10-2, *24-Hour Ambient Noise Level Measurements*, identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location. Table 4.10-2 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. (Urban Crossroads, Inc., 2017d, pp. 34-35) Appendix 5.2 of *Technical Appendix I* provides a summary of the existing hourly ambient noise levels described below:

- **Location L1** represents the noise levels north of the Project site on Orange Show Road adjacent to existing residential homes. The noise level measurements collected show an

overall 24-hour exterior noise level of 79.4 dBA CNEL. The hourly noise levels measured at location L1 ranged from 71.6 to 78.4 dBA Leq during the daytime hours and from 68.4 to 74.6 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 76.1 dBA Leq with an average nighttime noise level of 71.7 dBA Leq. (Urban Crossroads, Inc., 2017d, p. 34)

- **Location L2** represents the noise levels north of the Project site on Washington Avenue south of Orange Show Road near existing residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 62.7 dBA CNEL. The hourly noise levels measured at location L2 ranged from 55.4 to 64.5 dBA Leq during the daytime hours and from 50.6 to 58.4 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 59.4 dBA Leq with an average nighttime noise level of 54.9 dBA Leq. (Urban Crossroads, Inc., 2017d, p. 34)

- **Location L3** represents the noise levels north of the Project site on Dumas Street, west of Waterman Avenue, near an existing church and residential homes. The 24-hour CNEL indicates that the overall exterior noise level is 66.0 dBA CNEL. At location L3 the background ambient noise levels ranged from 58.7 to 65.3 dBA Leq during the daytime hours to levels of 54.0 to 62.0 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 60.9 dBA Leq with an average nighttime noise level of 58.9 dBA Leq. (Urban Crossroads, Inc., 2017d, p. 34)

- **Location L4**, located north of the Project site, represents the noise levels in the existing parking lot of the San Bernardino Public Golf Course. The noise level measurements collected show an overall 24-hour exterior noise level of 58.3 dBA CNEL. The hourly noise levels measured at location L4 ranged from 45.9 to 54.5 dBA Leq during the daytime hours and from 47.8 to 52.9 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 52.3 dBA Leq with an average nighttime noise level of 51.4 dBA Leq. (Urban Crossroads, Inc., 2017d, p. 34)

- **Location L5** represents the noise levels east of the Project site on Park Center Circle adjacent to existing office buildings. The noise level measurements collected show an overall 24-hour exterior noise level of 68.6 dBA CNEL. The hourly noise levels measured at location L5 ranged from 55.2 to 70.5 dBA Leq during the daytime hours and from 49.5 to 67.1 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 62.5 dBA Leq with an average nighttime noise level of 61.2 dBA Leq. (Urban Crossroads, Inc., 2017d, p. 34)

- **Location L6** represents the noise levels near the southern boundary of the Project site and near the Santa Ana River. The noise level measurements collected show an overall 24-hour exterior noise level of 58.9 dBA CNEL. The hourly noise levels measured at location L6 ranged from 50.8 to 54.3 dBA Leq during the daytime hours and from 48.1 to 53.8 dBA Leq

during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 53.1 dBA Leq with an average nighttime noise level of 51.8 dBA Leq. (Urban Crossroads, Inc., 2017d, pp. 34-35)

- **Location L7** represents the noise levels south of the Project site in an existing parking lot for a Quality Inn hotel on Waterman Avenue. The 24-hour CNEL indicates that the overall exterior noise level is 57.4 dBA CNEL. At location L7 the background ambient noise levels ranged from 48.5 to 55.2 dBA Leq during the daytime hours to levels of 45.8 to 51.6 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 52.3 dBA Leq with an average nighttime noise level of 50.2 dBA Leq. (Urban Crossroads, Inc., 2017d, p. 35)

- **Location L8** located south of the Project site, represents the noise levels adjacent to office buildings on Commerecenter West and the Santa Ana River Trail. The noise level measurements collected show an overall 24-hour exterior noise level of 58.2 dBA CNEL. The hourly noise levels measured at location L8 ranged from 48.9 to 55.6 dBA Leq during the daytime hours and from 46.7 to 52.5 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 53.0 dBA Leq with an average nighttime noise level of 51.0 dBA Leq. (Urban Crossroads, Inc., 2017d, p. 35)

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with the arterial roadway network. This includes the auto and heavy truck activities on Orange Show Road and Waterman Avenue near the noise level measurement locations. Additional background noise sources in the Project study area include aircraft overflight noise from the San Bernardino International Airport. (Urban Crossroads, Inc., 2017d, p. 35)

4.10.4 METHODOLOGY FOR CALCULATING PROJECT-RELATED NOISE IMPACTS

A. Construction Noise

Figure 4.10-2, *Construction Noise Source and Receiver Locations*, show the construction noise source locations in relation to nearby noise sensitive receiver locations. Noise generated by the Project's construction equipment would include a combination of trucks, power tools, concrete mixers, and portable generators that when combined, can reach high levels of noise. The number and mix of construction equipment is specified in Section 3.0, *Project Description*, of this EIR and would be operated on the Project site for site preparation, grading, building construction, paving, and architectural coating activities.

The construction noise analysis was prepared using reference noise level measurements taken by Urban Crossroads, Inc. to describe the typical construction activity noise levels for each stage of Project construction. The construction reference noise level measurements represent a list of typical construction activity noise levels. Noise levels generated by heavy construction equipment can range from approximately 68 dBA to in excess of 80 dBA when measured at 50 feet. However, these noise

levels diminish with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 80 dBA measured at 50 feet from the noise source to the receiver would be reduced to 74 dBA at 100 feet from the source to the receiver, and would be further reduced to 68 dBA at 200 feet from the source to the receiver. (Urban Crossroads, Inc., 2017d, p. 72)

To describe Project-related construction noise levels, measurements were collected for similar activities at several construction sites. Table 4.10-3, *Construction Reference Noise Levels*, provides a summary of the 16 construction reference noise level measurements. Because the reference noise levels were collected at varying distances of 30 feet and 50 feet, all construction noise level measurements presented in Table 4.10-3 were adjusted for consistency to describe a common reference distance of 50 feet. (Urban Crossroads, Inc., 2017d, p. 72)

B. FHWA Traffic Noise Prediction Model

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads using a computer program that replicates the FHWA Traffic Noise Prediction Model-FHWA-RD-77-108. The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California, the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period. Research conducted by Caltrans shows that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in the Project's Noise Impact Analysis (*Technical Appendix I1*). (Urban Crossroads, Inc., 2017d, p. 39)

C. Off-Site Traffic Noise Prediction Models

Table 4.10-4, *Off-Site Roadway Parameters*, presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 4.10-4 identifies the 11 study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications according to the City of San Bernardino General Plan Circulation Element, and the posted speed limit. (Urban Crossroads, Inc., 2017d, p. 39)

According to the Project's Traffic Impact Analysis *(Technical Appendix J1)*, the Project is expected to generate a net total of approximately 1,789 trip-ends per day (actual vehicles) with 117 AM peak hour trips and 127 PM peak hour trips. The net Project trip generation includes 682 truck trip-ends per day from the proposed building within the Project site. The Noise Study relies on the net Project

trips to account for the effect of individual truck trips on the study area roadway network. (Urban Crossroads, Inc., 2017d, p. 41)

To quantify the off-site noise levels, the Project-related truck trips were added to the heavy truck category in the FHWA noise prediction model. The addition of the Project related truck trips increases the percentage of heavy trucks in the vehicle mix. This approach recognizes that the FHWA noise prediction model is substantially influenced by the number of heavy trucks in the vehicle mix. (Urban Crossroads, Inc., 2017d, p. 41)

The 682 daily Project truck trip-ends were assigned to the 11-individual off-site study area roadway segments based on the Project truck trip distribution percentages documented in the Project's Traffic Impact Analysis (*Technical Appendix J1)*. Using the Project truck trips in combination with the Project trip distribution, Urban Crossroads, Inc. calculated the number of additional Project truck trips and vehicle mix percentages for each of the study area roadway segments. (Urban Crossroads, Inc., 2017d, p. 42)

D. Vibration Assessment

The Noise Impact Analysis (*Technical Appendix I1*) focuses on the potential ground-borne vibration associated with vehicular traffic and construction activities. Ground-borne vibration levels from automobile traffic are generally overshadowed by vibration generated by heavy trucks that roll over the same uneven roadway surfaces. However, due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity. However, while vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the human response (annoyance) using the vibration assessment methods defined by the FTA. (Urban Crossroads, Inc., 2017d, p. 44)

While vehicular traffic is rarely perceptible, construction activities have the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used (Urban Crossroads, Inc., 2017d, p. 44). Construction activity can result in varying degrees of ground-borne vibration, depending on the equipment and methods used and the distance to the affected structures and soil type. Construction equipment such as air compressors, light trucks, hydraulic loaders, etc. generate little or no ground vibration. Occasionally large bulldozers and loaded trucks can cause perceptible vibration levels at close proximity. (Urban Crossroads, Inc., 2017d, p. 25)

E. Operational Noise

Figure 4.10-3, *Operational Noise Source Locations,* identifies the representative off-site receiver locations used to assess the Project's operational noise levels in these locations. The future user(s) of

the Project's proposed building are unknown at this time. To present the potential worst-case noise conditions, the Noise Impact Analysis (*Technical Appendix I1*) assumes the Project would be operational 24 hours per day, seven days per week. Based on Project design, the Project business operations would primarily be conducted within the enclosed building, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. The on-site Project-related noise sources are expected to include: idling trucks, delivery truck activities, parking, backup alarms, as well as the loading and unloading of dry goods. The noise analysis is intended to describe noise level impacts associated with the expected typical warehouse and distribution storage activities at the Project site. As part of the Project's design, all on-site outdoor cargo handling equipment (CHE) (including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and other on-site equipment) would be powered by non-diesel fueled engines and all on-site indoor forklifts would be powered by electricity, compressed natural gas, or propane. (Urban Crossroads, Inc., 2017d, p. 63)

Because the future user(s) of the proposed building are unknown, the Project's operational noise levels were calculated based on reference noise level measurements collected at other project sites that exhibit similar operational activities. The reference noise levels are intended to describe the expected operational noise sources that may include idling trucks, delivery truck activities, parking, backup alarms, as well as the loading and unloading of dry goods. To estimate the Project off-site operational noise impacts associated with the Project, reference noise level measurements were collected from existing logistics warehouse operations containing similar operational noise sources, as shown on Table 4.10-5, *Reference Operational Noise Level Measurements* (Urban Crossroads, Inc., 2017d, p. 65)

To describe reasonably foreseeable Project-only operational noise levels, the analysis relies on a reference noise level of 62.8 dBA Leq at a uniform distance of 50 feet representing unloading/docking activity taken at the Motivational Fulfillment & Logistics Services distribution facility in the City of Chino, and the professional judgement and experience of Urban Crossroads preparing acoustical analyses and collecting acoustical measurements at warehouse facilities in the Inland Empire region. This facility has similar operating characteristics to those expected at the Project site. As shown on Table 4.10-5, the reference noise level of 62.8 dBA at a uniform distance of 50 feet has a noise-source height of 8 feet. (Urban Crossroads, Inc., 2017d, p. 65)

4.10.5 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant noise impact if the Project or any Project-related component would result in:

a. *Exposure of persons to or generation of noise levels in excess of standards established in the City's General Plan or Development Code, or applicable standards of other agencies;*

b. *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;*

c. *A substantial permanent increase in ambient noise level in the project vicinity above levels existing without the project;*

d. *A substantial or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;*

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 expose people residing or working in the project area to excessive noise levels; or*

f. *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.*

While the CEQA Guidelines and the City of San Bernardino General Plan Guidelines provide direction on noise compatibility and establish noise standards by land use type that are sufficient to assess the significance of noise impacts under Threshold (a), they do not define the levels at which increases are considered substantial for use under Thresholds (b), (c), and (d). Therefore, significance will be based on the following analysis methodology.

A. Operational Noise Effects to Noise-Sensitive Receivers

To determine the significance of a noise level increase, consideration must be given to the magnitude of the increase and the existing ambient noise levels. This approach recognizes that there is no single noise increase that renders the noise impact significant. There is no completely satisfactory way to measure the subjective effects of noise or of the corresponding human reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called ambient environment. (Urban Crossroads, Inc., 2017d, pp. 29-30)

In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged. With this in mind, the Federal Interagency Committee on Noise (FICON) developed guidance to be used for the assessment of project-generated increases in noise levels that take into account the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (i.e., CNEL). For example, if the ambient noise environment is quiet (less than (<) 60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for the purpose of this analysis, as identified by FICON, a *readily perceptible* 5 dBA or greater project-related noise level increase is considered a significant impact when the noise criteria for a given land use is exceeded. According to the FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise level increase appears to be

appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. Table 4.10-6, *Significance of Noise Impacts at Noise-Sensitive Receivers*, provides a summary of the potential noise impact significance criteria, based on guidance from FICON. (Urban Crossroads, Inc., 2017d, p. 30)

B. Operational Noise Effects to Non-Noise Sensitive Receivers

The City of San Bernardino General Plan Noise Element, Figure N-1, *Land Use Compatibility for Community Noise Exposure* was used to establish the satisfactory noise levels of significance for non-noise-sensitive land uses in the Project study area, such as industrial land uses. The *normally acceptable* exterior noise level for non-noise-sensitive land use, such as industrial use, is 70 dBA CNEL. Noise levels greater than 70 dBA CNEL are considered *conditionally acceptable* according to the *Land Use Compatibility for Community Noise Exposure*. (Urban Crossroads, Inc., 2017d, p. 30)

To determine if Project-related traffic noise level increases are significant at off-site non-noise-sensitive land uses, a *readily perceptible* 5 dBA and *barely perceptible* 3 dBA criteria are used. When the without Project noise levels at the non-noise-sensitive land uses are below the normally acceptable 70 dBA CNEL compatibility criteria, a readily perceptible 5 dBA or greater noise level increase is considered a significant impact. When the without Project noise levels are greater than the *normally acceptable* 70 dBA CNEL land use compatibility criteria, a *barely perceptible* 3 dBA or greater noise level increase is considered a significant impact since the noise level criteria is already exceeded. The noise level increases used to determine significant impacts for non-noise-sensitive land uses is generally consistent with the FICON noise level increase thresholds for noise-sensitive land uses but instead rely on the *City of San Bernardino General Plan Noise Element*, Table N-1, Land Use Compatibility for Community Noise Exposure *normally acceptable* 70 dBA CNEL exterior noise level criteria. (Urban Crossroads, Inc., 2017d, p. 31)

C. Construction-Related Noise Effects to Noise-Sensitive Receivers

To evaluate whether the Project will generate a substantial periodic increase in short-term noise levels at off-site sensitive receiver locations, a construction-related noise level threshold is adopted from the *Criteria for Recommended Standard: Occupational Noise Exposure* prepared by the National Institute for Occupational Safety and Health (NIOSH). A division of the U.S. Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The construction-related noise level threshold starts at 85 dBA for more than eight hours per day, and for every 3 dBA increase, the exposure time is cut in half. This results in noise level thresholds of 88 dBA for more than four hours per day, 92 dBA for more than one hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. For the purposes of the Project's Noise Impact Analysis (*Technical Appendix I*1), the lowest, more conservative construction noise level threshold of 85 dBA Leq is used as an acceptable threshold for construction noise at the nearby sensitive receiver locations. In addition, the construction noise

analysis is based on the closest distance to construction activities across all potential Project site access alternatives (interim and permanent site access Options 1 and 2) to present a conservative approach. Since this construction-related noise level threshold represents the energy average of the noise source over a given time period, they are expressed as Leq noise levels. Therefore, the noise level threshold of 85 dBA Leq over a period of eight hours or more is used to evaluate the potential Project-related construction noise level impacts at the nearby noise sensitive receiver locations. (Urban Crossroads, Inc., 2017d, p. 24, pp. 24, 81)

D. Significance Criteria Summary

As described below and as shown on Table 4.10-7, *Significance Criteria Summary*, noise impacts would be considered significant if any of the following occur as a direct result of the proposed Project.

1. Off-Site Traffic Noise

- When the noise levels at existing and future noise-sensitive land uses (e.g. residential, etc.):
  - are less than 60 dBA and the Project creates a *readily perceptible* 5 dBA or greater Project-related noise level increase; or
  - range from 60 to 65 dBA and the Project creates a *barely perceptible* 3 dBA or greater Project-related noise level increase; or
  - already exceed 65 dBA, and the Project creates a community noise level impact of greater than 1.5 dBA. (Urban Crossroads, Inc., 2017d, p. 31)

- When the noise levels at existing and future non-noise-sensitive land uses (e.g. industrial, etc.):
  - are less than the City of San Bernardino General Plan Noise Element, Figure N-1, *normally acceptable* 70 dBA and the Project creates a *readily perceptible* 5 dBA or greater Project-related noise level increase; or
  - are greater than the City of San Bernardino General Plan Noise Element, Table N-1, *normally acceptable* 70 dBA and the Project creates a *barely perceptible* 3 dBA or greater Project-related noise level increase. (Urban Crossroads, Inc., 2017d, p. 31)

2. Operational Noise

- If Project-related operational (stationary source) noise levels exceed the exterior 65 dBA Leq noise level standards at nearby sensitive residential land uses (City of San Bernardino Development Code, Section 19.20.030.15(A)); or

- If the existing ambient noise levels at the nearby noise-sensitive receivers near the Project site:
  - are less than 60 dBA and the Project creates a *readily perceptible* 5 dBA or greater Project-related noise level increase; or
  - range from 60 to 65 dBA and the Project creates a *barely perceptible* 3 dBA or greater Project-related noise level increase; or

- already exceed 65 dBA, and the Project creates a community noise level impact of greater than 1.5 dBA (FICON, 1992). (Urban Crossroads, Inc., 2017d, pp. 31-32)

E. Construction Noise and Vibration

- If Project-related construction activities:
  - occur anytime other than between the permitted hours of 7:00 a.m. and 8:00 p.m. on any day (City of San Bernardino Municipal Code, Section 8.54.070) or
  - create noise levels which exceed the 85 dBA Leq acceptable noise level threshold at the nearby sensitive receiver locations (NIOSH, Criteria for Recommended Standard: Occupational Noise Exposure). (Urban Crossroads, Inc., 2017d, p. 32)

- If short-term Project-generated construction vibration levels exceed the City of San Bernardino acceptable vibration standard of 0.7 in/sec (RMS) at sensitive receiver locations (City of San Bernardino Municipal Code, Section 15.68.020). (Urban Crossroads, Inc., 2017d, p. 32)

4.10.6 IMPACT ANALYSIS

Threshold a) Would the Project expose persons to or generation of noise levels in excess of standards established in the City's General Plan or Development Code, or applicable standards of other agencies?

Threshold c) Would the Project result in a substantial permanent increase in ambient noise levels in the project vicinity above existing without the project?

Threshold d) Would the Project result in a substantial or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

A. Short-Term Construction Noise

Construction equipment associated with the proposed Project, especially involving heavy equipment, would create intermittent periods of noise when construction equipment is in operation and would cause a short-term increase in ambient noise levels. Noise generated by the Project construction equipment would include a combination of trucks, power tools, concrete mixers, and portable generators that when combined, can reach high noise levels. The number and mix of construction equipment is expected to occur in the following stages: a) site preparation; b) grading; c) building construction; d) paving and e) application of architectural coatings. (Urban Crossroads, Inc., 2017d, p. 71)

To assess the short-term construction-related noise levels expected from the proposed Project, analyses of the Project's construction noise level impacts was completed for seven (7) noise sensitive receiver locations (R1 through R7). As shown on Figure 4.10-2, representative noise sensitive receivers near the Project site include the single-family residential homes at location R1 and R2, the church uses at locations R3 and R4, and the Santa Ana River Trail at location R6. Location R5

represents the closest business office use, and location R7 represents a nearby hotel use south of the Project site. The closest noise sensitive receiver is represented by location R1 where an existing residential home is located approximately 140 feet southeast of the Project's proposed northern access on Washington Avenue. Located approximately 218 feet east of the Project site on Dumas Street, R2 represents the existing residential homes closest to the Project site; under permanent site access Option1, this receiver location would be replaced with the extension of Washington Avenue south to the Project site. Because of the additional attenuation from distance and the shielding of intervening structures, other noise sensitive land uses in the Project study area that are located at greater distances than those identified in the Project's Noise Study would experience lower noise levels than represented by receiver locations R1 through R7. (Urban Crossroads, Inc., 2017d, p. 59)

The construction noise analysis shows that the highest construction noise levels would occur when construction activities take place at the closest point from the center of the Project construction activities to each of the nearby receiver locations. Tables 10-2 through 10-6 of *Technical Appendix I1* show the Project construction stages and the reference construction noise levels used for each stage. As shown on Table 4.10-8, *Construction Equipment Noise Level Summary (dBA Leq*), construction noise levels are calculated to range from 54.0 to 75.4 dBA Leq at the nearest noise receiver locations. (Urban Crossroads, Inc., 2017d, p. 79)

As shown on Table 4.10-8, the peak construction noise levels at the potentially impacted receiver locations are calculated to approach 75.4 dBA Leq at location R1 where an existing residential home is located approximately 140 southeast of the Project's proposed northern access on Washington Avenue. As shown on Table 4.10-9, *Construction Equipment Noise Level Compliance (dBA Leq)*, the peak construction noise levels at the seven (7) noise receiver locations, including the closest noise sensitive receiver (R1) would be below the 85 dBA Leq significance threshold for temporary construction activities. (Urban Crossroads, Inc., 2017d, p. 80) The San Bernardino General Plan does not set noise level standards for construction noise; however, the proposed Project is required to comply with the Municipal Code regulations for construction activities. Therefore, because the Project would be required to comply with the City of San Bernardino Municipal Code, Section 8.54.070 limiting construction activities to between the permitted hours of 7:00 a.m. and 8:00 p.m. on any day, and noise levels at sensitive receiver locations would be below 85 dBA Leq, impacts would be less than significant and no mitigation is required.

B. Stationary Operational Noise

The Project proposes the construction and operation of one high cube logistics warehouse building. At the present time, the future user(s) of the building is unknown. Therefore, to present the potential worst-case noise conditions, this analysis assumes the Project would be operational 24 hours per day, seven days per week. The Project's business operations would primarily be conducted within the enclosed buildings, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. Stationary operational noise sources associated with operation of the Project are expected to include idling trucks, delivery truck activities, parking, backup alarms, and the loading and unloading of dry goods at the designated truck loading docks. As part of the Project's

design, all on-site outdoor cargo handling equipment (CHE) (including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and other on-site equipment) would be powered by non-diesel fueled engines and all on-site indoor forklifts would be powered by electricity, compressed natural gas, or propane. (Urban Crossroads, Inc., 2017d, p. 63)

Reference operational noise levels are described in Subsection 4.10.4 and Table 4.10-10, *Operational Noise Level Projections (dBA Leq)*. As shown on Table 4.10-10, the hourly noise levels associated with the operation of the proposed Project are expected to range from 36.9 to 48.2 dBA Leq at the nearby sensitive receiver locations. The operational noise level calculations are included in Appendix 9.2 of *Technical Appendix I1*. As shown on Table 4.10-11, *Project Operational Noise Level Compliance*, the Project operational noise levels are below the City's noise standard of 65 dBA Leq for noise-sensitive uses (Urban Crossroads, Inc., 2017d, p. 66).

To describe the Project operational noise level contributions, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearby receiver locations potentially impacted by Project operational noise sources. The difference between the combined Project and ambient noise levels describe the Project noise level contributions to the existing ambient noise environment. Noise levels that would be experienced at receiver locations when Project-source noise is added to the ambient daytime and nighttime conditions are shown in Table 4.10-12, *Project Daytime Noise Contributions* and Table 4.10-13, *Project Nighttime Noise Level Contributions.* As indicated on Table 4.10-12 and Table 4.10-13 the highest Project-related daytime operational noise level increase would approach 1.2 dBA Leq at noise receiver location R6 (the area of the Santa Ana River). During the nighttime hours, the highest Project-related noise level increase would approach 1.6 dBA Leq, also at noise receiver R6. Because the Project-related operational noise level contributions would not exceed the significance criterion of 5, 3, or 1.5 dBA Leq in all representative noise level locations, the Project's contributions to the operational noise levels would be less than significant and would not result in a substantial temporary/periodic, or permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project. Impacts associated with the Project's operational noise would be less than significant and no mitigation is required. (Urban Crossroads, Inc., 2017d, p. 68)

C. Off-Site Transportation–Related Noise

To evaluate off-site noise increases that could result from Project-related traffic, noise levels were modeled for the following traffic scenarios. Noise contour boundaries represent equal levels of noise exposure and are measured in CNEL from the center of the roadway. (Urban Crossroads, Inc., 2017d, p. 47) Access to the northern portion of the Project site from Washington Avenue south of Orange Show Road would include both an interim roadway improvement area under Existing and Year 2018 conditions, and two permanent access alternatives for site access under Horizon Year 2040 conditions (Urban Crossroads, Inc., 2017d, p. 6).

- **Existing Without/With Project:** This traffic scenario refers to the existing present-day noise conditions, without and with the proposed Project. (Urban Crossroads, Inc., 2017d, p. 47)

- **Existing Plus Ambient 2018 Without/With Project:** This traffic scenario refers to the background noise conditions at future Year 2018 without and with the proposed Project plus ambient growth. (Urban Crossroads, Inc., 2017d, p. 47)

- **Existing Plus Ambient Plus Cumulative 2018 Without/With Project:** This traffic scenario refers to the background noise conditions at future Year 2018 without and with the proposed Project plus ambient growth. This scenario corresponds to Year 2018 conditions, and includes all cumulative projects identified in the Project's Traffic Impact Analysis (*Technical Appendix J1*). (Urban Crossroads, Inc., 2017d, p. 47)

- **Horizon Year 2040 Without/With Project:** This traffic scenario refers to the background noise conditions at future Year 2040 without and with the proposed Project. This scenario corresponds to Horizon Year 2040 conditions, and includes all cumulative projects identified in the Project's Traffic Impact Analysis *(Technical Appendix J1*). (Urban Crossroads, Inc., 2017d, p. 47)

To quantify the Project's operational traffic noise impacts on the surrounding areas, the changes in traffic noise levels on 11 roadway segments surrounding the Project were calculated based on the changes in the average daily traffic volumes. Noise contours were used to assess the Project's incremental traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area. Tables 7-1 through 7-8 of *Technical Appendix I1* present a summary of the exterior traffic noise levels, without barrier attenuation, for the 11 study area roadway segments analyzed from the "Without Project" to the "With Project" conditions in each of the timeframes: Existing, Existing Plus Ambient 2018, Existing Plus Ambient Plus Cumulative 2018, and Horizon Year 2040 conditions (refer to Subsection 4.10.7 below, *Cumulative Impact Analysis*, for the discussion of the Existing Plus Ambient Plus Cumulative 2018, and Horizon Year 2040 conditions). A summary of the traffic noise level contours for each of the traffic scenarios is contained in Appendix 7.1 of *Technical Appendix I1*. (Urban Crossroads, Inc., 2017d, pp. 47-48)

1. Existing Plus Project Traffic Noise Level Contributions

Table 4.10-14, *Existing Condition Off-Site Project-Related Noise Level Contributions*, presents a comparison of the existing noise levels that would result from development of the Project in the absence of cumulative development and ambient growth. As indicated on Table 4.10-14, noise level increases at all study area roadway segments would be less than significant, except for one segment that would be significant. Without the Project, the noise level is calculated to be 55.7 dBA CNEL at the roadway segment identified as Washington Avenue south of Orange Show Road (ID #1). With the addition of Project traffic, the dBA CNEL at this roadway segment is calculated to be 65.9 dBA

CNEL, which is an exterior noise level increase of 10.2 dBA CNEL. This roadway segment would include an interim roadway improvement area under Existing plus Project conditions. Because the noise levels at existing and future noise-sensitive land uses (e.g. residential, etc.) are less than 60 dBA and the Project creates a readily perceptible 5 dBA or greater Project-related noise level increase, the off-site Project-related traffic noise level increase at this roadway segment is considered a significant impact under "Existing With Project" conditions. It is important to note that the properties adjacent to Washington Avenue south of Orange Show Road are designated as "Industrial-Industrial Light (IL)" land use by the San Bernardino General Plan; therefore, the existing residential homes immediately south of the Project's access on Washington Avenue represent a non-conforming land use. However, the Project-related traffic noise level increase due to the addition of Project truck trips on this roadway segment represents a potentially significant noise level impact for both noise-sensitive and non-noise-sensitive land uses. (Urban Crossroads, Inc., 2017d, p. 52)

2. Existing Plus Ambient 2018 Project Traffic Noise Level Contributions

Table 4.10-15, *Existing + Ambient 2018 Project-Related Traffic Noise Level Contributions*, presents a comparison of the Existing Plus Ambient without and with Project conditions CNEL noise levels. As shown on Table 4.10-15, noise level increases at all study area roadway segments would be less than significant, except for one segment that would be significant. Without the Project, the noise level is calculated to be 57.7 dBA CNEL at the roadway segment identified as Washington Avenue south of Orange Show Road (ID #1). With the addition of Project traffic, the dBA CNEL is calculated to be 66.1 dBA CNEL, which is an exterior noise level increase of 8.4 dBA CNEL. This roadway segment would include an interim roadway improvement area under Existing Plus Ambient 2018 conditions. Because the noise levels at existing and future noise-sensitive land uses (e.g. residential, etc.) are less than 60 dBA and the Project creates a readily perceptible 5 dBA or greater Project-related noise level increase, the off-site Project-related traffic noise level condition for the segment of roadway identified as Washington Avenue south of Orange Show Road (ID #1), represents a significant impact under the Existing Plus Ambient 2018 traffic scenario. (Urban Crossroads, Inc., 2017d, p. 54)

Threshold b) Would the Project result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?

A. Short-Term Construction Ground-borne Vibration Levels

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used and distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized vibration. The proposed Project's construction activities most likely to cause vibration are heavy mobile construction equipment and trucks hauling building materials. Although all heavy mobile construction equipment has the potential of causing at least some perceptible vibration while operating close to buildings, the vibration is usually short-term and is not of sufficient magnitude to cause building damage. Trucks hauling building materials to construction sites can be sources of vibration intrusion

if the haul routes pass through residential neighborhoods on streets with bumps or potholes but repairing the bumps and potholes generally eliminates the problem. The closest existing residential home is located approximately 140 feet southeast of the Project's proposed northern access on Washington Avenue. It is not expected that heavy equipment such as large bulldozers would operate close enough to any residences to cause a vibration impact. (Urban Crossroads, Inc., 2017d, p. 81)

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by Urban Crossroads, Inc. based on data published by the FTA. Construction activities that would have the potential to generate low levels of ground-borne vibration within the Project site include grading and paving. Using the vibration source level of construction equipment and the construction vibration assessment methodology published by the FTA, it is possible to calculate estimated vibration levels. As shown on Table 4.10-16, *Construction Equipment Vibration Levels*, a large bulldozer represents the peak source of vibration with a reference velocity of 0.089 in/sec (PPV) at 25 feet. At distances ranging from 81 to 952 feet from the Project site, construction vibration velocity levels are expected to approach 015 in/sec (PPV). To assess the human perception of vibration levels in PPV, the velocities are converted to RMS vibration levels based on the Caltrans *Transportation and Construction Vibration Guidance Manual* conversion factor of 0.71. As shown on Table 4.10-16, construction vibration levels in RMS are expected to approach 0.11 in/sec (RMS) at the nearby receiver locations. Based on the City of San Bernardino vibration standard of 0.7 in/sec, the construction-related vibration levels of 0.002 in/sec are considered less than significant and no mitigation is required. Furthermore, vibration levels at the closest noise-sensitive receivers are unlikely to be sustained during the entire construction period, but would occur only during the times that heavy construction equipment is operating at the Project site perimeter. Moreover, construction at the Project site would be restricted to daytime hours consistent with City of San Bernardino Municipal Code requirements; thereby eliminating potential vibration impacts during the sensitive nighttime hour. (Urban Crossroads, Inc., 2017d, pp. 81-82)

B. Long-Term Operational Ground-Borne Noise and Vibration

Ground-borne vibration levels from automobile traffic are generally overshadowed by vibration generated by heavy trucks that roll over the same uneven roadway surfaces. However, due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity. (Urban Crossroads, Inc., 2017d, p. 44)

To assess the potential vibration impacts from truck haul trips associated with operational activities, the City of San Bernardino threshold for vibration of 0.7in/sec (RMS) is used. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. Typical vibration levels for the Project's heavy truck activity at normal traffic speeds would approach 0.001 in/sec (RMS), based on the FTA *Transit Noise Impact and Vibration Assessment.* Truck deliveries transiting on site would be travelling at very low speeds; therefore, it is expected that delivery truck vibration impacts at nearby homes would be well below the vibration threshold of 0.7 in/sec (RMS). Because

the truck vibration levels would not exceed the City of San Bernardino threshold for vibration of 0.7 in/sec (RMS) for haul trips associated with operational activities, impacts would be less than significant and no mitigation is required. (Urban Crossroads, Inc., 2017d, p. 70)

Threshold 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 expose people residing or working in the project area to excessive noise levels?

Threshold f) For a project within the vicinity of a private airstrip, would the Project expose people residing or working in the project area to excessive noise levels?

The San Bernardino International Airport (SBIA) is located approximately 1.75 miles northeast of the Project site. The *City of San Bernardino General Plan Noise Element*, Table N-3, indicates that any industrial (manufacturing) building within the 65 to 70 dBA CNEL noise level contour boundary must satisfy an interior noise level standard of 65 dBA CNEL. No exterior noise level standards are identified for industrial land uses in the *City of San Bernardino General Plan Noise Element*. (Urban Crossroads, Inc., 2017d, p. 26)

A portion of the Project site is located within the 65 to 70 dBA CNEL noise level contour boundary of the SBIA. However, the Project's building would not be located within the 65 to 70 dBA CNEL noise level contour boundary. In addition, the Project's industrial use is considered *normally acceptable* with exterior noise levels between 65 to 70 dBA. Therefore, impacts would be less than significant and no mitigation is required. Further, standard building construction typically provides up to 25 dBA CNEL of attenuation, which would reduce the interior noise levels within the building to satisfy the 65 dBA CNEL interior noise level standard of the *City of San Bernardino General Plan Noise Element*. (Urban Crossroads, Inc., 2017d, p. 26)

The Project site is located approximately 0.33 miles northwest of the R.I. San Bernardino G/L Helistop-Heliport which is located at E. Carnegie Drive, San Bernardino, CA. Therefore, the Project site would be subjected to helicopter-related noise, but such noise is not regarded as excessive and as such, any off-site helicopter noise that would be audible at the Project site would be within the acceptable noise range for light industrial uses (City of San Bernardino, 2005b, Ch. 5.10, Page 21). Therefore, the Project would not expose people residing or working in the Project area to excessive noise levels associated with helicopter noise.

In addition, the proposed Project does not involve the construction, operation, or use of any public airports or public use airports. There are no conditions associated with the proposed Project that would contribute to airport noise or expose people working in the Project area to excessive noise levels associated with airport noise. In addition, the proposed Project is not located near any private airfields of airstrips. Also, the Project does not include the construction, operation, or use of any private airstrips. Therefore, the proposed Project would not expose people residing or working in the Project

area to excessive noise levels associated with any aircraft. Impacts would be less than significant and no mitigation is required.

4.10.7 CUMULATIVE IMPACT ANALYSIS

The cumulative impact analysis considers the construction and operation of the proposed Project in conjunction with other development projects in the immediate vicinity of the Project site that would be under simultaneous construction and operation as the proposed Project, and that would have the potential for combined noise levels that would be audible at the same sensitive noise receivers as the proposed Project. For the purposes of this analysis, the list of projects approach was used. Refer to Table 4.0-1, *Cumulative Development Land Use Summary* and Figure 4.0-1, *Cumulative Development Location Map* in EIR Section 4.0, *Environmental Analysis*. In regards to transportation noise, the cumulative study area is based on the study area determined for analysis in the Project's Traffic Impact Analysis (*Technical Appendix J1*), and considers the list of projects approach as provided in Table 4.0-1.

A. Construction-Related Noise

Construction equipment associated with the proposed Project, especially involving heavy equipment, would create intermittent periods of noise when construction equipment is in operation and would cause a short-term increase in ambient noise levels. The construction noise analysis shows that the highest construction noise levels would occur when construction activities take place at the closest point from the center of the Project construction activities to each of the nearby received locations.

As shown on Table 4.10-9, *Construction Equipment Noise Level Compliance (dBA Leq)*, the peak construction noise levels at the potentially impacted receiver locations are calculated to approach 70.6 dBA Leq at location R1 where an existing residential home is located approximately 140 southeast of the Project's proposed northern access on Washington Avenue. As shown on Table 4.10-9, *Construction Equipment Noise Level Compliance (dBA Leq)*, the peak construction noise levels at the seven (7) noise receiver locations, including the closest noise sensitive receiver (R1) would be below the 85 dBA Leq significance threshold for temporary construction activities. (Urban Crossroads, Inc., 2017d, p. 80) The San Bernardino General Plan does not set noise level standards for construction noise; however, the proposed Project is required to comply with the Municipal Code regulations for construction activities. Therefore, because the Project would be required to comply with the City of San Bernardino Municipal Code, Section 8.54.070 limiting construction activities to between the permitted hours of 7:00 a.m. and 8:00 p.m. on any day; impacts associated with compliance to General Plan and Municipal Code standards would be less than significant and no mitigation is required. Other construction projects would similarly be required to comply with applicable Municipal Code standards that regulate construction activities and construction noise.

Project construction noise levels combined with ambient noise and construction noise from cumulative development that may be operating simultaneous to the proposed Project's construction activities would add to the cumulative noise environment. However, there are no cumulative

development construction projects known to have the potential to occur immediately south, west, or east of the Project site. North of the Project site an approved warehouse building is expected to be developed at some point in the future (Waterman Industrial Center), which would result in the removal of four residential homes, a church, and the golf course's driving range. Should this project be constructed before the proposed Project or be under simultaneous construction as the proposed Project, it is reasonably foreseeable that the Waterman Industrial Center's building would act as a noise barrier between the Project site and sensitive receivers further to the north. Also, the Waterman Industrial Center would have removed existing sensitive receivers on its property that would then not have the potential to be impacted by the Project's construction noise. Also, all cumulative development in this area would be required to comply with the City of San Bernardino Municipal Code, Section 8.54.070 limiting construction activities to between the permitted hours of 7:00 a.m. and 8:00 p.m. on any day. For these reasons, the Project's construction noise would result in a less than cumulatively considerable impact and mitigation beyond Municipal Code compliance is not required.

B. Stationary Operational Noise

As shown on Table 4.10-10, the hourly noise levels associated with the operation of the proposed Project are expected to range from 36.9 to 48.2 dBA Leq at the nearby sensitive receiver locations. As shown on Table 4.10-11, *Project Operational Noise Level Compliance*, the Project operational noise levels are below the City's noise standard of 65 dBA Leq for noise-sensitive uses. (Urban Crossroads, Inc., 2017d, p. 66)

Noise levels that would be experienced at receiver locations when Project-source noise is added to the ambient daytime and nighttime conditions are shown in Table 4.10-12, *Project Daytime Noise Contributions* and Table 4.10-13, *Project Nighttime Noise Level Contributions.* As indicated on Table 4.10-12 and Table 4.10-13, the highest Project-related daytime operational noise level increase would approach 1.2 dBA Leq at noise receiver location R6 (the area of the Santa Ana River). During the nighttime hours, the highest Project-related noise level increase would approach 1.6 dBA Leq, also at noise receiver R6. Because any cumulative development near noise receiver R6 would either be south of the Santa Ana River Trail or east of S. Waterman Avenue, cumulative stationary operational noise levels would be decreased with distance or from intervening physical barriers or other noise sources such as traffic on S. Waterman Avenue. There are no cumulative development projects known to have the potential to occur immediately south, west, or east of the Project site. North of the Project site an approved warehouse building is expected to be developed at some point in the future (Waterman Industrial Center), which would result in the removal of four residential homes, a church, and the golf course's driving range. When constructed, it is reasonably foreseeable that the Waterman Industrial Center's building would act as a noise barrier between the Project site and sensitive receivers further to the north. Also, the Waterman Industrial Center would have removed existing sensitive receivers on its property that would then not have the potential to be impacted by the Project's operational noise. As such, Project-related stationary operational noise level impacts would be less than cumulatively considerable and no mitigation is required. (Urban Crossroads, Inc., 2017d, p. 68)

C. Off-Site Transportation-Related Noise

1. Existing Plus Ambient Plus Cumulative 2018 Project Traffic Noise Level Contributions

Table 4.10-17, *Existing + Ambient + Cumulative 2018 Project Traffic Noise Level Contributions* presents a comparison of the Existing Plus Ambient Plus Cumulative 2018 without and with Project conditions CNEL levels. As shown on Table 4.10-17, noise levels are calculated to range from 57.7 dBA CNEL to 79.1 dBA CNEL without the Project. At the roadway segment identified as Washington Avenue south of Orange Show Road (ID #1), the noise level is calculated to be 57.7 dBA CNEL without the addition of Project traffic. With the addition of Project traffic, the Project is calculated to generate an exterior noise increase of up to 8.4 dBA CNEL, which would result in a noise level of 66.1 dBA CNEL with the addition of Project traffic under this scenario. This roadway segment would include an interim roadway improvement area under Existing Plus Ambient 2018 conditions Plus Cumulative Conditions. Because the noise levels at existing and future noise-sensitive land uses (e.g. residential, etc.) without the Project are less than 60 dBA and the Project creates a readily perceptible 5 dBA or greater Project-related noise level increase, impacts would be significant for the off-site Project-related traffic noise level condition for the segment of roadway identified as Washington Avenue south to Orange Show Road (ID #1), under the Existing Plus Ambient Plus Cumulative 2018 traffic scenario. (Urban Crossroads, Inc., 2017d, p. 54) Project-related traffic noise impacts on all other roadway segments would be less than significant.

2. Horizon Year 2040 Project Traffic Noise Level Contributions

Table 4.10-18, *Horizon Year 2040 Off-Site Project-Related Traffic Noise Levels*, presents a comparison of the Horizon Year 2040 without and with Project conditions CNEL noise levels. As shown on Table 4.10-18, noise levels are calculated to range from 61.0 to 79.5 dBA CNEL without the Project. At the roadway segment identified as Washington Avenue south of Orange Show Road (ID #1), the noise level is calculated to be 61.0 dBA CNEL without the addition of Project traffic. With the addition of Project traffic, the Project is calculated to generate an exterior noise level increase of up to 5.8 dBA CNEL, which would result in a noise level of 66.8 dBA CNEL with the addition of Project traffic under this scenario. This roadway segment would include an interim roadway improvement area and two permanent access alternatives for site access under Horizon Year 2040 conditions. Because the noise levels without the Project range from 60 to 65 dBA and the Project creates a barely perceptible 3 dBA or greater Project-related noise level increase, impacts would be significant for the off-site Project-related traffic noise level condition for the segment of roadway identified as Washington Avenue south to Orange Show Road (ID #1), under the Horizon Year 2040 traffic scenario. (Urban Crossroads, Inc., 2017d, p. 55) Project-related traffic noise impacts on all other roadway segments would be less than significant.

D. Ground-borne Noise and Ground-borne Vibration

1. Short-Term Construction Ground-borne Vibration Levels

As shown on Table 4.10-16, Project-related construction vibration levels in RMS are expected to approach 0.11 in/sec (RMS) at the nearby receiver locations. Based on the City of San Bernardino vibration standard of 0.7 in/sec, the construction-related vibration impacts are considered less than significant and no mitigation is required. Furthermore, vibration levels at the site of the closest sensitive receiver are unlikely to be sustained during the entire construction period, but would occur rather only during the times that heavy construction equipment is operating at the Project site perimeter. Project construction ground-borne vibration levels combined with ambient noise and vibration levels from cumulative development that may be operating simultaneous to the proposed Project's construction activities would add to the cumulative ground-borne vibration levels. However, cumulative development projects that may be producing construction ground-borne vibration simultaneous to the Project's construction activities would also be restricted to daytime hours consistent with City of San Bernardino requirements thereby eliminating potential vibration impacts during the sensitive nighttime hours. Therefore, impacts associated with short-term construction ground-borne vibration levels would not be cumulatively considerable. (Urban Crossroads, Inc., 2017d, pp. 81-82)

2. Long-Term Operational Ground-Borne Noise and Vibration

Typical vibration levels for the Project's heavy truck activity at normal traffic speeds would approach 0.001 in/sec (RMS), based on the FTA *Transit Noise Impact and Vibration Assessment.* Truck deliveries on site would be travelling at very low speeds so it is expected that delivery truck vibration impacts at nearby homes would not exceed the vibration threshold of 0.7in/sec (RMS). Because the truck vibration levels would not exceed the City of San Bernardino threshold for vibration of 0.7 in/sec (RMS) for haul trips associated with operational activities, and because truck deliveries associated with cumulative development would also be made at very low speeds, impacts would not be cumulatively considerable. (Urban Crossroads, Inc., 2017d, p. 70)

E. Airport Noise

The Project site is located within the 65 to 70 dBA CNEL noise level contour boundary of the SBIA. However, the Project's building would not be located in the portion of the Project site within the 65 to 70 dBA CNEL noise level contour boundary. In addition, the Project's industrial use is considered *normally acceptable* with exterior noise levels between 65 to 70 dBA. Therefore, impacts would be less than significant and would not be cumulatively considerable. Further, standard building construction typically provides up to 25 dBA CNEL of attenuation, which would reduce the interior noise levels within the building at the Project site to satisfy the 65 dBA CNEL interior noise level standard of the *City of San Bernardino General Plan Noise Element*. (Urban Crossroads, Inc., 2017d, p. 26)

In addition, the proposed Project does not involve the construction, operation, or use of any public airports or public use airports. There are no conditions associated with the proposed Project that would contribute to airport noise or expose people working in the Project area to excessive noise levels associated with airport noise. In addition, the proposed Project is not located near any private airfields of airstrips. Also, the Project does not include the construction, operation, or use of any private airstrips. Therefore, the proposed Project would not expose people residing or working in the Project area to excessive noise levels associated with a private airstrip. As such, the proposed Project would not result in any cumulatively considerable impact associated with aircraft noise.

4.10.8 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Thresholds a), c), and d): Significant Direct and Cumulatively Considerable Impact. Short-term construction-related noise would be less than significant. Stationary operational noise impacts would be less than significant. Off-site Project-related traffic noise impacts would be significant direct and cumulatively considerable for all analyzed traffic scenarios (Existing plus Project; Existing plus Ambient 2018; Existing plus Ambient Plus Cumulative 2018; and Horizon Year 2040) for the one roadway segment identified as Washington Avenue south of Orange Show Road (ID #1) because the Project would increase the noise level by a perceptible amount at receiver locations. Under existing conditions, the properties adjacent to this roadway segment are non-conforming residential uses located on properties designated by the San Bernardino General Plan as "Industrial-Industrial Light (IL)."

Threshold b): Less-than-Significant Impact. The proposed Project would not result in the exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels during the Project's short-term construction activities or during the long-term operation of the Project.

Thresholds e) and f): Less-than-Significant Impact. The proposed Project would not expose people residing or working in the project area to excessive noise levels associated with a public airport or public use airport, private airstrip, or heliport.

4.10.9 MITIGATION

Although the Project's noise levels associated with its short-term construction activities would be less than significant and mitigation is not required, the following mitigation measures would further reduce any temporary and intermittent noise level increases produced by the Project's construction equipment at the nearby noise-sensitive land uses.

MM 4.10-1 Prior to approval of grading plans and/or issuance of building permits, plans shall include the following notes. The Project construction supervisor shall ensure compliance with the notes and the City shall conduct periodic inspection at its discretion.

a) Noise-generating Project construction activities shall only occur between the hours of 7:00 a.m. and 8:00 p.m. on any day, as specified in the City of San Bernardino Noise Ordinance.

b) The construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer's standards.

c) No stationary construction equipment shall be placed within 500 feet of residential homes and other noise-sensitive receivers. The construction contractor shall place all stationary construction equipment so that the emitted noise is directed away from the noise-sensitive receivers nearest the Project site.

d) The construction contractor shall locate equipment staging in the western portion of the property, near the western façade of the proposed building, which is the area that would create the greatest distance between the construction-related noise sources and noise-sensitive receivers nearest the Project site.

e) The construction contractor shall schedule truck haul deliveries to occur during the hours specified for construction equipment by the City of San Bernardino Noise Ordinance (between the hours of 7:00 a.m. and 8:00 p.m. on any day) and the construction contractor shall design haul truck delivery routes to minimize the use of roads that pass by noise-sensitive land uses.

Although the Project's noise impacts associated with stationary operational noise would be less than significant and no mitigation is required, the following mitigation measures would further reduce potential noise levels at nearby noise-sensitive receiver locations.

MM 4.10-2 Prior to the issuance of a building permit, the City of San Bernardino shall review the building plans to ensure that the following notes are included on the plans. In addition, prior to the issuance of a building permit, the Project's property owner shall provide documentation to the City of San Bernardino verifying that the provisions are made in the building's lease agreement that inform the user(s) of the following:

a) All on-site operating equipment under control of the building user(s) that is used in outdoor areas shall be equipped with properly functioning and well-maintained mufflers.

b) Quality pavement conditions shall be maintained on the property that are free of vertical deflection (no speed bumps are allowed) to minimize noise.

c) The truck access gates and loading docks within the Project's truck court shall be posted with signs which state: 1) truck drivers shall turn off engines when not in use; 2) diesel trucks servicing the Project site shall not idle for more

than five (5) minutes; and 3) in order for idling violations to be reported, telephone numbers of the building facilities managers shall be posted in a visible location.

4.10.10 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

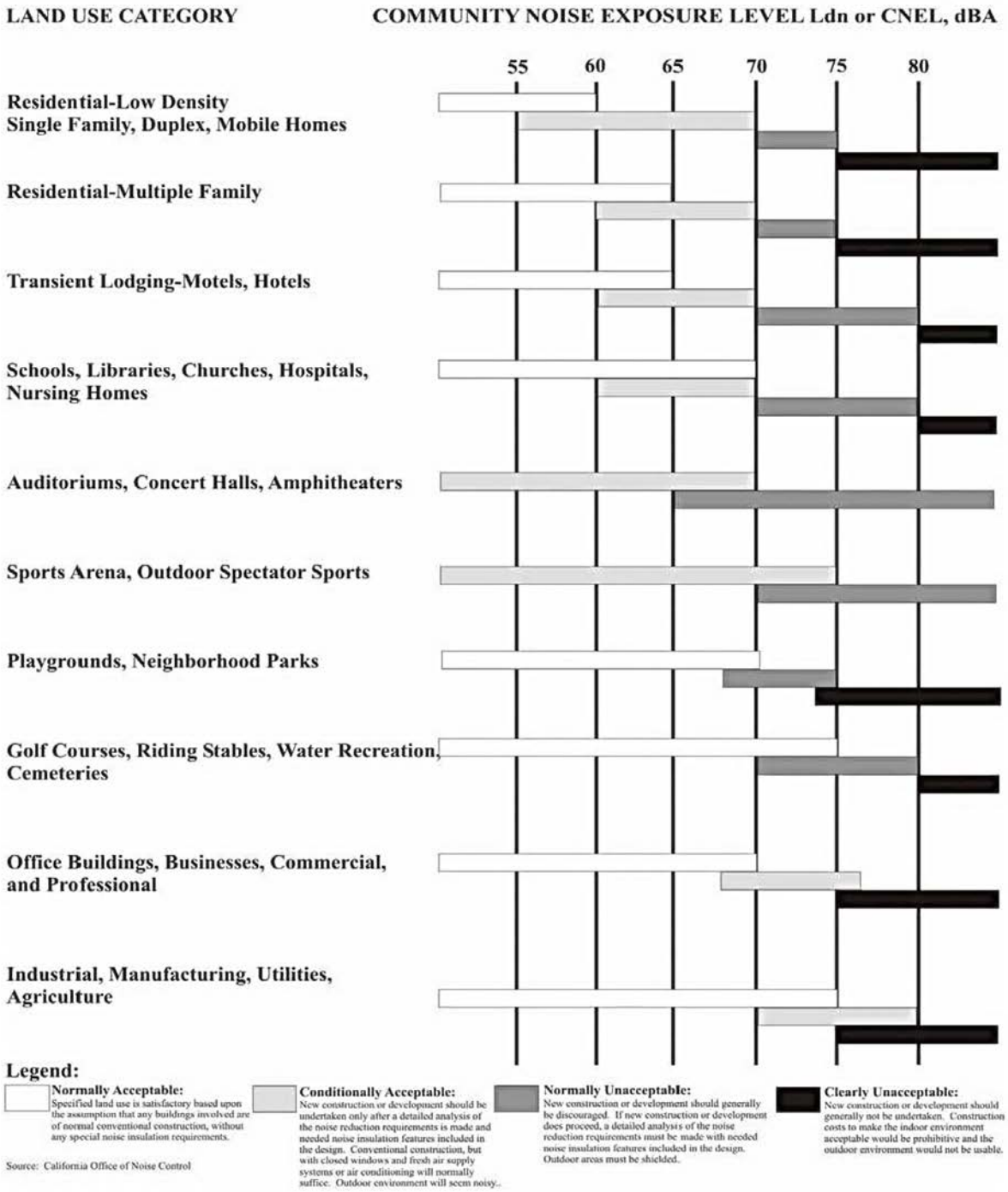
Thresholds a), c), and d): Significant and Unavoidable Off-Site Traffic-Related Noise Impact. Off-site Project-related traffic noise impacts would be significant and unavoidable for all analyzed traffic scenarios (Existing; Existing plus Ambient 2018; Existing plus Ambient Plus Cumulative 2018; and Horizon Year 2040) for the one roadway segment identified as Washington Avenue, south of Orange Show Road (ID #1). Under existing conditions, the properties adjacent to this roadway segment are non-conforming residential uses located on properties designated by the San Bernardino General Plan as "Industrial-Industrial Light (IL)." (Urban Crossroads, Inc., 2017d, p. 1)

Mitigation measures considered by the City of San Bernardino to address this impact were dismissed because they would be ineffective or infeasible. Two mitigation measures were considered, the application of rubberized asphalt on Washington Avenue and the installation of noise barriers.

Caltrans research shows that rubberized asphalt can provide potential noise attenuation of approximately 4 dBA. However, the effectiveness of reducing traffic noise levels through the application of rubberized asphalt is higher on roadways with low percentages of heavy trucks, because heavy truck engine and exhaust noise is not affected by rubberized alternative pavement. This is due to the truck height or the height at which truck engines and exhaust systems sit above the pavement. Therefore, the use of rubberized asphalt on Washington Avenue would not be effective at measurably reducing the Project's off-site traffic-related noise impact, which is caused by truck travel on the roadway segment. For this reason, the use of rubberized asphalt was dismissed as a potential mitigation measure due to ineffectiveness.

Noise barriers also were considered as potential mitigation. To achieve a readily perceptible 5 dBA reduction, which is identified by Caltrans as the minimum required noise attenuation to justify the construction of a noise barrier, a minimum 8-foot-high barrier would be required, which would block the line-of-sight from truck engine and exhaust noise along Washington Avenue to the nearby, non-confirming residential noise-sensitive receivers. (Urban Crossroads, Inc., 2017d, p. 55) Even with the installation of an 8-foot-high noise barrier, the Project-related transportation noise impact would remain above 5 dBA Leq in the Existing plus Project scenario and the significant impact would not be reduced to less than significant. Furthermore, the barrier would face the front yards of the existing non-conforming residential homes on Washington Avenue south of Orange Show Road, and physically block access from the existing homes to Washington Avenue, which is not feasible. For these reasons, the installation of a noise barrier was dismissed as a potential mitigation measure due to infeasibility and failure to adequately reduce the impact to less than significant.

Table 4.10-1 Land Use Compatibility for Community Noise Exposure



(City of San Bernardino, 2005a, Figure N-1)

Figure 4.10-1 Noise Measurement Locations

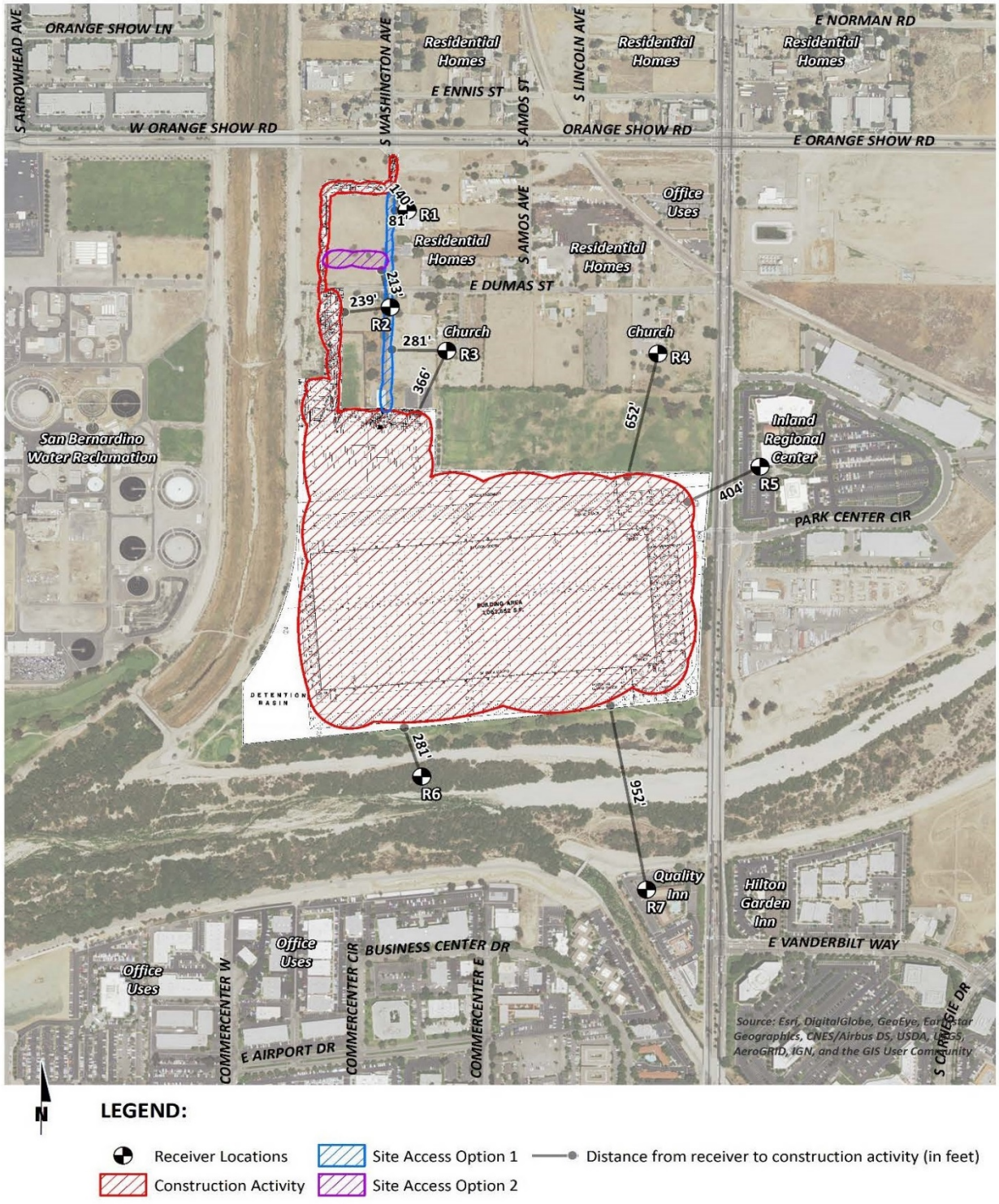
(Urban Crossroads, Inc., 2017d, Exhibit 5-A)

Table 4.10-2 24-Hour Ambient Noise Level Measurements

Location[1]	Distance To Project Boundary (Feet)	Description	Energy Average Hourly Noise Level (dBA Leq)[2]		CNEL
			Daytime	Nighttime	
L1	1,620'	Located north of the Project site on Orange Show Road adjacent to existing residential homes.	76.1	71.7	79.4
L2	0'	Located north of the Project site on Washington Avenue south of Orange Show Road near existing residential homes.	59.4	54.9	62.7
L3	920'	Located north of the Project site on Dumas Street, west of Waterman Avenue, near an existing church and residential homes.	60.9	58.9	66.0
L4	76'	Located north of the Project site in the existing parking lot of the San Bernardino Public Golf Course.	52.3	51.4	58.3
L5	362'	Located east of the Project site on Park Center Circle adjacent to existing office buildings.	62.5	61.2	68.6
L6	75'	Located near the southern Project site boundary and the Santa Ana River.	53.1	51.8	58.9
L7	825'	Located south of the Project site in an existing parking lot for a Quality Inn hotel on Waterman Avenue.	52.3	50.2	57.4
L8	818'	Located south of the Project site adjacent to office buildings on Commercenter West and the Santa Ana River Trail.	53.0	51.0	58.2

[1] See Figure 4.10-1, for the noise level measurement locations.
[2] Energy (logarithmic) average hourly levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2 of *Technical Appendix I1)*.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.
(Urban Crossroads, Inc., 2017d, Table 5-1)

Figure 4.10-2 Construction Noise Source and Receiver Locations



(Urban Crossroads, Inc., 2017d, Exhibit 10-A)

Table 4.10-3 Construction Reference Noise Levels

ID	Noise Source	Reference Distance From Source (Feet)	Reference Noise Levels @ Reference Distance (dBA Leq)	Reference Noise Levels @ 50 Feet (dBA Leq)[6]
1	Truck Pass-Bys & Dozer Activity[1]	30'	63.6	59.2
2	Dozer Activity[1]	30'	68.6	64.2
3	Construction Vehicle Maintenance Activities[2]	30'	71.9	67.5
4	Foundation Trenching[2]	30'	72.6	68.2
5	Rough Grading Activities[2]	30'	77.9	73.5
6	Residential Framing[3]	30'	66.7	62.3
7	Water Truck Pass-By & Backup Alarm[4]	30'	76.3	71.9
8	Dozer Pass-By[4]	30'	84.0	79.6
9	Two Scrapers & Water Truck Pass-By[4]	30'	83.4	79.0
10	Two Scrapers Pass-By[4]	30'	83.7	79.3
11	Scraper, Water Truck, & Dozer Activity[4]	30'	79.7	75.3
12	Concrete Mixer Truck Movements[5]	50'	71.2	71.2
13	Concrete Paver Activities[5]	30'	70.0	65.6
14	Concrete Mixer Pour & Paving Activities[5]	30'	70.3	65.9
15	Concrete Mixer Backup Alarms & Air Brakes[5]	50'	71.6	71.6
16	Concrete Mixer Pour Activities[5]	50'	67.7	67.7

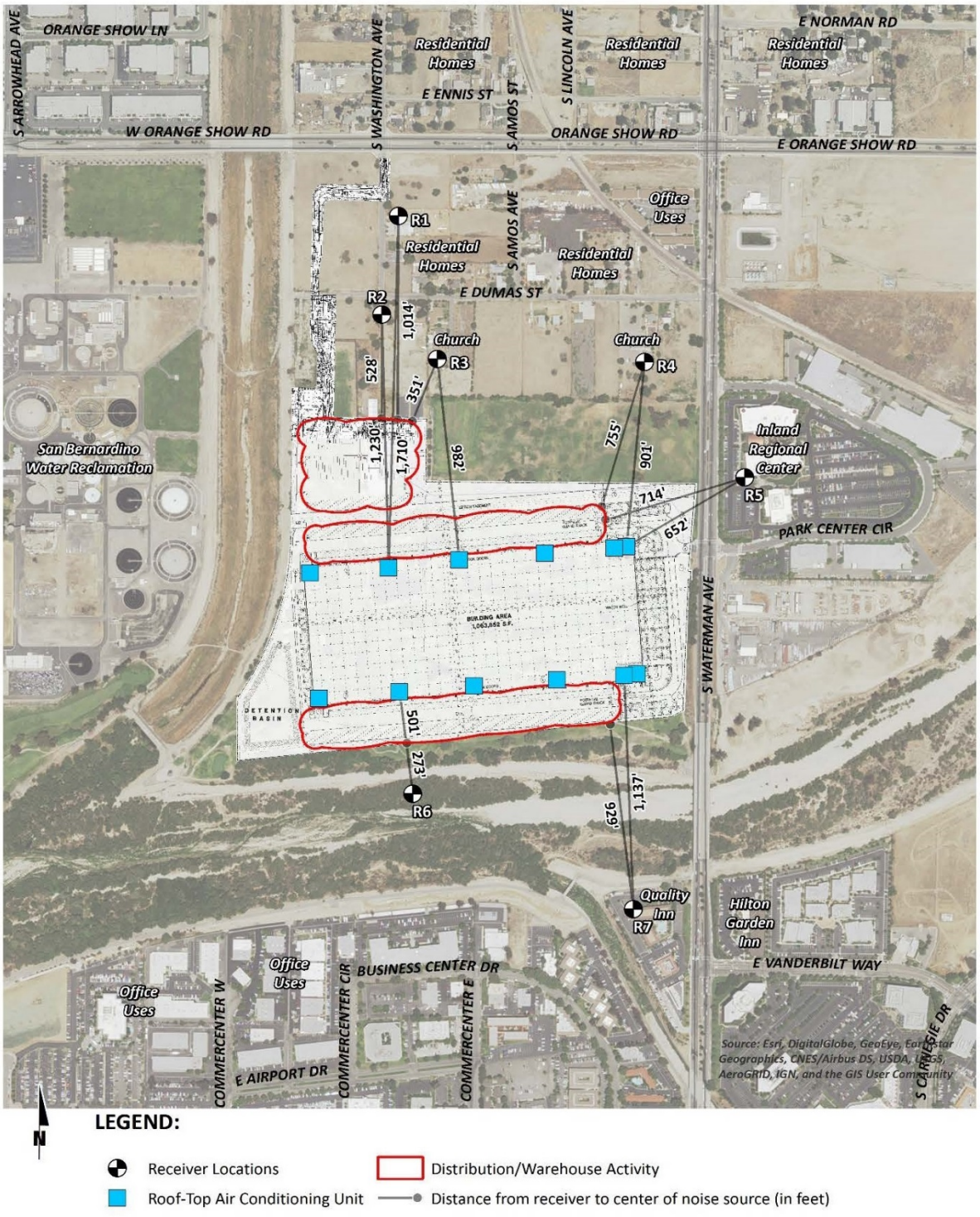
[1] As measured by Urban Crossroads, Inc. on 10/14/15 at a business park construction site located at the northwest corner of Barranca Parkway and Alton Parkway in the City of Irvine.
[2] As measured by Urban Crossroads, Inc. on 10/20/15 at a construction site located in Rancho Mission Viejo.
[3] As measured by Urban Crossroads, Inc. on 10/20/15 at a residential construction site located in Rancho Mission Viejo.
[4] As measured by Urban Crossroads, Inc. on 10/30/15 during grading operations within an industrial construction site located in the City of Ontario.
[5] Reference noise level measurements were collected from a nighttime concrete pour at an industrial construction site, located at 27334 San Bernardino Avenue in the City of Redlands, between 1:00 a.m. to 2:00 a.m. on 7/1/15.
[6] Reference noise levels are calculated at 50 feet using a drop off rate of 6 dBA per doubling of distance (point source).
(Urban Crossroads, Inc., 2017d, Table 10-1)

Table 4.10-4 Off-Site Roadway Parameters

ID	Roadway	Segment	Adjacent Planned (Existing) Land Use[1]	Distance from Centerline to Nearest Adjacent Land Use (Feet)[2]	Posted Speed Limit (mph)
1	Washington Av.	s/o Orange Show Rd.	Industrial Light (Residential)	30'	25
2	Waterman Av.	s/o Orange Show Rd.	Industrial Heavy (Office/Public)	50'	50
3	Waterman Av.	s/o Dumas St.	Industrial Heavy (Office/Public)	50'	50
4	Waterman Av.	s/o Park Center Dr.	Industrial Heavy (Public)	50'	50
5	Waterman Av.	n/o Hospitality Ln.	Commercial Regional (Public)	50'	50
6	Waterman Av.	s/o Hospitality Ln.	Commercial Regional (Commercial)	50'	50
7	Auto Center Rd.	e/o I-215 Fwy.	Commercial General (Commercial)	50'	40
8	Orange Show Rd.	e/o E St.	Industrial Light (Commercial/Ind.)	50'	50
9	Orange Show Rd.	e/o Arrowhead Av.	Industrial Light (Industrial)	50'	50
10	Orange Show Rd.	e/o Washington Av.	Industrial Light (Residential)	50'	50
11	Orange Show Rd.	e/o Waterman Av.	Industrial Light (Residential/Ind.)	50'	50

[1] Sources: City of San Bernardino General Plan Land Use Element, Figure LU-2 and Google Earth imagery.
[2] Distance to adjacent land use is based upon the right-of-way distances for each functional roadway classification provided in the General Plan Circulation Elements.
(Urban Crossroads, Inc., 2017d, Table 6-1)

Figure 4.10-3 Operational Noise Source Locations



(Urban Crossroads, Inc., 2017d, Exhibit 9-A)

Table 4.10-5 Reference Operational Noise Level Measurements

Noise Source	Duration (h:mm:ss)	Distance From Source (Feet)	Noise Source Height (Feet)	Hourly Activity (Minutes)[3]	Noise Level (dBA Leq)	
					@ Ref. Distance	@ 50 Feet
Entry Gate Activity[1]	0:15:00	20'	8'	60	64.0	56.0
Unloading/Docking Activity[1]	0:15:00	30'	8'	60	67.2	62.8
Roof-Top Air Conditioning Units[2]	96:00:00	5'	25'	39	77.2	57.2

[1] Reference noise level measurements were collected on 1/7/2015 from the existing operations of the Motivational Fulfillment & Logistics Services distribution facility located at 6810 Bickmore Avenue in the City of Chino.
[2] As measured by Urban Crossroads, Inc. on 7/27/2015 at the Santee Walmart located at 170 Town Center Parkway.
[3] Duration (minutes within the hour) of noise activity during peak hourly conditions.
(Urban Crossroads, Inc., 2017d, Table 9-1)

Table 4.10-6 Significance of Noise Impacts at Noise-Sensitive Receivers

Without Project Noise Level	Potential Significant Impact
< 60 dBA	5 dBA or more
60 - 65 dBA	3 dBA or more
> 65 dBA	1.5 dBA or more

Federal Interagency Committee on Noise (FICON), 1992.
(Urban Crossroads, Inc., 2017d, Table 4-1)

Table 4.10-7 Significance Criteria Summary

Analysis	Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Off-Site	Noise-Sensitive[1]	if ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase	
		if ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Project increase	
		if ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL Project increase	
	Non-Noise-Sensitive[2]	if ambient is < 70 dBA CNEL	≥ 5 dBA CNEL Project increase	
		if ambient is > 70 dBA CNEL	≥ 3 dBA CNEL Project increase	
Operational[3]	Noise-Sensitive	Exterior Residential Land Use	65 dBA Leq	
Construction[4]	Permitted hours between 7:00 a.m. to 8:00 p.m. on any day.			
	Noise-Sensitive	Noise Level Threshold[5]	85 dBA Leq	n/a
		Vibration Level Threshold[6]	0.7 in/sec	n/a

[1] Source: FICON, 1992.
[2] Source: City of San Bernardino General Plan Noise Element, Figure N-1.
[3] Source: City of San Bernardino Development Code, Section 19.20.030.15(A) (Appendix 3.1).
[4] Source: City of San Bernardino Municipal Code, Section 8.54.070 (Appendix 3.2).
[5] Source: NIOSH, Criteria for Recommended Standard: Occupational Noise Exposure.
[6] Source: Section 15.68.020 of the City of San Bernardino Municipal Code (Appendix 3.1).
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

(Urban Crossroads, Inc., 2017d, Table 4-2)

Table 4.10-8 Construction Equipment Noise Level Summary (dBA Leq)

Receiver Location[1]	Construction Phase Hourly Noise Level (dBA Leq)					
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Peak Activity[2]
R1	75.4	75.4	67.7	67.4	63.3	75.4
R2	67.0	67.0	59.3	59.0	54.9	67.0
R3	64.6	64.6	56.9	56.6	52.5	64.6
R4	57.3	57.3	49.6	49.3	45.2	57.3
R5	61.4	61.4	53.7	53.5	49.3	61.4
R6	54.0	54.0	46.3	46.0	41.9	54.0
R7	64.6	64.6	56.9	56.6	52.5	64.6

[1] Noise receiver locations.
[2] Estimated construction noise levels during peak operating conditions.
(Urban Crossroads, Inc., 2017d, Table10-7)

Table 4.10-9 Construction Equipment Noise Level Compliance (dBA Leq)

Receiver Location[1]	Construction Noise Levels (dBA Leq)		
	Peak Activity[2]	Threshold[3]	Threshold Exceeded?[4]
R1	75.4	85	No
R2	67.0	85	No
R3	64.6	85	No
R4	57.3	85	No
R5	61.4	85	No
R6	54.0	85	No
R7	64.6	85	No

[1] Noise receiver locations.
[2] Estimated construction noise levels during peak operating conditions.
[3] Construction noise level threshold.
[4] Do the estimated Project construction noise levels satisfy the construction noise level threshold?
(Urban Crossroads, Inc., 2017d, Table 10-8)

Table 4.10-10Operational Noise Level Projections (dBA Leq)

Receiver Location	Noise Sources[1]		Combined Operational Noise Levels (dBA Leq)[2]
	Unloading/ Docking Activity	Roof-Top Air Conditioning Unit	
R1	36.6	24.6	36.9
R2	42.3	27.5	42.4
R3	45.8	29.4	45.9
R4	39.2	30.2	39.7
R5	39.7	33.0	40.5
R6	48.0	35.3	48.2
R7	37.4	28.2	37.9

[2] Reference noise sources as shown on Table 9-1 of *Technical Appendix I1*.
[3] Calculations for each noise source are provided in Appendix 9.2 of *Technical Appendix I1*.
(Urban Crossroads, Inc., 2017d, Table 9-2)

Table 4.10-11Project Operational Noise Level Compliance

Receiver Location	Noise Level At Receiver Locations (dBA Leq)[1]	Noise Level Standard (dBA Leq)[2]	Threshold Exceeded?[4]
R1	36.9	65	No
R2	42.4	65	No
R3	45.9	65	No
R4	39.7	65	No
R5	40.5	65	No
R6	48.2	65	No
R6	37.9	65	No

1 Estimated Project stationary source noise levels as shown on Table 9-2 of *Technical Appendix I*1.
[3] Noise standards.
[4] Do the estimated Project stationary source noise levels exceed the noise standards on the affected land uses?

(Urban Crossroads, Inc., 2017d, Table 9-4)

Table 4.10-12Project Daytime Noise Contributions

Receiver Location	Total Project Operational Noise Level[1]	Measurement Location[2]	Reference Ambient Noise Levels[3]	Combined Project and Ambient[4]	Project Contribution[5]	Threshold Exceeded?[6]
R1	36.9	L2	54.9	55.0	0.1	No
R2	42.4	L4	51.4	51.9	0.5	No
R3	45.9	L4	52.3	53.2	0.9	No
R4	39.7	L3	60.9	60.9	0.0	No
R5	40.5	L5	62.5	62.5	0.0	No
R6	48.2	L6	53.1	54.3	1.2	No
R7	37.9	L7	52.3	52.5	0.2	No

[1] Total Project operational noise levels.
[2] Reference noise level measurement locations.
[3] Observed daytime ambient noise levels.
[4] Represents the combined ambient conditions plus the Project activities.
[5] The noise level increase expected with the addition of the proposed Project activities.
[6] Significance Criteria.
(Urban Crossroads, Inc., 2017d, Table 9-4)

Table 4.10-13Project Nighttime Noise Level Contributions

Receiver Location	Total Project Operational Noise Level[1]	Measurement Location[2]	Reference Ambient Noise Levels[3]	Combined Project and Ambient[4]	Project Contribution[5]	Threshold Exceeded?[6]
R1	36.9	L2	54.9	55.0	0.1	No
R2	42.4	L4	51.4	51.9	0.5	No
R3	45.9	L4	51.4	52.5	1.1	No
R4	39.7	L3	58.9	59.0	0.1	No
R5	40.5	L5	61.2	61.2	0.0	No
R6	48.2	L6	51.8	53.4	1.6	No
R7	37.9	L7	50.2	50.4	0.2	No

[1]Total Project operational noise levels.
[2] Reference noise level measurement locations.
[3]Observed nighttime ambient noise levels.
[4] Represents the combined ambient conditions plus the Project activities.
[5] The noise level increase expected with the addition of the proposed Project activities.
[6]Significance Criteria
(Urban Crossroads, Inc., 2017d, Table 9-5)

Table 4.10-14Existing Condition Off-Site Project-Related Noise Level Contributions

ID	Road	Segment	Adjacent Planned Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?[3]	Threshold Exceeded?[4]
				No Project	With Project	Project Addition		
1	Washington Av.	s/o Orange Show Rd.	Industrial Light (Residential)	55.7	65.9	10.2	Yes	Yes
2	Waterman Av.	s/o Orange Show Rd.	Industrial Heavy (Office/Public)	76.7	76.8	0.1	No	No
3	Waterman Av.	s/o Dumas St.	Industrial Heavy (Office/Public)	76.3	76.4	0.1	No	No
4	Waterman Av.	s/o Park Center Dr.	Industrial Heavy (Public)	77.3	78.0	0.7	No	No
5	Waterman Av.	n/o Hospitality Ln.	Commercial Regional (Public)	76.5	77.3	0.8	No	No
6	Waterman Av.	s/o Hospitality Ln.	Commercial Regional (Commercial)	78.6	79.0	0.4	No	No
7	Auto Center Rd.	e/o I-215 Fwy.	Commercial General (Commercial)	76.4	76.9	0.5	No	No
8	Orange Show Rd.	e/o E St.	Industrial Light (Commercial/Ind.)	77.5	78.0	0.5	No	No
9	Orange Show Rd.	e/o Arrowhead Av.	Industrial Light (Industrial)	76.4	77.1	0.7	No	No
10	Orange Show Rd.	e/o Washington Av.	Industrial Light (Residential)	76.4	76.5	0.1	Yes	No
11	Orange Show Rd.	e/o Waterman Av.	Industrial Light (Residential/Ind.)	75.8	75.8	0.0	Yes	No

[1] Sources: City of San Bernardino General Plan Land Use Element, Figure LU-2 and Google Earth imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[3] "Yes" = Existing, non-conforming noise-sensitive land uses adjacent to the study area roadway segment.
[4] Significance Criteria.
(Urban Crossroads, Inc., 2017d, Table 7-9)

Table 4.10-15Existing + Ambient 2018 Project-Related Traffic Noise Level Contributions

ID	Road	Segment	Adjacent Planned Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?[3]	Threshold Exceeded?[4]
				No Project	With Project	Project Addition		
1	Washington Av.	s/o Orange Show Rd.	Industrial Light (Residential)	57.7	66.1	8.4	Yes	Yes
2	Waterman Av.	s/o Orange Show Rd.	Industrial Heavy (Office/Public)	77.4	77.5	0.1	No	No
3	Waterman Av.	s/o Dumas St.	Industrial Heavy (Office/Public)	77.1	77.2	0.1	No	No
4	Waterman Av.	s/o Park Center Dr.	Industrial Heavy (Public)	78.0	78.6	0.6	No	No
5	Waterman Av.	n/o Hospitality Ln.	Commercial Regional (Public)	77.3	78.0	0.7	No	No
6	Waterman Av.	s/o Hospitality Ln.	Commercial Regional (Commercial)	79.1	79.5	0.4	No	No
7	Auto Center Rd.	e/o I-215 Fwy.	Commercial General (Commercial)	77.2	77.6	0.4	No	No
8	Orange Show Rd.	e/o E St.	Industrial Light (Commercial/Ind.)	78.3	78.7	0.4	No	No
9	Orange Show Rd.	e/o Arrowhead Av.	Industrial Light (Industrial)	77.2	77.8	0.6	No	No
10	Orange Show Rd.	e/o Washington Av.	Industrial Light (Residential)	77.1	77.2	0.1	Yes	No
11	Orange Show Rd.	e/o Waterman Av.	Industrial Light (Residential/Ind.)	76.9	76.9	0.0	Yes	No

[1] Sources: City of San Bernardino General Plan Land Use Element, Figure LU-2 and Google Earth imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[3] "Yes" = Existing, non-conforming noise-sensitive land uses adjacent to the study area roadway segment.
[4] Significance Criteria.
(Urban Crossroads, Inc., 2017d, Table 7-10)

Table 4.10-16Construction Equipment Vibration Levels

Receiver[1]	Distance to Const. Activity (Feet)	Receiver PPV Levels (in/sec)[2]					RMS Velocity Levels (in/sec)[3]	Threshold Exceeded?[4]
		Small Bulldozer	Jack-hammer	Loaded Trucks	Large Bulldozer	Peak Vibration		
R1	81'	0.001	0.006	0.013	0.015	0.015	0.011	No
R2	281'	0.000	0.001	0.002	0.002	0.002	0.001	No
R3	652'	0.000	0.000	0.001	0.001	0.001	0.000	No
R4	652'	0.000	0.000	0.001	0.001	0.001	0.000	No
R5	404'	0.000	0.001	0.001	0.001	0.001	0.001	No
R6	952'	0.000	0.000	0.000	0.000	0.000	0.000	No
R7	281'	0.000	0.001	0.002	0.002	0.002	0.002	No

[1] Receiver locations.
[2] Based on the Vibration Source Levels of Construction Equipment.
[3] Vibration levels in PPV are converted to RMS velocity using a 0.71 conversion factor identified in the Caltrans Transportation and Construction Vibration Guidance Manual, September 2013.
[4] Does the peak vibration exceed the City of San Bernardino maximum acceptable vibration threshold?
(Urban Crossroads, Inc., 2017d, Table 10-9)

Table 4.10-17 Existing + Ambient + Cumulative 2018 Project Traffic Noise Level Contributions

ID	Road	Segment	Adjacent Planned Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?[3]	Threshold Exceeded?[4]
				No Project	With Project	Project Addition		
1	Washington Av.	s/o Orange Show Rd.	Industrial Light (Residential)	57.7	66.1	8.4	Yes	Yes
2	Waterman Av.	s/o Orange Show Rd.	Industrial Heavy (Office/Public)	77.4	77.5	0.1	No	No
3	Waterman Av.	s/o Dumas St.	Industrial Heavy (Office/Public)	77.1	77.2	0.1	No	No
4	Waterman Av.	s/o Park Center Dr.	Industrial Heavy (Public)	78.0	78.6	0.6	No	No
5	Waterman Av.	n/o Hospitality Ln.	Commercial Regional (Public)	77.3	78.0	0.7	No	No
6	Waterman Av.	s/o Hospitality Ln.	Commercial Regional (Commercial)	79.1	79.5	0.4	No	No
7	Auto Center Rd.	e/o I-215 Fwy.	Commercial General (Commercial)	77.2	77.6	0.4	No	No
8	Orange Show Rd.	e/o E St.	Industrial Light (Commercial/Ind.)	78.3	78.7	0.4	No	No
9	Orange Show Rd.	e/o Arrowhead Av.	Industrial Light (Industrial)	77.2	77.8	0.6	No	No
10	Orange Show Rd.	e/o Washington Av.	Industrial Light (Residential)	77.1	77.2	0.1	Yes	No
11	Orange Show Rd.	e/o Waterman Av.	Industrial Light (Residential/Ind.)	76.9	76.9	0.0	Yes	No

[1] Sources: City of San Bernardino General Plan Land Use Element, Figure LU-2 and Google Earth imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[3] "Yes" = Existing, non-conforming noise-sensitive land uses adjacent to the study area roadway segment.
[4] Significance Criteria.
(Urban Crossroads, Inc., 2017d, Table 7-11)

Table 4.10-18 Horizon Year 2040 Off-Site Project-Related Traffic Noise Levels

ID	Road	Segment	Adjacent Planned Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?[3]	Threshold Exceeded?[4]
				No Project	With Project	Project Addition		
1	Washington Av.	s/o Orange Show Rd.	Industrial Light (Residential)	61.0	66.8	5.8	Yes	Yes
2	Waterman Av.	s/o Orange Show Rd.	Industrial Heavy (Office/Public)	77.6	77.7	0.1	No	No
3	Waterman Av.	s/o Dumas St.	Industrial Heavy (Office/Public)	77.8	77.9	0.1	No	No
4	Waterman Av.	s/o Park Center Dr.	Industrial Heavy (Public)	78.7	79.2	0.5	No	No
5	Waterman Av.	n/o Hospitality Ln.	Commercial Regional (Public)	78.1	78.6	0.5	No	No
6	Waterman Av.	s/o Hospitality Ln.	Commercial Regional (Commercial)	79.9	80.2	0.3	No	No
7	Auto Center Rd.	e/o I-215 Fwy.	Commercial General (Commercial)	76.5	77.0	0.5	No	No
8	Orange Show Rd.	e/o E St.	Industrial Light (Commercial/Ind.)	77.4	77.9	0.5	No	No
9	Orange Show Rd.	e/o Arrowhead Av.	Industrial Light (Industrial)	75.8	76.6	0.8	No	No
10	Orange Show Rd.	e/o Washington Av.	Industrial Light (Residential)	77.9	78.0	0.1	Yes	No
11	Orange Show Rd.	e/o Waterman Av.	Industrial Light (Residential/Ind.)	75.8	75.8	0.0	Yes	No

[1] Sources: City of San Bernardino General Plan Land Use Element, Figure LU-2 and Google Earth imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[3] "Yes" = Existing, non-conforming noise-sensitive land uses adjacent to the study area roadway segment.
[4] Significance Criteria.
(Urban Crossroads, Inc., 2017d, Table 7-12)

4.11 TRANSPORTATION / CIRCULATION

The analysis presented in this Subsection is based on a traffic impact analysis (TIA) report prepared by Urban Crossroads, Inc. The TIA, titled "Gateway South Building 4 Traffic Impact Analysis, City of San Bernardino" and dated April 6, 2017, is included as *Technical Appendix J1* to this EIR (Urban Crossroads, 2017e). The TIA was prepared in accordance with the City of San Bernardino's *Traffic Impact Study Guidelines* (dated June 2015) and, where appropriate, addresses applicable requirements of the San Bernardino Associated Governments' *San Bernardino County Congestion Management Program* (*CMP*, dated June 2016) and the California Department of Transportation's (Caltrans) *Guide for the Preparation of Traffic Impact Studies* (dated December 2002).

As discussed in EIR Section 3.0, *Project Description*, as a reasonable consequence of the Project, the City of San Bernardino is likely to require that the Project's proposed interim off-site roadway access be replaced in the future with a permanent roadway in a different alignment. As such, two options for a future permanent alignment are also evaluated in this EIR, one of which is addressed in the TIA (*Technical Appendix J1*) and the other is addressed in the "Gateway South Building 4 Alternatives Assessment Memorandum" prepared by Urban Crossroads, Inc., dated June 2, 2017 and included as *Appendix J2* to this EIR. In summary, the TIA and the memorandum analyze the following Project access points: A driveway is proposed to connect with S. Waterman Avenue via the existing western extension of Park Center Drive. This driveway is proposed to allow for full access and would serve both trucks and passenger cars. North of the Project site, an interim roadway access alignment and two possible permanent access alignments for truck travel are analyzed between the Project site and Orange Show Road, as described in detail in EIR Section 3.0, *Project Description*.

4.11.1 STUDY AREA

The geographic area that was evaluated for Project-related effects to the transportation and circulation network (hereafter referred to as the "Project study area") is defined as follows:

A. Intersections

The Project study area includes all proposed Project access points to public streets, all intersections where the Project's operation would add 50 or more peak hour trips, and intersections of local interest specifically requested for analysis by the City of San Bernardino. A "peak hour trip" is defined as a trip that occurs in the most congested hour between the hours of 7:00 AM and 9:00 AM (AM peak hour) or between the hours of 4:00 PM and 6:00 PM (PM peak hour). The "50 peak hour trip" criteria utilized by the City of San Bernardino to define the study area is consistent with the *San Bernardino County CMP* and with the methodology utilized by many other local government jurisdictions in the Inland Empire area, and generally represents the minimum threshold at with a project's traffic can be differentiated from background traffic and has the potential to substantially affect intersection performance. The use of a 50 peak hour trip criterion is a valid and proven way to establish a study area. (Urban Crossroads, 2017e, p. 5)

The Project study area contains the sixteen (16) intersections listed in Table 4.11-1, *Project Study Area Intersections*. For ease of reference throughout this EIR Subsection, identification numbers are assigned to each intersection listed Table 4.11-1 and correspond to the intersection locations illustrated on Figure 4.11-1, *Project Study Area Intersection Location Map*. The Project study area includes intersections wholly or partially under the jurisdictions of the City of San Bernardino and Caltrans.

B. Freeways

1. Freeway Mainline Segments

All freeway mainline segments are under the jurisdiction of the Caltrans. Caltrans requests that CEQA lead agencies include an analysis of potential impacts to freeway mainline segments when a proposed project is calculated to contribute 50 or more two-way peak hour trips to a state highway facility that is experiencing noticeable delay and approaching unstable traffic flow. Because impacts to freeway segments dissipate with distance from the point of entry to the State Highway System (i.e., at ramps receiving a project's traffic), Caltrans has indicated that when a project's traffic volumes dissipate to fewer than 50 peak hour trips on a freeway mainline segment, they become unrecognizable from other traffic on the State Highway System. Thus, Caltrans does not require a project's entire vehicular travel path on State highway facilities to be studied. Notwithstanding the information presented above, the Project study area includes all freeway mainline segments that would receive 25 or more two-way peak hour trips, which results in a more conservative (i.e., larger) study area than Caltrans typically requests. The eight (8) freeway mainline segments located in the Project study area are listed in Table 4.11-2, *Project Study Area Freeway Mainline Segments*. (Urban Crossroads, 2017e, pp. 5, 7)

2. Freeway Ramps

The Project's traffic would access/exit the State Highway System at Auto Center Drive (Interstate 215, I-215) and Waterman Avenue (Interstate 10, I-10). These locations are where the highest volumes of Project traffic would merge and diverge across freeway lanes and potentially disrupt traffic flow. Thus, the I-215 on/off-ramps at Auto Center Drive and the I-10 on/off-ramps at Waterman Avenue are included in the Project study area. (Urban Crossroads, 2017e, p. 7)

4.11.2 EXISTING CONDITIONS

The Project site is located in the southern portion of the City of San Bernardino. Figure 4.11-2, *City of San Bernardino General Plan Circulation Element*, depict the City's roadway network for major roads located in the vicinity of the Project site. The Project site is located approximately 0.6-mile east of I-215 and approximately 0.5-mile north of I-10.

A. Existing Intersection Conditions

Peak hour traffic counts and turning movement data was collected at study area intersections in March 2017. The days when traffic data was collected were representative of typical weekday peak

hour traffic; no field observations were made that would indicate atypical traffic conditions on the data collection days. (Urban Crossroads, 2017e, p. 38)

The traffic count data includes peak hour tabulations of passenger cars, 2-axle trucks, 3-axle trucks, and 4-or-more axle trucks at all study area intersections. Larger vehicles take up more space on the roadway and take a longer time to accelerate and decelerate than smaller, passenger vehicles; therefore, converting larger vehicle counts into passenger car equivalents (PCEs) better accounts for larger vehicles' effects on the circulation network than raw vehicle counts and allows for traffic to be represented as a standardized unit. For purposes of this analysis, a PCE factor of 2.0 is applied to 2-axle truck trips, 2.5 is applied to 3-axle truck trips, and 3.0 is applied to 4-or-more-axle truck trips, in accordance with City of San Bernardino traffic report requirements. (Urban Crossroads, 2017e, p. 42) Except where specifically noted, all of the vehicle trips/traffic volumes presented in this EIR Subsection are shown in terms of PCEs. A detailed description of the methodology used to classify peak hour and daily traffic trips is provided in *Technical Appendix J1*.

Figure 4.11-3, *Existing Peak Hour Intersection Traffic Volumes*, illustrates weekday, peak hour traffic volumes at Project study area intersections. Peak hour traffic operations were calculated by Urban Crossroads at Project study area intersections based on the analysis methodologies presented in Subsection 4.11.3. The peak hour level of service (LOS) for each Project study area intersection is summarized in Table 4.11-3, *Existing Intersection Levels of Service*. As shown in Table 4.11-3, all intersections in the Project study area operate at acceptable LOS during peak hours under existing conditions, with the exception of the I-10 Westbound Ramps / Carnegie Drive / Hospitality Lane intersection (Intersection #16). Intersection #16 operates at LOS E in the PM peak hour. (Urban Crossroads, 2017e, p. 45) Because roadway segment performance is dictated by the performance of intersections on both ends of the segment, a separate roadway segment analysis is duplicative of the intersection analysis and not necessary to determine the Project's impacts to the roadway network. If an intersection is operating deficiently, then it is assumed that the segment approach and departure lanes to and from the intersection are also operating deficiently.

B. Existing Freeway Conditions

Freeway mainline segment and interchange traffic volume data was obtained from Caltrans' Performance System (PeMS) website in March 2017. Data was collected for a period of three consecutive days and the maximum value observed within this three-day period is utilized as the baseline for the weekday, peak hour conditions. Actual vehicles, as opposed to PCE volumes, were used to calculate freeway density and the corresponding LOS/ramp queuing summaries in accordance with industry-standard methodology for freeway facilities (i.e., Transportation Research Board's *Highway Capacity Manual*) (Urban Crossroads, 2017e, p. 28). Figure 4.11-4, *Existing Peak Hour Freeway Traffic Volumes*, illustrates weekday, peak hour traffic volumes along freeway facilities in the Project study area.

1. Existing Freeway Mainline Conditions

The peak hour LOS for each freeway mainline segment in the Project study area is summarized in Table 4.11-4, *Existing Freeway Mainline Levels of Service*. Peak hour operations along freeway mainline segments in the Project study area were calculated using the analysis methodologies presented in Subsection 4.11.3. As summarized in Table 4.11-4, all freeway mainline segments located in the Project study area operate at acceptable LOS during the peak hours under existing conditions with the exception of the I-10 Westbound segments located west of Waterman Avenue (in the AM and PM peak hours) and east of Waterman Avenue (in the AM peak hour) (Urban Crossroads, 2017e, p. 50).

2. Existing Freeway Ramp Area Conditions

The existing peak hour queuing and merge/diverge LOS at freeway ramps in the Project study area are summarized in Table 4.11-5, *Existing Freeway Ramp Queuing Summary*, and Table 4.11-6, *Existing Freeway Ramp Merge/Diverge Levels of Service*, respectively. The peak hour queuing and merge/diverge LOS were calculated using the analysis methodologies presented in Subsection 4.11.3. As shown in Table 4.11-5 and Table 4.11-6, all freeway ramps and associated merge/diverge areas operate at acceptable levels under existing conditions (Urban Crossroads, 2017e, pp. 49, 51).

C. Existing Mass Transit

Omnitrans is responsible for providing bus transit service in the Project study area. Three Omnitrans bus routes, Routes 2 and 5 and the sbX Green Line, operate in the vicinity of the Project site. Route 5 serves San Bernardino, Del Rosa and California State University-San Bernardino seven days a week and operates along Waterman Avenue. The nearest Route 5 bus stop to the Project site is located at the Waterman Avenue / Park Center Drive intersection, immediately adjacent to the Project site. Route 2 serves Cal State San Bernardino and Loma Linda via E Street and Hospitality Lane and operates seven days a week. The nearest Route 2 bus stop to the Project site is located near the Waterman Avenue / Hospitality Lane intersection, approximately 0.4-mile south of the Project site. The sbX Green Line operates during weekdays only and provides express service between California State University-San Bernardino and Loma Linda University/Medical Center via E Street and Hospitality Lane. The nearest sbX Green Line bus stop to the Project site is located near the Hospitality Lane / Carnegie Drive intersection, approximately 0.6-mile from the Project site. (Urban Crossroads, 2017e; Google Earth Pro, 2017)

D. Existing Pedestrian and Bicycle Facilities

Figure PRT-2 from the City of San Bernardino General Plan identifies bicycle routes along Orange Show Road and Waterman Avenue within the Project study area, as well as a regional multi-purpose trail along the Santa Ana River to the south of the Project site (City of San Bernardino, 2005a). Field observations indicate nominal pedestrian and bicycle activity along the transportation network in the vicinity of the Project site, likely and partially due to limited, non-contiguous sidewalks along

Waterman Avenue (Urban Crossroads, 2017e, p. 38) and the limited number of residential homes within a close walking distance.

E. Existing Airport Facilities

The Project site is located approximately 1.2 miles southwest of the San Bernardino International Airport (SBIA). Per Figure LU-4 from the City of San Bernardino General Plan, the Project site is not located within the SBIA's influence area (City of San Bernardino, 2005a). The Project site also is located approximately 0.3-mile northwest of a private helipad.

F. Existing Regional and Local Transportation Programs and Plans

1. SCAG Regional Transportation Plan (RTP)

The Southern California Association of Governments (SCAG) is a regional agency established pursuant to California Government Code § 6500, also referred to as the Joint Powers Authority law. SCAG is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Organization (MPO). The Project site is within SCAG's regional authority. On April 7, 2016, SCAG adopted the *2016-2040 Regional Transportation Plan / Sustainable Communities Strategy* (*RTP/SCS*) with goals to: 1) preserve the existing transportation system; 2) expand the regional transit system; 3) expand passenger rail; 4) improve highway and arterial capacity; 5) managing demands on the transportation system; 6) optimizing the performance of the transportation system; 7) promoting forms of active transportation; 8) strengthening the regional transportation network for goods movement; 9) leveraging technology; 10) improving airport access; and 11) focusing new growth around transit (SCAG, 2016a, pp. 6-8).

2. San Bernardino County Congestion Management Program (CMP)

The *San Bernardino County CMP* was prepared by the San Bernardino Associated Governments (SANBAG). The *CMP's* intent is to more directly link land use, transportation, and air quality planning and to prompt reasonable growth management programs that would more effectively utilize new and existing transportation funds to alleviate traffic congestion and related impacts and improve air quality. The *San Bernardino CMP* was first adopted in November 1992 and has since been updated 12 times, with the most recent comprehensive update in June 2016. The *San Bernardino County CMP* roadway network includes the following intersections in the Project study area (Urban Crossroads, 2017e, p. 5):

- E Street / Auto Center Road / Orange Show Road (Intersection #3);
- Waterman Avenue / Hospitality Lane (Intersection #12); and
- Waterman Avenue / Redlands Boulevard (Intersection #15).

In addition, two *CMP* roadway network freeways, I-215 and I-10, are located within the Project study area (SANBAG, 2016, p. 2-5).

3. *San Bernardino County Measure "I"*

Measure "I", a one-half of one percent sales tax on retail transactions through the year 2040, was approved by San Bernardino County voters. The revenue generated by Measure "I" is to be used to fund transportation projects including, but not limited to, roadway improvements, commuter rail, public transit, and other identified improvements. Measure "I" requires that a local traffic impact fee be created to ensure that development projects are paying a fair share for transportation projects from which they would benefit (see discussion of "City of San Bernardino Development Impact Fee", below). Revenues collected through local traffic impact fee programs are used in tandem with regional Measure "I" revenues to fund projects identified in the SANBAG *Development Mitigation Nexus Study* (included as Appendix G to the *San Bernardino County CMP*). (Urban Crossroads, 2017e, pp. 13-14)

4. *City of San Bernardino Development Impact Fee (DIF)*

The City of San Bernardino created its Development Impact Fee (DIF) program to impose and collect fees from new residential, commercial, and industrial development for the purpose of funding local improvements necessary to accommodate City growth as identified in the City's General Plan Circulation Element. The identification of specific roadway and intersection improvement projects and the timing to use the DIF fees is established through periodic capital improvement programs which are overseen by the City's Public Works Department. (Urban Crossroads, 2017e, p. 14)

5. *City of San Bernardino General Plan Circulation Element*

The City of San Bernardino's General Plan Circulation Element is intended to guide the development of the City's circulation system in a manner that is compatible with the City's General Plan Land Use Element. To help meet traffic demands and achieve balanced growth, the City has adopted specific goals and policies, which serve as the basis for the Circulation Element. Refer to Figure 4.11-2 for an illustration of the City's master circulation plan and refer to *Technical Appendix J1* for a detailed summary of the City's General Plan Circulation Element.

4.11.3 METHODOLOGY FOR CALCULATING PROJECT-RELATED TRAFFIC IMPACTS

A. *Level of Service*

The performance of roadway facilities is described using the term "level of service" (LOS). LOS has been used as the basis for determining the significance of traffic impacts as standard practice in CEQA documents for decades. LOS is a qualitative description of traffic flow based on several factors such as speed, travel time, delay, and freedom to maneuver. In 2013, the California Legislature passed Senate Bill (SB) 743, which is intended to provide local governments with flexibility to balance the competition between the need to use the LOS metric for local traffic planning and the need to provide infill housing and mixed-use commercial developments within walking distance of mass transit facilities, downtowns, and town centers. Upon full implementation of SB 743, the California Governor's Office of Planning and Research (OPR) is expected to replace LOS as the metric against which traffic impacts are evaluated, with a metric based on vehicle miles

traveled (VMT). At the time the NOP for this EIR was released (February 2017), a VMT metric was not adopted by OPR, and the City of San Bernardino in its capacity as Lead Agency uses a LOS metric for evaluating a Project's traffic impacts. For this reason, a LOS metric and not a VMT metric is appropriately applied in the analysis presented in this EIR.

Six LOS designations are utilized to summarize traffic operations ranging from LOS A, which represents completely free-flow conditions, to LOS F, which represents a breakdown in flow resulting in stop-and-go conditions. Table 4.11-7 and Table 4.11-8 summarize typical operational conditions at signalized and unsignalized intersections for each LOS classification, respectively. (Urban Crossroads, 2017e, pp. 23-25)

B. Intersection Operations Analysis

The intersection LOS analysis is based on the traffic volumes observed during peak hour conditions. The following peak hours were selected for analysis because these hours are typically experience the most traffic during a 24-hour period:

- Weekday AM peak hour (between 7:00 AM and 9:00 AM)
- Weekday PM peak hour (between 4:00 PM and 6:00 PM)

For signalized intersections under the City of San Bernardino's jurisdiction, peak hour performance is calculated using the methodology described in the Transportation Research Board's *Highway Capacity Manual (HCM) 2010* in accordance with the City's *Traffic Impact Study Guidelines*. Intersection performance is based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. At signalized intersections, LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 4.11-7. (Urban Crossroads, 2017e, p. 23)

For signalized intersections under Caltrans' jurisdiction, the traffic modeling and signal timing optimization software package Synchro (Version 9) is used to analyze intersection performance in accordance with Caltrans' *Guide for the Preparation of Traffic Impact Studies*. Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in the Chapter 16 of *HCM 2010*. Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length. The level of service and capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network. (Urban Crossroads, 2017e, p. 25)

At unsignalized intersections, operations were evaluated using the methodology described in *HCM 2010* in accordance with the City's *Traffic Impact Study Guidelines*. At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. For

all-way stop controlled intersections, LOS is computed for the intersection as a whole (Urban Crossroads, 2017e, p. 25). The LOS rating is based on the weighted average control delay expressed in seconds per vehicle, as shown in Table 4.11-8.

For a more detailed discussion on intersection performance analysis methodology, refer to Subsection 2.2 of *Technical Appendix J1*.

C. Traffic Signal Warrant Analysis

The term "signal warrants" refers to the list of criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the potential need for installation of a traffic signal at an unsignalized intersection. A signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular intersection location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant. (Urban Crossroads, 2017e, pp. 26-27)

The signal warrant criteria presented in the latest edition of the Federal Highway Administration's (FHWA) *Manual on Uniform Traffic Control Devices* (*MUTCD*), as amended by the *MUTCD 2014 California Supplement*, is used to evaluate the potential need for traffic signals at all Project study area intersections that are currently unsignalized (Urban Crossroads, 2017e, pp. 26-27). For more information on signal warrant methodology, refer to Subsection 2.4 of *Technical Appendix J1*.

D. Freeway Analysis

1. Freeway Mainline Segment Analysis

For purposes of analysis, the freeway system in the Project study area has been divided into segments defined by the freeway-to-arterial interchange locations. Freeway mainline performance is based upon peak hour directional volumes, and the freeway segment analysis is based on the methodology described in *HCM 2010* and performed using HCS2010 software. The performance measure used by Caltrans to calculate LOS along freeway mainlines is vehicle density. Density is expressed in terms of passenger cars per mile per lane. (Urban Crossroads, 2017e, pp. 27-28) Table 4.11-9 summarizes the freeway segment LOS thresholds for each density range. For a more detailed discussion of freeway mainline segment analysis methodology, refer to Subsection 2.5 of *Technical Appendix J1*.

2. Freeway Ramp Queuing Analysis

The traffic modeling software package Synchro is used to evaluate the performance of freeway ramps, in terms of vehicle queuing. Storage (turn-pocket) length recommendations at the ramps are based upon the 95th percentile queue resulting from the Synchro progression analysis. The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes. The queue

length reported is for the lane with the highest queue in the lane group (Urban Crossroads, 2017e, p. 26). For more information on the freeway ramp queuing analysis methodology, refer to Subsection 2.3 of *Technical Appendix J1*.

3. Freeway Ramp Junction Merge/Diverge Analysis

The freeway ramp junction merge/diverge analysis is based on the methodology recommended in the *HCM 2010* and performed using HCS2010 software. Although the *HCM 2010* indicates the influence area for a freeway ramp merge/diverge junction is 1,500 feet, the Project's analysis was performed at all ramp locations with respect to the nearest on- or off-ramp at each interchange in an effort to be consistent with Caltrans guidance. The results – reported in passenger car per mile per lane – are calculated based on the existing number of travel lanes, number of lanes at the on- and off-ramps both at the analysis junction and at upstream and downstream locations (if applicable), and acceleration/deceleration lengths at each freeway ramp merge/diverge junction. (Urban Crossroads, 2017e, p. 29). Table 4.11-10 summarizes the freeway ramp junction merge/diverge LOS thresholds utilized in the analysis. For more information on the freeway ramp junction merge/diverge analysis methodology, refer to Subsection 2.6 of *Technical Appendix J1*.

E. Future Year Background Traffic

1. Opening Year (2018) Conditions

Opening Year (2018) background traffic forecasts are based upon a background – or ambient – growth of three percent above existing conditions (2017). This ambient growth factor is intended to approximate area-wide growth not accounted by the known cumulative development projects evaluated in *Technical Appendix J1* (see Subsection 4.11.3F, below). Ambient growth has been added to daily and peak hour traffic volumes on surrounding roadways, in addition to traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies. (Urban Crossroads, 2017e, p. 64)

According to regional population projections included in SCAG's *2016 RTP/SCS*, the City of San Bernardino is projected to experience 21.47 percent population growth between 2012 and 2040, which corresponds to an approximately 0.70 percent annual population growth rate. Over this same time period, employment within San Bernardino is projected to increase by 44.99 percent, which corresponds to an approximately 1.34 percent annual employment growth rate. Based on the foregoing information, the three percent ambient growth rate utilized in the Project's traffic analysis is appropriate and would tend to as opposed to understate, potential impacts to traffic and circulation. (Urban Crossroads, 2017e, p. 63)

2. Horizon Year (2040) Conditions

Horizon Year (2040) background traffic conditions were derived from the San Bernardino County Transportation Analysis Model (SBTAM). The SBTAM model reflects long-range land use and

circulation network data from cities and public agencies within San Bernardino County and is consistent with SCAG's traffic model for the southern California region. The SBTAM model was supplemented and modified using industry-accepted procedures for model forecast refinement and smoothing rather than solely relying on SBTAM model defaults. The modifications to the SBTAM model were made to provide a conservative analysis of the Project's potential long-range traffic impacts under Horizon Year (2040) conditions that would overstate – as opposed to understate – the Project's potential traffic impacts as compared to the results had the SBTAM model defaults been used. Refer to Subsection 4.9 of *Technical Appendix J1* for a detailed description of the refinements made to the SBTAM model for purposes of the Project's traffic impact analysis. (Urban Crossroads, 2017e, p. 70)

F. Cumulative Impact Analysis

CEQA Guidelines § 15130 requires that an EIR disclose the impact from the Project along with the incremental impacts from closely-related past, present, and reasonably foreseeable future projects (i.e., cumulative impact analysis). As previously described in EIR Subsection 4.0, *Environmental Analysis*, the Project's potential cumulative traffic impacts analysis utilizes a summary of projections approach *plus* a list of projects approach in order to provide a conservative, overstated analysis of cumulative impacts. Data for the summary of projections approach was obtained from the sources previously described in EIR Subsection 4.0. The list of 77 cumulative projects with the potential to add traffic to the same transportation facilities as the Project, as previously listed in EIR Subsection 4.0, was identified in consultation with planning and engineering staff from the cities of San Bernardino and Colton and the County of San Bernardino based on their records of past, pending, and foreseeable future projects. Descriptive information about each project considered in the cumulative impact analysis can be found in Subsection 4.7 of *Technical Appendix J1*. (Urban Crossroads, 2017e, p. 64)

4.11.4 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to the transportation/circulation system if the Project or any Project-related component would:

a. *Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;*

b. *Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or roadways;*

c. Result in a change in air traffic patterns, including an increase in traffic levels or a change in location that results in substantial risks;

d. Substantially increase hazards due to design feature (e.g., sharp curves of dangerous intersections) or incompatible uses (e.g., farm equipment);

e. Result in inadequate emergency access; or

f. Conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks) supporting alternative transportation.

The above-listed thresholds are derived directly from Section XVI of Appendix G to the CEQA Guidelines and address development projects' typical adverse effects related to transportation and traffic (OPR, 2009).

The specific criteria described below are utilized to evaluate the significance of potential traffic impacts under Thresholds "a" and "b," and are based on applicable City of San Bernardino, Caltrans, and *San Bernardino County CMP* performance standards.

A. Significance Criteria

1. Intersections

The Project would result in a substantial adverse effect to the performance of the circulation system if any of the following situations occur (Urban Crossroads, 2017e, pp. 30-31):

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- A direct impact would occur if: 1) an intersection operates at level of service (LOS) C without the Project and the addition of Project traffic would change the volume-to-capacity (v/c) ratio at the intersection by more than 0.04; or 2) an intersection operates at LOS D without the Project and the addition of Project traffic would change the v/c ratio at the intersection by more than 0.02; or 3) an intersection operates at LOS E or F without the Project and the addition of Project traffic would change the v/c ratio at the intersection by more than 0.01.

- A cumulatively considerable impact would occur if: 1) an intersection operates at level of service (LOS) C with cumulative traffic, but without the Project, and the addition of Project traffic would change the volume-to-capacity (v/c) ratio at the intersection by more than 0.04; or 2) an intersection operates at LOS D with cumulative traffic, but without the Project, and the addition of Project traffic would change the v/c ratio at the intersection by more than 0.02; or 3) an intersection operates at LOS E or F with cumulative traffic, but without the Project, and the addition of Project traffic would change the v/c ratio at the intersection by more than 0.01.

San Bernardino County CMP Facilities & Caltrans Facilities

- A direct impact would occur if the Project would cause an intersection to degrade from LOS D or better to LOS E or F.

- A cumulatively considerable impact would occur if an intersection is calculated to operate at an unacceptable level of service (i.e., LOS E or F) without the Project, and the Project contributes 50 or more peak hour trips to the affected intersection.

2. Freeway Mainline Segments and Ramp Junctions

If a freeway mainline segment or ramp junction is calculated to operate at an acceptable level of service (i.e., LOS D or better) without the Project and the Project would contribute traffic that would cause the facility to operate at an unacceptable level of service (i.e., LOS E or F), the Project's impact is considered direct and significant. If the facility would operate at a deficient LOS without the Project and the Project would contribute 50 or more peak hour trips to the affected facility, the addition of Project traffic would be considered cumulatively considerable. (Urban Crossroads, 2017e, p. 31)

3. Freeway Ramp Queuing

To determine whether the addition of Project traffic at a freeway off-ramp results in a significant impact, the stacking distance is measured to determine if the addition of Project traffic to the off-ramp would cause traffic "spill back" onto the freeway mainline. Stacking distance on freeway ramps is acceptable if the required 95th percentile stacking distance is less than or equal to the stacking distance provided. Therefore, a significant impact would occur if the needed 95th percentile stacking exceeded the off-ramps available stacking area. (Urban Crossroads, 2017e, pp. 25-26)

4.11.5 IMPACT ANALYSIS

The roadway improvements proposed by the Project are described in EIR Section 3.0, *Project Description*; the construction of these improvements would be ensured as part of the Project's conditions of approval issued by the City of San Bernardino in association with the Project's approval process. The construction of proposed roadway improvements, including driveway connections, is assumed throughout the analysis presented in *Technical Appendix J1* and summarized in this Subsection.

Threshold a) Would the Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

The analysis provided under Threshold a) focuses on potential impacts to the local circulation system (i.e., intersections) in accordance with applicable City of San Bernardino and Caltrans significance thresholds. Refer to Threshold b) for an analysis of potential impacts to the *San Bernardino County CMP* roadway network in accordance with applicable *CMP* significance thresholds.

❑ Project Vehicle Trip Generation

Vehicle trip generation represents the amount of traffic that is both attracted to and produced by a development project. Determining traffic generation for a specific project is, therefore, based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses proposed by a given project.

The Project's vehicle trips were calculated using the Institute of Transportation Engineer (ITE) *Trip Generation Manual (9th Edition, 2012)* trip generation rate and vehicle mix (i.e., percentage of passenger cars trips vs. truck trips) for high-cube warehouse land uses (ITE Code 152). The *Trip Generation Manual* does not provide guidance on truck fleet mix (i.e., percentage of 2-axle, 3-axle, and 4-or-more axle trucks); therefore, data regarding truck vehicle mix is based on recommendations provided the by the South Coast Air Quality Management District (SCAQMD). Based on data from the ITE and the recommendations of the SCAQMD, the Project is calculated to generate 1,789 actual daily vehicle trips, including 1,107 daily passenger car trips and 682 daily passenger car trips. (Urban Crossroads, 2017e, pp. 55-56)

As noted earlier in this Subsection, PCE trips better reflect the real-world effect of larger vehicles (i.e., trucks) on the circulation system than actual vehicle trips. The City of San Bernardino requires the use of PCE trips for traffic impact analyses for non-residential projects. Table 4.11-11, *Project Trip Generation Summary (Passenger Car* Equivalent), summarizes the Project's trip generation with PCE factors applied. After applying the PCE factors, the Project is calculated to generate 2,941 PCE trips, including 171 PCE trips in the AM peak hour and 200 PCE trips in the PM peak hour. (Urban Crossroads, 2017e, pp. 55, 57-58) The Project's PCE trips presented in Table 4.11-11 are utilized throughout the analysis in *Technical Appendix J1* and this EIR Subsection to determine the Project's effect to the transportation and circulation network.

For more information on the trip generation methodology, refer to Subsection 4.1 of *Technical Appendix J1*.

❑ Project Vehicle Trip Distribution

Trip distribution is the process of identifying the probable destinations, directions, or traffic routes that will be utilized by a project's traffic. The potential interaction between a project's land uses and surrounding regional access routes are considered to identify the route where a project's traffic would distribute. The trip distribution for the proposed Project was developed based on anticipated passenger car and truck travel patterns to-and-from the Project site. The traffic distribution pattern for Project-related truck trips is depicted on Figure 4.11-5, *Project Truck Trip Distribution*. The traffic distribution pattern for Project-related passenger car trips is depicted on Figure 4.11-6, *Project Passenger Car Trip Distribution*.

Based on the Project's traffic generation and trip distribution patterns, the Project's average daily traffic (ADT) along study area roadways and AM and PM peak hour volumes at study area intersections are shown on Figure 4.11-7 and Figure 4.11-8, respectively.

❑ Analysis Scenarios

The Project's potential impacts to the local transportation and circulation network are assessed for each of the scenarios listed below.

- Short-term Construction Conditions
- Existing (2017) plus Project Conditions
- Opening Year (2018) Conditions
- Horizon Year (2040) Conditions

The Short-term Construction conditions analysis determines the potential for the Project's construction-related traffic to result in an adverse effect to the local roadway system.

The Existing (2017) plus Project (E+P) analysis determines direct Project-related traffic impacts that would occur on the roadway system under the theoretical scenario where the Project is added to existing conditions. The E+P scenario is presented to disclose direct impacts as required by CEQA. In the case of the proposed Project, the estimated time period between the commencement of the Project's environmental review (2017) and estimated Project buildout (2018) is one year. During this time period, traffic conditions are not static – other projects are being constructed, the transportation network is evolving, and traffic patterns are changing. Therefore, the E+P scenario is very unlikely to materialize in real-world conditions and thus does not accurately describe the environment that will likely exist when the proposed Project is constructed and becomes operational. Regardless, the E+P scenario is evaluated to satisfy CEQA requirements to identify the Project's impacts to the existing environment.

The Opening Year (2018) analysis includes an evaluation the Existing plus Ambient Growth plus Project (E+A+P) traffic conditions and Existing plus Ambient Growth plus Project plus Cumulative Development (E+A+P+C) conditions to identify the Project's contribution to potential cumulative

traffic impacts within the study area. The E+A+P analysis identifies the potential cumulative impacts that would result solely from expected background growth in the study area plus development of the proposed Project (Existing plus Ambient Growth plus Project, or E+A+P). Cumulative development projects within the Project study area are not included within the E+A+P evaluation. The E+A+P+C analysis adds traffic from development projects that are approved and not yet constructed to the E+A+P traffic volumes to identify potential, additional cumulative impacts.

The Horizon Year (2040) analysis is utilized to determine if improvements funded through local and regional transportation mitigation fee programs, such as the City of San Bernardino Development Impact Fee program or other approved funding mechanisms, can accommodate the City's planned long-term growth at the target level of service identified in the City's General Plan Circulation Element.

Refer to *Technical Appendix J1* for a detailed discussion of the methodologies and assumptions for each analysis scenario, and a list of cumulative development projects considered in the analysis.

A. Impact Analysis for Short-Term Construction Traffic Conditions

During the Project's construction phase, traffic to-and-from the subject property would be generated by activities such as construction employee trips, construction materials deliveries, and the use/delivery of heavy equipment.

Vehicular traffic associated with construction employees would be substantially less than daily and peak hour traffic volumes generated during Project operational activities, especially because construction activities typically begin/end outside of the peak hours. Accordingly, a majority of the construction employees would not be driving to/from the Project site during hours of peak congestion. Traffic from construction workers is not expected to result in a substantial adverse effect to Project study area intersections because most trips would occur during non-peak hours and the total volume of trips would be less than the Project's operational trips, which are shown to result in a less-than-significant impact in the following Subsection.

Construction materials deliveries to the Project site also would also have a nominal effect to Project study area intersections. Construction materials would be delivered to the site throughout the construction phase based on need and would not occur on an everyday basis. Furthermore, many construction materials deliveries would occur during non-peak hours. The total daily number of construction materials deliveries to the Project site are expected to be well below the Project's operational trips, which are shown in the following subsection to result in a less-than-significant impact.

Heavy equipment would be utilized on the Project site during the construction phase. As most heavy equipment is not authorized to be driven on public roadways, most equipment would be delivered and removed from the site via flatbed trucks (sometimes with multiple pieces of equipment delivered to the site on a single trip). As with the delivery of construction materials, the delivery of heavy

equipment to the Project site would not occur on a daily basis, but would occur periodically throughout the construction phase based on need. As described in EIR Section 3.0, *Project Description*, only up to 15 pieces of construction equipment are expected on the Project site during any given phase of construction; therefore, deliveries of construction equipment to the Project site is not expected to generate substantial traffic.

Accordingly, traffic generated by the Project's construction phase would not result in a conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. Impacts during the Project's construction phase would be less than significant.

B. Impact Analysis for Existing plus Project Traffic Conditions

Project study area roadway ADT volumes and peak hour intersection volumes under E+P traffic conditions are illustrated on Figure 4.11-9 and Figure 4.11-10, respectively. The peak hour LOS at Project study area intersections is summarized in Table 4.11-12, *Existing plus Project Intersection Analysis*. As shown in Table 4.11-12, all study area intersections would operate at acceptable LOS under E+P traffic conditions and Project-related traffic would not exceed applicable significance thresholds. Accordingly, the Project would not result in a conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system under E+P traffic conditions. Impacts would be less than significant.

C. Impact Analysis for Opening Year (2018) Traffic Conditions

Project study area roadway ADT volumes and peak hour intersection volumes under E+A+P traffic conditions are illustrated on Figure 4.11-11 and Figure 4.11-12, respectively. The peak hour LOS at Project study area intersections is summarized in Table 4.11-13, *Opening Year Intersection Analysis*. As shown in Table 4.11-13, all study area intersections would operate at acceptable LOS under E+A+P traffic conditions and Project-related traffic would not exceed applicable significance thresholds. Accordingly, the Project would not result in or contribute to a conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system under E+A+P traffic conditions. Impacts would be less than significant.

D. Impact Analysis for Opening Year (2018) plus Cumulative Traffic Conditions

Project study area roadway ADT volumes and peak hour intersection volumes under E+A+P+C traffic conditions are illustrated on Figure 4.11-13 and Figure 4.11-14, respectively. The peak hour LOS at Project study area intersections is summarized in Table 4.11-14, *Opening Year plus Cumulative Intersection Analysis*. As shown in Table 4.11-14, the I-10 Westbound Ramps / Carnegie Drive / Hospitality Lane intersection (Intersection #16) would operate at unacceptable LOS during the PM peak hour under E+A+P+C traffic conditions. The Project's contribution to the LOS deficiency at Intersection #16 would not exceed applicable significance thresholds. All other intersections in the Project study area would operate at acceptable LOS under E+A+P+C traffic conditions and Project-related traffic would not exceed applicable significance

thresholds. Accordingly, the Project would not result in or contribute to a conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system under E+A+P+C traffic conditions. Impacts would be less than significant.

E. Impact Analysis for Horizon Year (2040) Traffic Conditions

Project study area roadway ADT volumes and peak hour intersection volumes under Horizon Year (2040) traffic conditions are illustrated on Figure 4.11-15 and Figure 4.11-16, respectively. The peak hour LOS at Project study area intersections is summarized in Table 4.11-15, *Horizon Year Intersection Analysis*. As shown in Table 4.11-15, all Project study area intersections would operate at acceptable LOS under Horizon Year (2040) traffic conditions with the exception of the following:

- E Street / Auto Center Road / Orange Show Road (Intersection #3) in the AM and PM peak hours;
- Waterman Avenue / Orange Show Road (Intersection #9) in the AM and PM peak hours;
- Waterman Avenue / I-10 Westbound On-Ramp (Intersection #13) in the PM peak hour;
- Waterman Avenue / Redlands Boulevard (Intersection #15) in the PM peak hour; and
- I-10 Westbound Ramps / Carnegie Drive / Hospitality Lane intersection (Intersection #16) in the AM and PM peak hours.

The Project's traffic contributions to Intersections #9, #15, and #16 would not exceed applicable significance thresholds under Horizon Year (2040) traffic conditions and would be less than significant (refer to Table 4.11-15). Notwithstanding, the Project's traffic contributions to Intersections #3 and #13 would exceed applicable significance thresholds and are determined to be cumulatively considerable and mitigation would be required.

F. Conclusion

Based on the foregoing analysis, the Project would result in less-than-significant impacts to the performance of the local circulation network under E+P, E+A+P, and E+A+P+C traffic conditions; however, the Project would make a significant and cumulatively considerable contribution to a conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system under Horizon Year (2040) traffic conditions at two intersections (#3 and #13).

Threshold b) Would the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or roadways?

The SANBAG *San Bernardino County CMP* is applicable to the Project because of the Project site's proximity to freeway mainline segments and major intersections that are designated as part of the *CMP* roadway system. The *CMP* facilities located within the Project study area were previously described in Subsection 4.1.1A.2.

As described above under Threshold a), the Project would contribute a significant cumulatively considerable traffic impact at the following *CMP* intersection:

- E Street / Auto Center Road / Orange Show Road (Intersection #3) – During Horizon Year (2040) traffic conditions

Accordingly, the Project's contribution to the conflict with the *San Bernardino County CMP* LOS standards for the *CMP* arterial roadway network under Horizon Year (2040) traffic conditions would be cumulatively considerable and mitigation is required.

The remainder of the analysis under this Threshold will focus on the Project's potential effects to regional freeway facilities that are part of the *San Bernardino County CMP* freeway network, including I-215 and I-10 mainline segments and on/off-ramps.

A. Impact Analysis for Short-Term Construction Traffic Conditions

❑ Freeway Mainline Segments

As previously disclosed in Table 4.11-4, two freeway mainline segments in the Project study area operate at deficient LOS under existing conditions (i.e., without Project-related construction or operational traffic): the I-10 Westbound segment west of Waterman Avenue and the I-10 Westbound segment east of Waterman Avenue. As shown in Table 4.11-16, and described in detail in the following Subsection, the I-10 Westbound segments listed above would continue to operate at deficient LOS under E+P (operational conditions); however, the Project's contribution to the LOS deficiency would be less than significant and less than cumulatively considerable because the Project would not cause the deficiency nor would the Project send 50 or more peak hour trips to the deficient freeway mainline segments. The Project's short-term construction phase would generate less peak hour traffic than the Project's long-term operational phase (refer to discussion under Threshold a), above); therefore, the Project's construction phase would contribute less traffic to study area freeway mainline segments than shown in Table 4.11-16. Accordingly, the Project's construction phase would contribute less than 50 peak hour trips at all Project study area freeway mainline segments and would not contribute cumulatively considerable traffic volumes to I-10 Westbound segments in the study area that are calculated to operate at deficient LOS.

❑ Freeway Ramps

As shown in Table 4.11-17 and Table 4.11-18, respectively, and described in detail in the following subsection, all freeway ramp merge/diverge junctions and off-ramps in the Project study area would operate at acceptable LOS under E+P (operational) conditions. Because the Project's short-term construction traffic period would generate less daily and peak hour traffic volumes than would occur during Project operation, all freeway ramp merge/diverge junctions and off-ramps in the Project study area would operate at or better than the levels of service summarized in Table 4.11-17 and Table 4.11-18 during the construction period. Accordingly, the Project would result in less-than-

significant impacts to *CMP* freeway ramp merge/diverge junctions and off-ramps under short-term construction conditions.

B. Impact Analysis for Existing plus Project Traffic Conditions

❑ Freeway Mainline Segments

Peak hour traffic volumes along Project study area freeway mainline segments under E+P traffic conditions are illustrated on Figure 4.11-17, *Existing plus Project Peak Hour Freeway Mainline Volumes*, and the corresponding freeway mainline peak hour LOS is summarized on Table 4.11-16, *Existing plus Project Freeway Mainline Analysis*. As shown in Table 4.11-16, all Project study area intersections would operate at acceptable LOS under E+P conditions with the exception of the following two segments:

- I-10 Westbound, west of Waterman Avenue (in the AM and PM peak hours); and
- I-10 Westbound, east of Waterman Avenue (in the AM peak hour).

As previously disclosed under Subsection 4.1.1A.1, the above-listed freeway mainline segments operate at unacceptable LOS under existing conditions. Furthermore, as shown in Table 4.11-16, the Project would contribute less than 50 peak hour trips to each of the freeway mainline segments listed above. Accordingly, the Project would neither cause the LOS deficiency nor contribute cumulatively considerable traffic to the LOS deficiency (i.e., 50 or more peak hour trips) at the I-10 Westbound freeway mainline segments listed above. The Project's impacts to *CMP* freeway mainline segments would be less than significant under E+P conditions.

The freeway mainline segments listed in Table 4.11-16 include the segments that would receive the highest concentration of traffic from the Project (i.e., 25 or more peak hour trips). However, Project-related traffic does not stop at the limits of the freeway mainline segments listed in Table 4.11-16. Rather, Project-related traffic continues to travel throughout the southern California region along the State Highway System, dissipating as distance from the Project site increases. As such, Project-related traffic has the potential to travel along freeway mainline segments that experience unacceptable levels of service, including but not limited to *San Bernardino County CMP* segments of I-15, I-215, and I-10 (located outside of the Project's study area), as well as freeway segments located outside of San Bernardino County, such as I-5, I-15, I-215, I-110, I-405, I-710, SR-60, and SR-91, among others. All State Highway System facilities that operate at an unacceptable LOS are considered to be cumulatively impacted; however, because the Project would contribute fewer than 50 peak hour trips to any congested freeway segment beyond the Project's study area, the Project's effect to *San Bernardino County CMP* freeway facilities and other freeway facilities located outside of San Bernardino County would not be cumulatively considerable under E+P traffic conditions.

❑ Freeway Ramps

As summarized in Table 4.11-17 and Table 4.11-18, all freeway ramps in the Project study area would experience acceptable ramp queuing and ramp merge/diverge performance under E+P traffic

conditions. Accordingly, the Project would not cause or contribute to deficient operations at Project study area freeway off-ramps under E+P traffic conditions and the Project's impact to *CMP* freeway off-ramps is determined to be less than significant.

C. Impact Analysis for Opening Year (2018) Traffic Conditions

❑ Freeway Mainline Segments

Peak hour traffic volumes along Project study area freeway mainline segments under Opening Year traffic conditions are illustrated on Figure 4.11-18, *Opening Year Peak Hour Freeway Mainline Volumes*, and the corresponding freeway mainline peak hour LOS is summarized on Table 4.11-19, *Opening Year Freeway Mainline Analysis*. As shown in Table 4.11-19, all Project study area intersections would operate at acceptable LOS under Opening Year conditions with the exception of the following four segments:

- I-215 Northbound, south of Auto Center Drive (in the PM peak hour);
- I-10 Eastbound, west of Waterman Avenue (in the AM peak hour);
- I-10 Westbound, west of Waterman Avenue (in the AM and PM peak hours); and
- I-10 Westbound, east of Waterman Avenue (in the AM peak hour).

As shown in Table 4.11-19, the Project would not contribute substantial peak hour traffic (i.e., 50 or more peak hour trips) to any of the freeway mainline segments listed above. Thus, although the above-listed freeway mainline segments would operate at deficient LOS during the AM and/or PM peak hours, traffic attributable to the Project would not exceed applicable significance thresholds. Accordingly, the Project's impacts to *CMP* freeway mainline segments would be less than significant under Opening Year conditions.

The freeway mainline segments listed in Table 4.11-19 include the segments that would receive the highest concentration of traffic from the Project (i.e., 25 or more peak hour trips). However, Project-related traffic does not stop at the limits of the freeway mainline segments listed in Table 4.11-19. Rather, Project-related traffic continues to travel throughout the southern California region along the State Highway System, dissipating as distance from the Project site increases. As such, Project-related traffic has the potential to travel along freeway mainline segments that experience unacceptable levels of service, including but not limited to *San Bernardino County CMP* segments of I-15, I-215, and I-10 (located outside of the Project's study area), as well as freeway segments located outside of San Bernardino County, such as I-5, I-15, I-215, I-110, I-405, I-710, SR-60, and SR-91, among others. All State Highway System facilities that operate at an unacceptable LOS are considered to be cumulatively impacted; however, because the Project would contribute fewer than 50 peak hour trips to any congested freeway segment beyond the Project's study area, the Project's effect to *San Bernardino County CMP* freeway facilities and other freeway facilities located outside of San Bernardino County would not be cumulatively considerable under Opening Year traffic conditions.

❑ Freeway Ramps

All freeway ramps in the Project study area would experience acceptable queuing under Opening Year conditions, as summarized in Table 4.11-20, *Opening Year Freeway Ramp Queuing Analysis*. Additionally, all freeway ramp merge/diverge areas in the Project study area would operate at acceptable LOS, with the exception of the I-10 Westbound on-ramp at Waterman Avenue which would experience deficient LOS in the PM peak hour (refer to Table 4.11-21, *Opening Year Freeway Ramp Merge/Diverge Analysis*). As described in the preceding subsection, the Project would not contribute 50 or more peak hour trips to the I-10 Westbound mainline segments adjacent to Waterman Avenue; therefore, the Project also would contribute less than 50 peak hour trips to the I-10 Westbound on-ramp at Waterman Avenue. Accordingly, the Project would not exceed applicable significance thresholds and would not result in a cumulatively considerable contribution to the LOS deficiency at the I-10 Westbound merge/diverge area at the Waterman Avenue on-ramp. The Project's impacts to *CMP* freeway ramps would be less than significant under Opening Year conditions.

D. Impact Analysis for Opening Year (2018) plus Cumulative Traffic Conditions

❑ Freeway Mainline Segments

Peak hour traffic volumes along Project study area freeway mainline segments under Opening Year plus Cumulative traffic conditions are illustrated on Figure 4.11-19, *Opening Year plus Cumulative Peak Hour Freeway Mainline Volumes*, and the corresponding freeway mainline peak hour LOS is summarized on Table 4.11-22, *Opening Year plus Cumulative Freeway Mainline Analysis*. As shown in Table 4.11-22, all Project study area intersections would operate at acceptable LOS under Opening Year plus Cumulative conditions with the exception of the following four segments:

- I-215 Northbound, south of Auto Center Drive (in the PM peak hour);
- I-10 Eastbound, west of Waterman Avenue (in the AM peak hour);
- I-10 Westbound, west of Waterman Avenue (in the AM and PM peak hours); and
- I-10 Westbound, east of Waterman Avenue (in the AM peak hour).

As shown in Table 4.11-22, the Project would not contribute substantial peak hour traffic (i.e., 50 or more peak hour trips) to any of the freeway mainline segments listed above. Thus, although the above-listed freeway mainline segments would operate at deficient LOS during the AM and/or PM peak hours, Project-related traffic would not exceed applicable significance thresholds. Accordingly, the Project's impacts to *CMP* freeway mainline segments would be less than significant under Opening Year plus Cumulative conditions.

The freeway mainline segments listed in Table 4.11-22 include the segments that would receive the highest concentration of traffic from the Project (i.e., 25 or more peak hour trips). However, Project-related traffic does not stop at the limits of the freeway mainline segments listed in Table 4.11-22. Rather, Project-related traffic continues to travel throughout the southern California region along the State Highway System, dissipating as distance from the Project site increases. As such, Project-

related traffic has the potential to travel along freeway mainline segments that experience unacceptable levels of service, including but not limited to *San Bernardino County CMP* segments of I-15, I-215, and I-10 (located outside of the Project's study area), as well as freeway segments located outside of San Bernardino County, such as I-5, I-15, I-215, I-110, I-405, I-710, SR-60, and SR-91, among others. All State Highway System facilities that operate at an unacceptable LOS are considered to be cumulatively impacted; however, because the Project would contribute fewer than 50 peak hour trips to any congested freeway segment beyond the Project's study area, the Project's effect to *San Bernardino County CMP* freeway facilities and other freeway facilities located outside of San Bernardino County would not be cumulatively considerable under Opening Year plus Cumulative traffic conditions.

❑ Freeway Ramps

All freeway ramps in the Project study area would experience acceptable queuing under Opening Year plus Cumulative conditions, as summarized in Table 4.11-23, *Opening Year plus Cumulative Freeway Ramp Queuing Analysis*. Additionally, all freeway ramp merge/diverge areas in the Project study area would operate at acceptable LOS, with the exception of the I-10 Westbound on-ramp at Waterman Avenue which would experience deficient LOS in the PM peak hour (refer to Table 4.11-24, *Opening Year plus Cumulative Freeway Ramp Merge/Diverge Analysis*). As described in the preceding subsection, the Project would not contribute 50 or more peak hour trips to the I-10 Westbound mainline segments adjacent to Waterman Avenue; therefore, the Project also would contribute less than 50 peak hour trips to the I-10 Westbound on-ramp at Waterman Avenue. Accordingly, the Project would not exceed applicable significance thresholds and would not result in a cumulatively considerable contribution to the LOS deficiency at the I-10 Westbound merge/diverge area at the Waterman Avenue on-ramp. The Project's impacts to *CMP* freeway ramps would be less than significant under Opening Year plus Cumulative conditions.

E. Impact Analysis for Horizon Year (2040) Traffic Conditions

❑ Freeway Mainline Segments

Peak hour traffic volumes along Project study area freeway mainline segments under Horizon Year traffic conditions are illustrated on Figure 4.11-20, *Horizon Year Peak Hour Freeway Mainline Volumes*, and the corresponding freeway mainline peak hour LOS is summarized on Table 4.11-25, *Horizon Year Freeway Mainline Analysis*. As shown in Table 4.11-25, all Project study area intersections would operate at acceptable LOS under Opening Year conditions with the exception of the following six segments:

- I-215 Northbound, north of Auto Center Drive (in the PM peak hour);
- I-215 Northbound, south of Auto Center Drive (in the AM and PM peak hours);
- I-215 Southbound, south of Auto Center Drive (in the PM peak hour);
- I-10 Eastbound, west of Waterman Avenue (in the AM and PM peak hours);
- I-10 Westbound, west of Waterman Avenue (in the AM and PM peak hours); and

- I-10 Westbound, east of Waterman Avenue (in the AM and PM peak hours).

As shown in Table 4.11-25, the Project would not contribute substantial peak hour traffic (i.e., 50 or more peak hour trips) to any of the freeway mainline segments listed above. Thus, although the above-listed freeway mainline segments would operate at deficient LOS during the AM and/or PM peak hours, Project-related traffic would not exceed applicable significance thresholds. Accordingly, the Project's impacts to *CMP* freeway mainline segments would be less than significant under Horizon Year conditions.

The freeway mainline segments listed in Table 4.11-25 include the segments that would receive the highest concentration of traffic from the Project (i.e., 25 or more peak hour trips). However, Project-related traffic does not stop at the limits of the freeway mainline segments listed in Table 4.11-25. Rather, Project-related traffic continues to travel throughout the southern California region along the State Highway System, dissipating as distance from the Project site increases. As such, Project-related traffic has the potential to travel along freeway mainline segments that experience unacceptable levels of service, including but not limited to *San Bernardino County CMP* segments of I-15, I-215, and I-10 (located outside of the Project's study area), as well as freeway segments located outside of San Bernardino County, such as I-5, I-15, I-215, I-110, I-405, I-710, SR-60, and SR-91, among others. All State Highway System facilities that operate at an unacceptable LOS are considered to be cumulatively impacted; however, because the Project would contribute fewer than 50 peak hour trips to any congested freeway segment beyond the Project's study area, the Project's effect to *San Bernardino County CMP* freeway facilities and other freeway facilities located outside of San Bernardino County would not be cumulatively considerable under Horizon Year traffic conditions.

❑ Freeway Ramps

As summarized in Table 4.11-26, *Horizon Year Freeway Ramp Queuing Summary*, the I-10 Eastbound off-ramp at Redlands Boulevard is calculated to experience unacceptable queuing under Horizon Year traffic conditions. In addition, the following six freeway ramp merge/diverge areas are projected to operate at unacceptable LOS under Horizon Year traffic conditions (see Table 4.11-27, *Horizon Year Freeway Ramp Merge/Diverge Analysis*):

- I-215 Northbound on-ramp at Auto Center Drive (in the PM peak hour);
- I-215 Southbound loop on-ramp (upstream) at Auto Center Drive (in the PM peak hour);
- I-215 Southbound loop on-ramp (downstream) at Auto Center Drive (in the PM peak hour);
- I-10 Eastbound on-ramp at Waterman Avenue (in the AM peak hour);
- I-10 Westbound on-ramp at Waterman Avenue (in the AM and PM peak hours); and
- I-10 Westbound off-ramp at Waterman Avenue (in the AM and PM peak hours).

As described in the preceding subsection, the Project would contribute less than 50 peak hour trips to all freeway mainline segment in the Project study area; therefore, the Project also would contribute less than 50 peak hour trips to the freeway ramps that would experience unacceptable queuing and merge/diverge performance in the Horizon Year, as listed above. Accordingly, the Project would not exceed applicable significance thresholds and would not result in a cumulatively considerable contribution to the performance deficiencies at freeway ramps in the Project study area. The Project's impacts to *CMP* freeway ramps would be less than significant under Horizon Year conditions.

F. Conclusion

Based on the foregoing analysis, various *San Bernardino County CMP* freeway facilities are projected to operate at unacceptable LOS during E+P, Opening Year, Opening Year plus Cumulative, and Horizon Year traffic conditions. However, traffic generated by the Project would not exceed applicable significance thresholds and, therefore, would not conflict with the *San Bernardino County CMP* with regards to freeway performance. Notwithstanding the above, the Project would conflict with the *CMP* with regards to the performance of the arterial roadway network, due to an impact at the E Street / Auto Center Road / Orange Show Road intersection under Horizon Year (2040) traffic conditions.

Threshold c) Would the Project result in a change in air traffic patterns, including an increase in traffic levels or a change in location that results in substantial risks?

The Project does not contain an air travel component (e.g., runway, helipad, etc.); thus, air traffic volumes would not be changed as a result of the Project and the Project would not affect air traffic patterns at the SBIA (located approximately 1.2 miles northeast of the Project site) or a nearby private helipad (located approximately 0.3-mile southeast of the Project site). Although the Project site is located in the vicinity of the SBIA, the site is not located in the SBIA's influence area and development on the site would not affect operations at the SBIA (City of San Bernardino, 2005a, Figure LU-4). The warehouse building proposed by the Project would have a height up to 55 feet above finished grade and this building height would not extend into the airspace or interfere with flight operations at the SBIA or the nearby private helipad. Accordingly, the Project would not have the potential to affect air traffic patterns, including an increase in traffic levels or a change in flight path location that results in substantial safety risks. No impact would occur.

Threshold d) Would the Project substantially increase hazards due to design feature (e.g., sharp curves of dangerous intersections) or incompatible uses (e.g., farm equipment)?

All improvements proposed by the Project within public rights-of-ways would be installed in conformance with the City's design standards. The City of San Bernardino Public Works Department reviewed the Project's application materials (refer to EIR Section 3.0, *Project Description*) and determined that no hazardous transportation design features would be introduced by

the Project. Due to the typical wide turning radius of large trucks, the proposed driveway at Washington Avenue (Alternative Access 3, Driveway 1A) would be designed with a 50-foot curb radius on the northwest corner in order to accommodate the turning radius of a WB-67 truck (Urban Crossroads, Inc., 2017f, p. 2). The City also determined that all lane widths and turning movement radii along the Project's proposed off-site interim roadway improvement alignment, between the Project site's northern boundary and Orange Show Road, meet applicable safety requirements.

The Project would be compatible with existing and planned industrial and office park land uses located immediately north and east of the Project site. Access to/from the Project site would be provided by Orange Show Road (via Washington Avenue) and Waterman Avenue; both Orange Show Road and Waterman Avenue provide direct access to regional freeway facilities (i.e., I-215 and I-10) that would be utilized by Project truck traffic, thereby minimizing potential incompatibilities with residentially-zoned properties and primary bicycle and pedestrian travel ways. As such, there would be no transportation hazards created as a result of an incompatible land use.

Although the land uses proposed by the Project would be consistent with existing and planned long-term land uses in the surrounding area, the Project would generate traffic that would traverse two existing at-grade railroad crossings located approximately 600 feet to the south and 600 feet to the west, respectively, of the Waterman Avenue / Orange Show Road intersection (Intersection #9). Crossing signals (with crossing gates) are in place under existing conditions to prevent vehicles from stopping on the train tracks during train crossings. Under Opening Year plus Cumulative and Horizon Year traffic conditions, the northbound and eastbound approaches to Intersection #9 would experience long stacking lengths that would extend beyond the railroad crossings. The long vehicle queues under Opening Year plus Cumulative and Horizon Year traffic conditions would not result in any safety hazards due to the aforementioned grade crossing signals and crossing gates at the train crossing. Accordingly, the Project would not substantially contribute safety hazards due to an existing design feature (i.e., insufficient stacking at Intersection #9). Notwithstanding the information presented above, mitigation is recommended at Intersection #9 to improve the flow of northbound and eastbound vehicles during peak hours.

Threshold e) Would the Project result in inadequate emergency access?

The Project would result in the construction of one high cube warehouse building on the Project site, which would require the need for emergency access to-and-from the site. The City of Bernardino reviewed the Project's design to ensure that adequate access to-and-from the Project site would be provided for emergency vehicles. The City of San Bernardino also will require the Project to provide adequate paved access to-and-from the site as a condition of Project approval. Furthermore, the City of San Bernardino will review all future Project construction drawings to ensure that adequate emergency access is maintained along abutting public streets during temporary construction activities. With required adherence to City requirements for emergency vehicle access, no impact would occur.

Threshold f) Would the Project conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks) supporting alternative transportation?

The proposed Project is a high cube logistics warehouse building, which is a land use that is not likely to attract large volumes of pedestrian, bicycle or transit traffic. Regardless, the Project is designed to comply with all applicable City of San Bernardino transportation policies.

According to the City of San Bernardino General Plan, the Orange Show Road segment located north of the Project site and the Waterman Avenue segment located along the Project site's eastern frontage are designated bicycle routes. The Project does not include any element that would preclude the use of either Orange Show Road or Waterman Avenue as a bicycle route, and the Project would install bicycle racks in accordance with the City's Municipal Code requirements. Furthermore, all Project driveways would be stop-signed controlled and sight distance at each Project driveway is required to be reviewed by the City of San Bernardino at the time improvement plans are submitted to ensure that sight distance meets City standards and provides for safe pedestrian and bicycle circulation.

The City of San Bernardino General Plan also identifies a regional multi-purpose trail (the Santa Ana River Trail) along the Santa Ana River, to the south of the Project site. The Project does not include any component or off-site improvement that would physically interfere with use of the Santa Ana River Trail.

Bus service in the immediate vicinity of the Project site is available along Waterman Avenue via Omnitrans Route 5. There is one bus stop located along the Project's frontage with Waterman Avenue. The Project does not include any component that would interfere with Omnitrans bus service operations along Hospitality Lane (i.e., Omnitrans Route 2 and sbX Greenline). The Project would retain the existing bus stop and would not conflict with Omnitrans bus transit operations. Accordingly, the Project could not conflict with local public transit service.

As demonstrated by the foregoing analysis, the Project would not conflict with adopted policies, plans or programs related to alternative transportation, or otherwise substantially decrease the performance or safety of such facilities, and a less-than-significant impact would occur.

4.11.6 CUMULATIVE IMPACT ANALYSIS

The analysis under Threshold a) disclosed the Project's potential to affect the transportation network on a direct and cumulative basis. As concluded under Threshold a), the Project would result in a cumulatively considerable impact at the E Street / Auto Center Road / Orange Show Road intersection (Intersection #3) and the Waterman Avenue / I-10 Westbound On-Ramp intersection (Intersection #13) under Horizon Year traffic conditions.

The analysis under Threshold b) evaluated the Project's potential to result in substantial adverse effects to the *San Bernardino County CMP* roadway network, including *CMP* arterial roadways and freeway facilities. As concluded under Threshold b), the Project would result in a cumulatively considerable impact at one *CMP* arterial intersection (Intersection #3); but, would not result in any cumulatively considerable effects to *CMP* freeway facilities.

The Project would not contribute to a significant cumulative impact under the topics discussed under Thresholds c), d), and e) because the Project has would not change air traffic patterns; cause or exacerbate existing transportation design safety concerns; or adversely affect emergency access.

As presented under Threshold f), the proposed Project would not conflict with adopted policies or programs regarding public transit, bicycle, or pedestrian facilities and thus has no potential to contribute to a cumulative impact. The Project would have a less-than-significant cumulatively considerable impact to adopted policies and programs regarding public transit, bicycle, and pedestrian facilities, as well as a less-than-significant cumulatively considerable impact to the performance of such facilities.

4.11.7 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a): Cumulatively Considerable Impact. The Project would not cause any study area intersection to operate at unacceptable LOS; however, the Project would result in a cumulatively considerable impact at two intersections in the Horizon Year (2040) – the E Street / Auto Center Drive / Orange Show Road intersection and the Waterman Avenue / I-10 Westbound On-Ramp intersection – under Horizon Year (2040) traffic conditions, which are calculated to operate an unacceptable LOS with or without the addition of Project traffic.

Threshold b): Cumulatively Considerable Impact. The Project would cumulatively contribute to a conflict with the *San Bernardino CMP* arterial roadway/intersection performance standards under Horizon Year (2040) traffic conditions at the E Street / Auto Center Drive / Orange Show Road intersection. The Project would not conflict with *CMP* performance standards related to the performance of freeway facilities under any analysis scenario.

Threshold c): No Impact. The proposed Project does not include an air travel component and would not affect local air traffic levels. In addition, the Project would not introduce any physical features that would alter or obstruct air traffic patterns.

Threshold d): Less-than-Significant Impact. The proposed Project would not substantially increase transportation safety hazards due to incompatible uses or design features.

Threshold e): No Impact. Adequate emergency access would be provided to the Project site during both short-term construction and long-term operation. The Project would not result in inadequate emergency access to the site or surrounding properties.

Threshold f): Less-than-Significant Impact. The Project is consistent with adopted policies and programs regarding public transit, bicycle, and pedestrian facilities, and is designed to minimize potential conflicts with non-vehicular means of transportation.

4.11.8 MITIGATION

The following mitigation measures would minimize the Project's cumulatively considerable impacts at the E Street / Auto Center Drive / Orange Show Road intersection (Intersection #3) and Waterman Avenue / I-10 Westbound On-Ramp intersection (Intersection #13):

MM 4.11-1 Prior to issuance of building permits, the Project Applicant shall comply with the City of San Bernardino Development Impact Fee (DIF) program, which requires the payment of a fee to the City (less fee credits), a portion of which is applied to reduce traffic congestion by funding the installation of roadway improvements.

MM 4.11-2 Prior to issuance of an occupancy permit, the Project Applicant shall make a fair-share payment to the City of San Bernardino, to be held in trust, for the improvements to the E Street / Auto Center Road / Orange Show Road intersection improvements listed below. The required fair-share payment shall be in accordance with Table 1-4 of the "Gateway South Building 4 Traffic Impact Analysis" prepared by Urban Crossroads (dated April 6, 2017). The City of San Bernardino shall only use the funds for the purpose of implementing improvements to the E Street / Auto Center Road / Orange Show Road intersection listed below. If within five years of the date of collection of the Project's fair-share fee payment, the City of San Bernardino has not completed the improvements or established a fair-share funding program for the specified improvements to the E Street / Auto Center Road / Orange Show Road intersection, then the City of San Bernardino shall return the funds to the Project Applicant.

a) Re-stripe and lengthen the storage for the existing dual northbound left turn lanes; and

b) Modify the traffic signal with overlap phasing on the eastbound right turn lane.

MM 4.11-3 Prior to issuance of an occupancy permit, the Project Applicant shall make a fair-share payment to the City of San Bernardino, to be held in trust, for the improvements to the Waterman Avenue / I-10 Westbound On-Ramp intersection improvements listed below. The required fair-share payment shall be in accordance with Table 1-4 of the "Gateway South Building 4 Traffic Impact Analysis" prepared by Urban Crossroads (dated April 6, 2017). The City of San Bernardino shall only use the funds for the purpose of implementing improvements to the Waterman Avenue / I-10 Westbound On-Ramp intersection listed below. If within five years of the date of collection of the Project's fair-share fee payment, the City of San

Bernardino has not completed the improvement or established a fair-share funding program for the specified improvements to the Waterman Avenue / I-10 Westbound On-Ramp intersection, then the City of San Bernardino shall return the funds to the Project Applicant.

a) Install traffic signal.

Although the Project's contribution to the projected LOS deficiency at the Waterman Avenue / Orange Show Road intersection (Intersection #9) is less than significant, the following mitigation measure is recommended to improve vehicle stacking in the vicinity of the intersection:

MM 4.11-4 Prior to issuance of an occupancy permit, the Project Applicant shall make a fair-share payment to the City of San Bernardino, to be held in trust, for the improvements to the Waterman Avenue / Orange Show Road intersection improvements listed below. The required fair-share payment shall be in accordance with Table 1-4 of the "Gateway South Building 4 Traffic Impact Analysis" prepared by Urban Crossroads (dated April 6, 2017). The City of San Bernardino shall only use the funds for the purpose of implementing improvements to the Waterman Avenue / Orange Show Road intersection listed below. If within five years of the date of collection of the Project's fair-share fee payment, the City of San Bernardino has not completed the improvements or established a fair-share funding program for the specified improvements to the Waterman Avenue / Orange Show Road intersection, then the City of San Bernardino shall return the funds to the Project Applicant.

a) Install second northbound left turn lane;

b) Install northbound right turn lane;

c) Modify traffic signal to apply a railroad preemption.

4.11.9 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold a): Significant and Unavoidable Cumulatively Considerable Impact. Mitigation Measures (MM) 4.11-1 through 4.11-3 would require the Project to pay development impact fees and participate in fair-share funding programs to address cumulatively considerable impacts to the local roadway network that would result from the Project's operation.

As shown in Table 4.11-28, *Horizon Year Intersection Analysis – With Mitigation*, all intersections in the Project study area would operate at acceptable LOS under Horizon Year conditions with recommended improvements. However, to achieve acceptable LOS conditions, Intersection #3 (E Street / Auto Center Road / Orange Show Road) and Intersection #13 (Waterman Avenue / I-10 Westbound On-Ramp) require improvements that either: 1) are not under the sole jurisdictional authority of the City of San Bernardino (meaning the City of San Bernardino cannot assure that the recommended improvements would be implemented); and/or 2) are not included in any existing

mitigation funding program to ensure a date-certain installation. Because the Lead Agency (City of San Bernardino) cannot assure that the recommended improvements would be implemented and/or in place at the time of need, the cumulative impacts to Intersection #3 and Intersection #13 are recognized as significant and potentially unavoidable under Horizon Year conditions. No other feasible mitigation measures for these cumulatively considerable impacts are available that would have a proportional nexus to the Project's impact.

Threshold b): Significant and Unavoidable Cumulatively Considerable Impact. Mitigation Measures (MM) 4.11-1 and 4.11-2 would require the Project to pay development impact fees and participate in fair-share funding programs to address cumulative impacts at the E Street / Auto Center Drive / Orange Show Road intersection (Intersection #3). As described above, Intersection #3 would operate at acceptable LOS under Horizon Year conditions with the implementation of MM 4.11-1 and 4.11-2; however, the City of San Bernardino cannot assure that the needed improvements are installed at Intersection #3 by the time of need because the needed improvements are not included in any existing mitigation funding program (meaning there is no mechanism available for development projects to contribute toward the construction of needed improvements or for the City to construct the improvements). Because the Lead Agency (City of San Bernardino) cannot assure the recommended improvements would be implemented and/or in place at the time of need, the cumulative impacts to Intersection #3 are recognized as significant and unavoidable under Horizon Year conditions. No other feasible mitigation measures for this cumulatively considerable impact is available that would have a proportional nexus to the Project's impact.

Table 4.11-1 Project Study Area Intersections

ID	Intersection Location	Jurisdiction	CMP?
1	I-215 SB Ramps / Auto Center Rd. (*)	Caltrans	No
2	I-215 NB Ramps / Auto Center Rd.	Caltrans	No
3	E St. / Auto Center Rd. / Orange Show Rd.	City of San Bernardino	Yes
4	Arrowhead Av. / Orange Show Rd.	City of San Bernardino	No
5	Washington Av. / Orange Show Rd.	City of San Bernardino	No
6	Washington Av. / Driveway 1 (Access Alternative 1 only) (*)	City of San Bernardino	No
7	Washington Av. / Dumas St. (*)	City of San Bernardino	No
8	I-10 EB Off-ramp / E. Redlands Bl. (*)	Caltrans	No
9	S. Waterman Av. / Orange Show Rd.	City of San Bernardino	No
10	S. Waterman Av. / Dumas St.	City of San Bernardino	No
11	S. Waterman Av. / Park Center Dr.	City of San Bernardino	No
12	S. Waterman Av. / Hospitality Ln.	City of San Bernardino	Yes
13	S. Waterman Av. / I-10 WB On-Ramp	Caltrans	No
14	S. Waterman Av. / I-10 EB Ramps (*)	Caltrans	No
15	S. Waterman AV. / E. Redlands Bl. (*)	City of San Bernardino	Yes
16	I-10 WB Ramps/Carnegie Dr. / Hospitality Ln. (*)	Caltrans	No

(*) = Fewer than 50 peak hour trips

Source: (Urban Crossroads, 2017e, Table 1-1)

Table 4.11-2 Project Study Area Freeway Mainline Segments

ID	Freeway Mainline Segments
1	I-215 – Northbound, North of Auto Center Dr.
2	I-215 – Northbound, South of Auto Center Dr.
3	I-215 – Southbound, North of Auto Center Dr.
4	I-215 – Southbound, South of Auto Center Dr.
5	I-10 – Eastbound, West of Waterman Av.
6	I-10 – Eastbound, East of Waterman Av.
7	I-10 – Westbound, West of Waterman Av.
8	I-10 – Westbound, East of Waterman Av.

Source: (Urban Crossroads, 2017e, Table 1-2)

Table 4.11-3 Existing Intersection Levels of Service

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service		v/c[5]	
			Northbound			Southbound			Eastbound			Westbound								
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	AM	PM
1	I-215 SB Ramps / Auto Center Rd.	TS	0	0	0	1	1	1	0	2	0	0	2	0	18.3	11.9	B	B	--	--
2	I-215 NB Ramps / Auto Center Rd.	TS	1	1	2	0	0	0	1	2	0	0	2	1	18.4	30.7	B	C	--	0.72
3	E St. / Auto Center Rd. / Orange Show Rd.[4]	TS	1	2	0	2	2	1>	2	2	1	2	2	1>	34.6	43.9	C	D	0.70	0.83
4	Arrowhead Av. / Orange Show Rd.	TS	1	1	0	1	1	1>	1	2	0	1	2	d	24.7	33.9	C	C	0.49	0.54
5	Washington Av. / Orange Show Rd.	TS	0	1	d	0	1	0	1	2	0	1	2	0	4.4	5.5	A	A	--	--
6	Washington Av. / Driveway 1		Intersection Does Not Exist												Intersection Does Not Exist					
7	Washington Av. / Dumas St.	CSS	0	0	0	0	1	0	0	1	0	0	1	0	8.6	8.7	A	A	--	--
8	I-10 EB Ramps / E. Redlands Bl.	TS	0	0	1	1	1	1	0	2	0	1	2	0	29.9	28.7	C	C	0.55	0.49
9	S. Waterman Av. / Orange Show Rd.	TS	1	2	d	1	2	d	1	2	d	1	2	d	39.9	36.9	D	D	0.64	0.87
10	S. Waterman Av. / Dumas St.	CSS	1	2	0	0	2	0	1	0	d	0	0	0	16.3	16.3	C	C	0.01	0.01
11	S. Waterman Av. / Park Center Dr.	TS	1	2	1	1	2	0	0	1	0	0	1	d	6.0	10.8	A	B	--	--
12	S. Waterman Av. / Hospitality Ln.	TS	2	2	2>	1	3	1>	1	2	1	2	2	0	37.5	45.9	D	D	0.65	0.74
13	S. Waterman Av. / I-10 WB On-Ramp	CSS	1	2	0	0	3	0	0	0	0	0	0	0	10.6	14.0	B	B	--	--
14	S. Waterman Av. / I-10 EB Ramps	CSS	0	2	1>>	0	2	0	0	0	0	0	0	1>>	0.0	0.0	A	A	--	--
15	S. Waterman Av. / E. Redlands Bl.	TS	1	2	1	1	2	0	2	2	0	1	2	0	38.5	43.2	D	D	0.66	0.93
16	I-10 WB Ramps/Carnegie Dr. / Hospitality Ln.	TS	1	2	1	1	2	1	1	2	1>	2	2	0	**65.0**	50.3	**E**	D	**0.53**	0.74

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; > = Right Turn Overlap Phasing; >> = Free-Right Turn Lane

[2] Per the 2010 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross-street Stop; TS = Traffic Signal

[4] Although there is a second northbound left turn lane, the analysis has been performed assuming a single left as vehicles headed onto the I-215 Northbound often block the inner left turn lane. As a result, the inner left turn lane does not get adequately utilized each cycle.

[5] Volume to capacity (v/c) ratio has been reported using the HCM 2000 methodology (as HCM 2010 does not report the overall v/c) for intersections with operating at LOS C or worse, consistent with the City of San Bernardino Traffic Impact Study Guidelines.

Source: (Urban Crossroads, 2017e, Table 3-1)

Table 4.11-4 Existing Freeway Mainline Levels of Service

Freeway	Direction	Mainline Segment	Lanes[1]	Existing (2017)							
				Volume		Truck %		Density[2]		LOS	
				AM	PM	AM	PM	AM	PM	AM	PM
I-215	NB	North of Auto Center Dr.	4	5,326	6,523	3%	1%	21.2	27.0	C	D
		South of Auto Center Dr.	4	6,934	7,535	2%	2%	29.6	33.8	D	D
	SB	North of Auto Center Dr.	5	6,628	5,471	4%	2%	21.3	17.2	C	B
		South of Auto Center Dr.	5	6,585	8,167	4%	2%	21.1	27.2	C	D
I-10	EB	West of Waterman Av.	4	7,224	6,350	10%	8%	33.6	27.2	D	D
		East of Waterman Av.	5	6,517	6,526	11%	8%	21.7	21.3	C	C
	WB	West of Waterman Av.	4	7,808	7,764	15%	17%	**40.4**	**40.7**	**E**	**E**
		East of Waterman Av.	4	8,451	7,016	14%	18%	**47.6**	34.0	**F**	D

[1] Number of lanes are in the specified direction and is based on existing conditions. No future improvements are currently planned.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2017e, Table 3-3)

Table 4.11-5 Existing Freeway Ramp Queuing Summary

Intersection	Movement	Available Stacking Distance (Feet)	95th Percentile Queue (Feet)		Acceptable?[1]	
			AM Peak	PM Peak	AM	PM
I-215 SB Off-Ramp / Auto Center Rd.	SBL	2,695	368 [2]	160	Yes	Yes
	SBL/T	2,230	353 [2]	156	Yes	Yes
	SBR	465	41	37	Yes	Yes
I-215 NB Off-Ramp / Auto Center Rd.	NBL	925	54	45	Yes	Yes
	NBL/T	1,050	54	44	Yes	Yes
	NBR	275	273 [2]	182	Yes	Yes
I-10 EB Off-Ramp / E. Redlands Bl.	SBL	100	364	302	Yes[3]	Yes[3]
	SBL/T	845	368	297	Yes	Yes
	SBR	215	323	96	Yes[3]	Yes
I-10 WB Off-Ramp / E. Hospitality Ln.	NBL	800	317	190	Yes	Yes
	NBT	1,575	303	346	Yes	Yes
	NBR	160	65	111	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

[2] 95th percentile volume exceeds capacity, queue may be longer

[3] Although the 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-10 Freeway mainline.

Source: (Urban Crossroads, 2017e, Table 3-2)

Table 4.11-6 Existing Freeway Ramp Merge/Diverge Levels of Service

Freeway	Direction	Ramp or Segment	Lanes on Freeway[1]	Existing (2017)			
				AM Peak Hour		PM Peak Hour	
				Density[2]	LOS	Density[2]	LOS
I-215	NB	On-Ramp at Auto Center Drive	4	23.6	C	30.1	D
		Off-Ramp at Auto Center Drive	4	7.9	A	9.9	A
	SB	Off-Ramp at Auto Center Drive	5	28.6	D	24.3	C
		Loop On-Ramp (Upstream) at Auto Center Drive	4	26.4	C	28.3	D
		Loop On-Ramp (Downstream) at Auto Center Drive	5	22.4	C	28.2	D
I-10	EB	Off-Ramp at Waterman Avenue	4	22.9	C	18.4	B
		On-Ramp at Waterman Avenue	4	21.2	C	22.8	C
	WB	On-Ramp at Waterman Avenue	4	25.7	C	30.2	D
		Off-Ramp at Waterman Avenue	4	28.6	D	22.6	C

[1] Number of lanes are in the specified direction and is based on existing conditions. No future improvements are currently planned.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2017e, Table 3-4)

Table 4.11-7 Signalized Intersection LOS Thresholds

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A	F
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B	F
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D	F
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E	F
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up	F	F

Source: HCM 2010

Source: (Urban Crossroads, 2017e, Table 2-1)

Table 4.11-8 Unsignalized Intersection LOS Thresholds

Description	Average Control Delay Per Vehicle (Seconds)	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Little or no delays.	0 to 10.00	A	F
Short traffic delays.	10.01 to 15.00	B	F
Average traffic delays.	15.01 to 25.00	C	F
Long traffic delays.	25.01 to 35.00	D	F
Very long traffic delays.	35.01 to 50.00	E	F
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F	F

Source: HCM 2010

Source: (Urban Crossroads, 2017e, Table 2-2)

Table 4.11-9 Freeway Mainline LOS Thresholds

Level of Service	Description	Density Range (pc/mi/ln)[1]
A	Free-flow operations in which vehicles are relatively unimpeded in their ability to maneuver within the traffic stream. Effects of incidents are easily absorbed.	0.0 – 11.0
B	Relative free-flow operations in which vehicle maneuvers within the traffic stream are slightly restricted. Effects of minor incidents are easily absorbed.	11.1 – 18.0
C	Travel is still at relative free-flow speeds, but freedom to maneuver within the traffic stream is noticeably restricted. Minor incidents may be absorbed, but local deterioration in service will be substantial. Queues begin to form behind significant blockages.	18.1 – 26.0
D	Speeds begin to decline slightly and flows and densities begin to increase more quickly. Freedom to maneuver is noticeably limited. Minor incidents can be expected to create queuing as the traffic stream has little space to absorb disruptions.	26.1 – 35.0
E	Operation at capacity. Vehicles are closely spaced with little room to maneuver. Any disruption in the traffic stream can establish a disruption wave that propagates throughout the upstream traffic flow. Any incident can be expected to produce a serious disruption in traffic flow and extensive queuing.	35.1 – 45.0
F	Breakdown in vehicle flow.	>45.0

[1] pc/mi/ln = passenger cars per mile per lane. Source: HCM

Source: (Urban Crossroads, 2017e, Table 2-4)

Table 4.11-10 Freeway Ramp Junction Merge/Diverge LOS Thresholds

Level of Service	Density Range (pc/mi/ln)[1]
A	≤10.0
B	10.0 – 20.0
C	20.0 – 28.0
D	28.0 – 35.0
E	>35.0
F	Demand Exceeds Capacity

[1] pc/mi/ln = passenger cars per mile per lane. Source: HCM

Source: (Urban Crossroads, 2017e, Table 2-5)

Table 4.11-11 Project Trip Generation Summary (Passenger Car Equivalent)

Land Use	Units[2]	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Trip Generation Rates[1]									
High-Cube Warehouse[3]	TSF	152	0.076	0.034	0.110	0.037	0.083	0.120	1.680
Passenger Cars			0.055	0.025	0.080	0.025	0.055	0.080	1.040
2-Axle Trucks (PCE = 2.0)			0.009	0.004	0.013	0.005	0.012	0.018	0.282
3-Axle Trucks (PCE = 2.5)			0.009	0.004	0.013	0.005	0.012	0.018	0.283
4-Axle+ Trucks (PCE = 3.0)			0.037	0.017	0.054	0.022	0.050	0.072	1.158

Land Use	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Trip Generation Summary									
High-Cube Warehouse	1,064.880	TSF							
Passenger Cars:			59	26	85	26	59	85	1,107
Truck Trips:									
2-axle:			10	4	14	6	13	19	300
3-axle:			10	4	14	6	13	19	301
4+-axle:			40	18	58	24	53	77	1,233
- Net Truck Trips (PCE) [3]			*60*	*26*	*86*	*36*	*79*	*115*	*1,834*
TOTAL NET TRIPS (PCE) [4]			***119***	***52***	***171***	***62***	***138***	***200***	***2,941***

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Ninth Edition (2012).

[2] TSF = thousand square feet

[3] Vehicle Mix Source: Total truck percentage source from ITE Trip Generation manual. Truck mix (by axle type) source from SCAQMD.

AM peak hour = 72.7% passenger cars, 6.01% 2-Axle trucks, 4.83% 3-Axle trucks, 16.46% 4-Axle trucks

PM peak hour = 66.7% passenger cars, 7.33% 2-Axle trucks, 5.89% 3-Axle trucks, 20.08% 4-Axle trucks

ADT = 61.9% passenger cars, 8.38% 2-Axle trucks, 6.74% 3-Axle trucks, 22.98% 4-Axle trucks

[4] TOTAL NET TRIPS (PCE) = Passenger Cars + Net Truck Trips (PCE).

Source: (Urban Crossroads, 2017e, Table 4-2)

Table 4.11-12 Existing plus Project Intersection Analysis

#	Intersection	Traffic Control[2]	Existing (2017)						E+P						Change in v/c[6]		Significant Impact?[5]
			Delay[1] (secs.)		LOS[7]		Average v/c[3]		Delay[1] (secs.)		LOS[7]		Average v/c[3]				
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
1	I-215 SB Ramps / Auto Center Rd.	TS	18.3	11.9	B	B	--	--	19.2	12.0	B	B	--	--	--	--	No
2	I-215 NB Ramps / Auto Center Rd.	TS	18.4	30.7	B	C	--	0.72	20.4	30.8	C	C	0.76	0.75	--	0.03	No
3	E St. / Auto Center Rd. / Orange Show Rd.[4]	TS	34.6	43.9	C	D	0.70	0.83	40.1	45.5	D	D	0.72	0.85	0.02	0.02	No
4	Arrowhead Av. / Orange Show Rd.	TS	24.7	33.9	C	C	0.49	0.54	33.8	37.3	C	D	0.50	0.57	0.01	0.03	No
5	Washington Av. / Orange Show Rd.	TS	4.4	5.5	A	A	--	--	5.3	7.4	A	A	--	--	--	--	No
6	Washington Av. / Driveway 1	CSS	Intersection Does Not Exist						8.7	8.8	A	A	--	--	--	--	No
7	Washington Av. / Dumas St.	CSS	8.6	8.7	A	A	--	--	8.6	8.7	A	A	--	--	--	--	No
	Alternative Access:	CSS	Not Applicable						9.1	9.4	A	A	--	--	--	--	No
8	I-10 EB Ramps / E. Redlands Bl.	TS	29.9	28.7	C	C	0.55	0.49	29.9	28.7	C	C	0.55	0.49	0.00	0.00	No
9	S. Waterman Av. / Orange Show Rd.	TS	39.9	34.5	D	C	0.64	0.87	41.1	35.3	D	D	0.64	0.90	0.00	0.03	No
10	S. Waterman Av. / Dumas St.	CSS	16.3	16.3	C	C	0.01	0.01	16.6	16.4	C	C	0.01	0.01	0.00	0.00	No
11	S. Waterman Av. / Park Center Dr.	TS	6.0	10.8	A	B	--	--	9.1	14.8	A	B	--	--	--	--	No
12	S. Waterman Av. / Hospitality Ln.	TS	37.5	45.9	D	D	0.65	0.74	37.9	45.9	D	D	0.66	0.74	0.01	0.00	No
13	S. Waterman Av. / I-10 WB On-Ramp	CSS	10.6	14.0	B	B	--	--	10.6	14.0	B	B	--	--	--	--	No
14	S. Waterman Av. / I-10 EB Ramps	CSS	0.0	0.0	A	A	--	--	0.0	0.0	A	A	--	--	--	--	No
15	S. Waterman Av. / E. Redlands Bl.	TS	38.5	43.2	D	D	0.66	0.93	38.5	43.2	D	D	0.66	0.93	0.00	0.00	No
16	I-10 WB Ramps/Carnegie Dr. / Hospitality Ln.	TS	38.1	48.2	D	D	0.51	0.74	38.2	48.3	D	D	0.52	0.74	0.01	0.00	No

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] Per the 2010 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[2] CSS = Cross-street Stop; TS = Traffic Signal; CSS = Improvement

[3] Volume to capacity (v/c) ratio has been reported using the HCM 2000 methodology (as HCM 2010 does not report the overall v/c) for intersections operating at LOS C or worse, consistent with the City of San Bernardino Traffic Impact Study Guidelines.

[4] Although there is a second northbound left turn lane, the analysis has been performed assuming a single left as vehicles headed onto the I-215 Northbound often block the inner left turn lane. As a result, the inner left turn lane does not get adequately utilized each cycle.

[5] Significant impact has been identified if the change in v/c exceeds the applicable thresholds per the City of San Bernardino Traffic Impact Study Guidelines

[6] The TIA Guidelines have significance criteria based on v/c difference for LOS C or worse. As such, difference in v/c has not been reported for LOS "A" or LOS "B".

[7] LOS = Level of Service

Source: (Urban Crossroads, 2017e, Table 5-1)

Table 4.11-13 Opening Year Intersection Analysis

#	Intersection	Traffic Control[2]	EA (2018) Delay[1] (secs.) AM	EA (2018) Delay[1] (secs.) PM	EA (2018) LOS[7] AM	EA (2018) LOS[7] PM	EA (2018) Average v/c[3,6] AM	EA (2018) Average v/c[3,6] PM	EAP (2018) Delay[1] (secs.) AM	EAP (2018) Delay[1] (secs.) PM	EAP (2018) LOS[7] AM	EAP (2018) LOS[7] PM	EAP (2018) Average v/c[3] AM	EAP (2018) Average v/c[3] PM	Δ v/c Difference[6] AM	Δ v/c Difference[6] PM	Significant Impact?[5]
1	I-215 SB Ramps / Auto Center Rd.	TS	19.4	12.1	B	B	--	--	20.5	12.1	C	B	0.50	--	--	--	No
2	I-215 NB Ramps / Auto Center Rd.	TS	20.2	32.4	C	C	0.76	0.75	22.8	32.2	C	C	0.78	0.77	0.02	0.02	No
3	E St. / Auto Center Rd. / Orange Show Rd.[4]	TS	38.6	45.2	D	D	0.72	0.86	45.4	47.3	D	D	0.74	0.87	0.02	0.01	No
4	Arrowhead Av. / Orange Show Rd.	TS	33.9	34.7	C	C	0.50	0.57	34.6	39.3	C	D	0.52	0.59	0.02	0.02	No
5	Washington Av. / Orange Show Rd.	TS	4.4	5.6	A	A	--	--	5.4	7.5	A	A	--	--	--	--	No
6	Washington Av. / Driveway 1	**CSS**	Intersection Does Not Exist						8.7	8.8	A	A	--	--	--	--	No
7	Washington Av. / Dumas St.	CSS	8.6	8.7	A	A	--	--	8.6	8.7	A	A	--	--	--	--	No
	Alternative Access:	CSS	Not Applicable						9.1	9.4	A	A	--	--	--	--	No
8	I-10 EB Ramps / E. Redlands Bl.	TS	30.9	29.4	C	C	0.57	0.50	30.9	29.4	C	C	0.57	0.50	0.00	0.00	No
9	S. Waterman Av. / Orange Show Rd.	TS	40.5	34.9	D	C	0.66	0.89	41.8	43.8	D	D	0.66	0.92	0.00	0.03	No
10	S. Waterman Av. / Dumas St.	CSS	16.3	16.4	C	C	0.01	0.01	17.4	16.7	C	C	0.01	0.01	0.00	0.00	No
11	S. Waterman Av. / Park Center Dr.	TS	6.2	11.2	A	B	--	--	9.3	15.6	A	B	--	--	--	--	No
12	S. Waterman Av. / Hospitality Ln.	TS	38.0	47.1	D	D	0.67	0.75	38.4	47.2	D	D	0.67	0.75	0.00	0.00	No
13	S. Waterman Av. / I-10 WB On-Ramp	CSS	10.7	14.2	B	B	--	--	10.7	14.4	B	B	--	--	--	--	No
14	S. Waterman Av. / I-10 EB Ramps	CSS	0.0	0.0	A	A	--	--	0.0	0.0	A	A	--	--	--	--	No
15	S. Waterman Av. / E. Redlands Bl.	TS	40.1	46.4	D	D	0.68	0.96	40.1	46.4	D	D	0.68	0.96	0.00	0.00	No
16	I-10 WB Ramps/Carnegie Dr. / Hospitality Ln.	TS	38.6	50.5	D	D	0.53	0.76	38.7	50.6	D	D	0.54	0.76	0.01	0.00	No

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

1 Per the 2010 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

2 CSS = Cross-street Stop; TS = Traffic Signal; **CSS** = Improvement

3 Volume to capacity ratio has been reported using the HCM 2000 methodology (as HCM 2010 does not report the overall v/c) for intersections operating at LOS C or worse, consistent with the City of San Bernardino Traffic Impact Study Guidelines.

4 Although there is a second northbound left turn lane, the analysis has been performed assuming a single left as vehicles headed onto the I-215 Northbound often block the inner left turn lane. As a result, the inner left turn lane does not get adequately utilized each cycle.

5 Significant impact has been identified if the change in v/c exceeds the applicable thresholds per the City of San Bernardino Traffic Impact Study Guidelines

6 The TIA Guidelines have significance criteria based on v/c difference for LOS C or worse. As such,v/c ratios and difference in v/c have not been reported for LOS "A" or LOS "B".

7 LOS = Level of Service

Source: (Urban Crossroads, 2017e, Table 6-1)

Table 4.11-14 Opening Year plus Cumulative Intersection Analysis

#	Intersection	Traffic Control[2]	EAC (2018) Delay[1] (secs.) AM	EAC (2018) Delay[1] (secs.) PM	EAC (2018) LOS[7] AM	EAC (2018) LOS[7] PM	EAC (2018) Average v/c[3,6] AM	EAC (2018) Average v/c[3,6] PM	EAPC (2018) Delay[1] (secs.) AM	EAPC (2018) Delay[1] (secs.) PM	EAPC (2018) LOS[7] AM	EAPC (2018) LOS[7] PM	EAPC (2018) Average v/c[3] AM	EAPC (2018) Average v/c[3] PM	Δ v/c Difference[6] AM	Δ v/c Difference[6] PM	Significant Impact?[5]
1	I-215 SB Ramps / Auto Center Rd.	TS	24.1	12.0	C	--	0.54	0.46	26.0	12.0	C	B	0.55	--	0.01	--	No
2	I-215 NB Ramps / Auto Center Rd.	TS	31.2	31.9	C	C	0.87	0.89	34.6	34.5	C	C	0.89	0.91	0.02	0.02	No
3	E St. / Auto Center Rd. / Orange Show Rd.[4]	TS	40.3	46.0	D	D	0.82	0.93	47.7	51.6	D	D	0.83	0.94	0.01	0.01	No
4	Arrowhead Av. / Orange Show Rd.	TS	36.2	34.9	D	C	0.60	0.67	37.0	44.8	D	D	0.60	0.69	0.00	0.02	No
5	Washington Av. / Orange Show Rd.	TS	6.4	7.5	A	A	--	--	6.8	8.9	A	A	--	--	--	--	No
6	Washington Av. / Driveway 1	**CSS**	Intersection Does Not Exist						8.8	9.0	A	A	--	--	--	--	No
7	Washington Av. / Dumas St.	CSS	8.7	8.8	A	A	--	--	8.7	8.8	A	A	--	--	--	--	No
	Alternative Access:	CSS	Not Applicable						9.2	9.5	A	A	--	--	--	--	No
8	I-10 EB Ramps / E. Redlands Bl.	TS	34.3	29.5	C	C	0.65	0.57	34.3	29.5	C	C	0.65	0.57	0.00	0.00	No
9	S. Waterman Av. / Orange Show Rd.	TS	48.6	53.6	D	D	0.75	1.08	50.8	54.9	D	D	0.77	1.10	0.02	0.02	No
10	S. Waterman Av. / Dumas St.	CSS	19.5	18.6	C	C	0.02	0.01	19.9	19.0	C	C	0.02	0.01	0.00	0.00	No
11	S. Waterman Av. / Park Center Dr.	TS	7.1	13.2	A	B	--	--	10.4	20.1	B	C	--	0.68	--	--	No
12	S. Waterman Av. / Hospitality Ln.	TS	41.7	53.1	D	D	0.75	0.79	42.3	53.2	D	D	0.76	0.79	0.01	0.00	No
13	S. Waterman Av. / I-10 WB On-Ramp	CSS	11.3	17.6	B	C	--	0.61	11.3	17.6	B	C	--	0.61	--	0.00	No
14	S. Waterman Av. / I-10 EB Ramps	CSS	0.0	0.0	A	A	--	--	0.0	0.0	A	A	--	--	--	--	No
15	S. Waterman Av. / E. Redlands Bl.	TS	43.4	54.4	D	D	0.74	1.00	43.4	54.4	D	D	0.74	1.00	0.00	0.00	No
16	I-10 WB Ramps/Carnegie Dr. / Hospitality Ln.	TS	44.4	**71.8**	D	**E**	0.62	**0.87**	44.6	**72.0**	D	**E**	**0.62**	**0.87**	0.00	0.00	No

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

1 Per the 2010 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

2 CSS = Cross-street Stop; AWS = All Way Stop; TS = Traffic Signal; **CSS** = Improvement

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4 Although there is a second northbound left turn lane, the analysis has been performed assuming a single left as vehicles headed onto the I-215 Northbound often block the inner left turn lane. As a result, the inner left turn lane does not get adequately utilized each cycle.

5 Significant impact has been identified if the change in v/c exceeds the applicable thresholds per the City of San Bernardino Traffic Impact Study Guidelines

6 The TIA Guidelines have significance criteria based on v/c difference for LOS C or worse. As such,v/c ratios and difference in v/c have not been reported for LOS "A" or LOS "B".

7 LOS = Level of Service

Source: (Urban Crossroads, 2017e, Table 7-1)

Table 4.11-15 Horizon Year Intersection Analysis

#	Intersection	Traffic Control[2]	2040 Without Project						2040 With Project						Δ v/c Difference[6]		Significant Impact?[5]
			Delay[1] (secs.)		LOS[7]		Average v/c[3,6]		Delay[1] (secs.)		LOS[7]		Average v/c[3]				
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
1	I-215 SB Ramps / Auto Center Rd.	TS	46.8	13.6	D	B	0.74	--	51.2	13.7	D	B	0.75	--	0.01	--	No
2	I-215 NB Ramps / Auto Center Rd.	TS	48.4	49.2	D	D	1.03	0.95	52.6	51.3	D	D	1.04	0.97	0.01	0.02	No
3	E St. / Auto Center Rd. / Orange Show Rd.[4]	TS	**61.9**	**98.2**	**E**	**F**	**0.80**	**1.05**	**68.2**	**102.7**	**E**	**F**	**0.82**	**1.07**	**0.02**	**0.02**	**Yes**
4	Arrowhead Av. / Orange Show Rd.	TS	54.4	49.9	D	D	0.63	0.69	54.5	51.5	D	D	0.64	0.71	0.01	0.02	No
5	Washington Av. / Orange Show Rd.	TS	7.2	10.4	A	B	--	--	8.2	10.4	A	B	--	--	--	--	No
6	Washington Av. / Driveway 1	CSS	Intersection Does Not Exist						8.8	9.1	A	A	--	--	--	--	No
7	Washington Av. / Dumas St.	CSS	8.7	8.8	A	A	--	--	8.7	8.8	A	A	--	--	--	--	No
	Alternative Access:	CSS	Not Applicable						9.2	9.5	A	A	--	--	--	--	No
8	I-10 EB Ramps / E. Redlands Bl.	TS	44.4	29.5	D	C	0.75	0.66	44.4	29.5	D	C	0.75	0.66	0.00	0.00	No
9	S. Waterman Av. / Orange Show Rd.	TS	53.4	**58.8**	D	**E**	0.87	**1.24**	**65.6**	**62.3**	**E**	**E**	**0.88**	**1.25**	0.01	0.01	No
10	S. Waterman Av. / Dumas St.	CSS	22.5	22.1	C	C	0.02	0.02	23.3	22.1	C	C	0.03	0.02	0.00	0.00	No
11	S. Waterman Av. / Park Center Dr.	TS	7.9	46.6	A	D	--	0.80	11.6	46.6	B	D	--	0.80	--	0.00	No
12	S. Waterman Av. / Hospitality Ln.	TS	49.0	54.1	D	D	0.86	0.96	52.4	54.8	D	D	0.87	0.96	0.01	0.00	No
13	S. Waterman Av. / I-10 WB On-Ramp	CSS	14.7	**>100.0**	B	**F**	--	1.16	14.7	**>100.0**	B	**F**	--	1.16	--	0.00	**Yes[8]**
14	S. Waterman Av. / I-10 EB Ramps	CSS	0.0	0.0	A	A	--	--	0.0	0.0	A	A	--	--	--	--	No
15	S. Waterman Av. / E. Redlands Bl.	TS	54.3	**122.6**	D	**F**	1.10	**1.40**	54.3	**122.8**	D	**F**	1.10	**1.40**	0.00	0.00	No
16	I-10 WB Ramps/Carnegie Dr. / Hospitality Ln.	TS	**83.6**	**123.9**	**F**	**F**	**0.79**	**1.08**	**84.3**	**124.4**	**F**	**F**	**0.80**	**1.08**	0.01	0.00	No

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] Per the 2010 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[2] CSS = Cross-street Stop; AWS = All Way Stop; TS = Traffic Signal; CSS = Improvement

[3] Volume to capacity ratio has been reported using the HCM 2000 methodology (as HCM 2010 does not report the overall v/c) for intersections operating at LOS C or worse, consistent with the City of San Bernardino Traffic Impact Study Guidelines.

[4] Although there is a second northbound left turn lane, the analysis has been performed assuming a single left as vehicles headed onto the I-215 Northbound often block the inner left turn lane. As a result, the inner left turn lane does not get adequately utilized each cycle.

[5] Significant impact has been identified if the change in v/c exceeds the applicable thresholds per the City of San Bernardino Traffic Impact Study Guidelines

[6] The TIA Guidelines have significance criteria based on v/c difference for LOS C or worse. As such,v/c ratios and difference in v/c have not been reported for LOS "A" or LOS "B".

[7] LOS = Level of Service

[8] Improvements have been identified for the intersection of S. Waterman Av. / I-10 WB Ramp as the it is under the jurisdiction of Caltrans and Project contributes more than 50 peak hour trips to the intersection.

Source: (Urban Crossroads, 2017e, Table 8-1)

Table 4.11-16 Existing plus Project Freeway Mainline Analysis

Freeway	Direction	Mainline Segment	Lanes[1]	Existing (2017)								Existing plus Project							
				Volume		Truck %		Density[2]		LOS		Volume		Truck %		Density[2]		LOS	
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
I-215	NB	North of Auto Center Dr.	4	5,326	6,523	3%	1%	21.2	27.0	C	D	5,336	6,551	3%	1%	21.3	27.1	C	D
		South of Auto Center Dr.	4	6,934	7,535	2%	2%	29.6	33.8	D	D	6,962	7,550	3%	2%	30.0	33.9	D	D
	SB	North of Auto Center Dr.	5	6,628	5,471	4%	2%	21.3	17.2	C	B	6,652	5,483	4%	2%	21.3	17.2	C	B
		South of Auto Center Dr.	5	6,585	8,167	4%	2%	21.1	27.2	C	D	6,597	8,200	4%	3%	21.1	27.5	C	D
I-10	EB	West of Waterman Av.	4	7,224	6,350	10%	8%	33.6	27.2	D	D	7,251	6,365	10%	8%	33.8	27.3	D	D
		East of Waterman Av.	5	6,517	6,526	11%	8%	21.7	21.3	C	C	6,527	6,555	11%	8%	21.7	21.5	C	C
	WB	West of Waterman Av.	4	7,808	7,764	15%	17%	**40.4**	**40.7**	**E**	**E**	7,814	7,781	15%	17%	**40.5**	**40.9**	**E**	**E**
		East of Waterman Av.	4	8,451	7,016	14%	18%	**47.6**	34.0	**F**	D	8,475	7,029	14%	18%	**47.9**	34.1	**F**	D

[1] Number of lanes are in the specified direction and is based on existing conditions. No future improvements are currently planned.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2017e, Table 5-3)

Table 4.11-17 Existing plus Project Freeway Ramp Queuing Analysis

Intersection	Movement	Available Stacking Distance (Feet)	Existing (2017)				E+P			
			95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Off-Ramp / Auto Center Rd.	SBL	2,695	368 [2]	160	Yes	Yes	381 [2]	161	Yes	Yes
	SBL/T	2,230	353 [2]	156	Yes	Yes	366 [2]	163	Yes	Yes
	SBR	465	41	37	Yes	Yes	41	37	Yes	Yes
I-215 NB Off-Ramp / Auto Center Rd.	NBL	925	54	45	Yes	Yes	54	45	Yes	Yes
	NBL/T	1,050	54	44	Yes	Yes	54	44	Yes	Yes
	NBR	275	273	182 [0]	Yes	Yes	292 [2]	197 [2]	Yes	Yes
I-10 EB Off-Ramp / E. Redlands Bl.	SBL	100	364	302	Yes[3]	Yes[3]	364	302	Yes[3]	Yes[3]
	SBL/T	845	368	297	Yes	Yes	368	297	Yes	Yes
	SBR	215	323	96	Yes[3]	Yes	323	96	Yes[3]	Yes
I-10 WB Off-Ramp / E. Hospitality Ln.	NBL	800	317	190	Yes	Yes	329	196	Yes	Yes
	NBT	1,575	303	346	Yes	Yes	303	346	Yes	Yes
	NBR	160	65	111	Yes	Yes	65	111	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

[2] 95th percentile volume exceeds capacity, queue may be longer

[3] Although the 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-10 Freeway mainline.

Source: (Urban Crossroads, 2017e, Table 5-2)

Table 4.11-18 Existing plus Project Freeway Ramp Merge/Diverge Analysis

Freeway	Direction	Ramp or Segment	Lanes on Freeway[1]	Existing (2017)				Existing plus Project			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[2]	LOS	Density[2]	LOS	Density[2]	LOS	Density[2]	LOS
I-215	NB	On-Ramp at Auto Center Drive	4	23.6	C	30.1	D	23.7	C	30.4	D
		Off-Ramp at Auto Center Drive	4	7.9	A	9.9	A	7.9	A	9.9	A
	SB	Off-Ramp at Auto Center Drive	5	28.6	D	24.3	C	28.7	D	24.4	C
		Loop On-Ramp (Upstream) at Auto Center Drive	4	26.4	C	28.3	D	26.6	C	28.6	D
		Loop On-Ramp (Downstream) at Auto Center Drive	5	22.4	C	28.2	D	22.5	C	28.6	D
I-10	EB	Off-Ramp at Waterman Avenue	4	22.9	C	18.4	B	23.1	C	18.5	B
		On-Ramp at Waterman Avenue	4	21.2	C	22.8	C	21.3	C	23.1	C
	WB	On-Ramp at Waterman Avenue	4	25.7	C	30.2	D	25.7	C	30.3	D
		Off-Ramp at Waterman Avenue	4	28.6	D	22.6	C	28.8	D	22.7	C

[1] Number of lanes are in the specified direction and is based on existing conditions. No future improvements are currently planned.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2017e, Table 5-4)

Table 4.11-19 Opening Year Freeway Mainline Analysis

Freeway	Direction	Mainline Segment	Lanes[1]	EA (2018)								EAP (2018)							
				Volume		Truck %		Density[2]		LOS		Volume		Truck %		Density[2]		LOS	
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
I-215	NB	North of Auto Center Dr.	4	5,486	6,719	3%	1%	22.0	28.1	C	D	5,496	6,747	3%	1%	22.0	28.3	C	D
		South of Auto Center Dr.	4	7,142	7,761	3%	2%	31.2	**35.5**	D	**E**	7,170	7,776	3%	2%	31.4	**35.6**	D	**E**
	SB	North of Auto Center Dr.	5	6,827	5,635	4%	2%	22.0	17.7	C	B	6,851	5,647	4%	2%	22.1	17.7	C	B
		South of Auto Center Dr.	5	6,783	8,412	4%	3%	21.8	28.6	C	D	6,795	8,445	4%	3%	21.9	28.7	C	D
I-10	EB	West of Waterman Av.	4	7,441	6,541	10%	8%	**35.3**	28.4	**E**	D	7,468	6,556	10%	8%	**35.5**	28.5	**E**	D
		East of Waterman Av.	5	6,713	6,722	11%	8%	22.4	22.1	C	C	6,723	6,751	11%	8%	22.5	22.2	C	C
	WB	West of Waterman Av.	4	8,042	7,997	15%	17%	**43.0**	**43.3**	**E**	**E**	8,048	8,014	15%	17%	**43.0**	**43.5**	**E**	**E**
		East of Waterman Av.	4	8,705	7,226	14%	18%	**51.2**	**35.8**	**F**	**E**	8,729	7,239	14%	18%	**51.6**	**35.9**	**F**	**E**

[1] Number of lanes are in the specified direction and is based on existing conditions. No future improvements are currently planned.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2017e, Table 6-3)

Table 4.11-20 Opening Year Freeway Ramp Queuing Analysis

Intersection	Movement	Available Stacking Distance (Feet)	EA (2018)				EAP (2018)			
			95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Off-Ramp / Auto Center Rd.	SBL	2,695	385 [2]	166	Yes	Yes	396 [2]	166	Yes	Yes
	SBL/T	2,230	369 [2]	162	Yes	Yes	382 [2]	168	Yes	Yes
	SBR	465	42	37	Yes	Yes	42	37	Yes	Yes
I-215 NB Off-Ramp / Auto Center Rd.	NBL	925	56	45	Yes	Yes	56	45	Yes	Yes
	NBL/T	1,050	55	45	Yes	Yes	55	45	Yes	Yes
	NBR	275	291 [2]	209 [2]	Yes[3]	Yes	306 [2]	235 [2]	Yes[3]	Yes
I-10 EB Off-Ramp / E. Redlands Bl.	SBL	100	380	311	Yes[4]	Yes[4]	380	311	Yes[4]	Yes[4]
	SBL/T	845	384	308	Yes	Yes	384	308	Yes	Yes
	SBR	215	352	110	Yes[4]	Yes	352	110	Yes[4]	Yes
I-10 WB Off-Ramp / E. Hospitality Ln.	NBL	800	327	194	Yes	Yes	338	203	Yes	Yes
	NBT	1,575	312	357	Yes	Yes	314	357	Yes	Yes
	NBR	160	68	119	Yes	Yes	68	119	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

[2] 95th percentile volume exceeds capacity, queue may be longer

[3] Although the 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-215 Freeway mainline.

[4] Although the 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-10 Freeway mainline.

Source: (Urban Crossroads, 2017e, Table 6-2)

Table 4.11-21 Opening Year Freeway Ramp Merge/Diverge Analysis

Freeway	Direction	Ramp or Segment	Lanes on Freeway[1]	EA (2018)				EAP (2018)			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[2]	LOS	Density[2]	LOS	Density[2]	LOS	Density[2]	LOS
I-215	NB	On-Ramp at Auto Center Drive	4	24.2	C	30.9	D	24.3	C	31.1	D
		Off-Ramp at Auto Center Drive	4	8.5	A	10.6	B	8.5	A	10.6	B
	SB	Off-Ramp at Auto Center Drive	5	29.3	D	24.9	C	29.5	D	25.0	C
		Loop On-Ramp (Upstream) at Auto Center Drive	4	27.1	C	29.1	D	27.2	C	29.3	D
		Loop On-Ramp (Downstream) at Auto Center Drive	5	22.9	C	29.2	D	23.1	C	29.6	D
I-10	EB	Off-Ramp at Waterman Avenue	4	23.9	C	19.2	B	24.1	C	19.3	B
		On-Ramp at Waterman Avenue	4	22.0	C	23.6	C	22.1	C	23.9	C
	WB	On-Ramp at Waterman Avenue	4	27.1	C	**31.2**	**F**	27.1	C	**31.4**	**F**
		Off-Ramp at Waterman Avenue	4	29.8	D	23.6	C	29.9	D	23.6	C

[1] Number of lanes are in the specified direction and is based on existing conditions. No future improvements are currently planned.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2017e, Table 6-4)

Table 4.11-22 Opening Year plus Cumulative Freeway Mainline Analysis

Freeway	Direction	Mainline Segment	Lanes[1]	EAC (2018)								EAPC (2018)							
				Volume		Truck %		Density[2]		LOS		Volume		Truck %		Density[2]		LOS	
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
I-215	NB	North of Auto Center Dr.	4	5,534	6,781	3%	1%	22.2	28.5	C	D	5,544	6,809	3%	1%	22.2	28.6	C	D
		South of Auto Center Dr.	4	7,391	7,900	2%	2%	32.7	**36.7**	D	**E**	7,419	7,915	3%	2%	33.2	**36.8**	D	**E**
	SB	North of Auto Center Dr.	5	6,909	5,672	4%	2%	22.3	17.8	C	B	6,933	5,684	4%	2%	22.4	17.8	C	B
		South of Auto Center Dr.	5	6,825	8,514	4%	3%	22.0	29.1	C	D	6,837	8,547	4%	3%	22.0	29.2	C	D
I-10	EB	West of Waterman Av.	4	7,463	6,555	10%	8%	**35.5**	28.5	**E**	D	7,490	6,570	10%	8%	**35.7**	28.6	**E**	D
		East of Waterman Av.	5	6,736	6,760	11%	8%	22.5	22.2	C	C	6,746	6,789	11%	8%	22.5	22.3	C	C
	WB	West of Waterman Av.	4	8,107	8,098	15%	17%	**43.7**	**44.5**	**E**	**E**	8,113	8,115	15%	16%	**43.8**	**44.3**	**E**	**E**
		East of Waterman Av.	4	8,854	7,330	13%	18%	**52.8**	**36.8**	**F**	**E**	8,878	7,343	14%	18%	**53.9**	**36.9**	**F**	**E**

[1] Number of lanes are in the specified direction and is based on existing conditions. No future improvements are currently planned.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2017e, Table 7-5)

Table 4.11-23 Opening Year plus Cumulative Freeway Ramp Queuing Analysis

Intersection	Movement	Available Stacking Distance (Feet)	EAC (2018) 95th Percentile Queue (Feet) AM Peak Hour	EAC (2018) 95th Percentile Queue (Feet) PM Peak Hour	EAC (2018) Acceptable? [1] AM	EAC (2018) Acceptable? [1] PM	EAPC (2018) 95th Percentile Queue (Feet) AM Peak Hour	EAPC (2018) 95th Percentile Queue (Feet) PM Peak Hour	EAPC (2018) Acceptable? [1] AM	EAPC (2018) Acceptable? [1] PM
I-215 SB Off-Ramp / Auto Center Rd.	SBL	2,695	425 [2]	174	Yes	Yes	436 [2]	180	Yes	Yes
	SBL/T	2,230	405 [2]	173	Yes	Yes	416 [2]	176	Yes	Yes
	SBR	465	42	40	Yes	Yes	42	40	Yes	Yes
I-215 NB Off-Ramp / Auto Center Rd.	NBL	925	62	46	Yes	Yes	62	46	Yes	Yes
	NBL/T	1,050	61	46	Yes	Yes	61	46	Yes	Yes
	NBR	275	395 [2]	306 [2]	Yes[3]	Yes[3]	410 [2]	316 [2]	Yes[3]	Yes[3]
I-10 EB Off-Ramp / E. Redlands Bl.	SBL	100	384	315	Yes[4]	Yes[4]	384	315	Yes[4]	Yes[4]
	SBL/T	845	384	311	Yes	Yes	384	311	Yes	Yes
	SBR	215	480	131	Yes[4]	Yes	480	131	Yes[4]	Yes
I-10 WB Off-Ramp / E. Hospitality Ln.	NBL	800	387 [2]	207	Yes	Yes	407 [2]	215	Yes	Yes
	NBT	1,575	368	510 [2]	Yes	Yes	369 [2]	512 [2]	Yes	Yes
	NBR	160	73	160	Yes	Yes	73	160	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

[2] 95th percentile volume exceeds capacity, queue may be longer

[3] Although the 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-215 Freeway mainline.

[4] Although the 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-10 Freeway mainline.

Source: (Urban Crossroads, 2017e, Table 7-2)

Table 4.11-24 Opening Year plus Cumulative Freeway Ramp Merge/Diverge Analysis

Freeway	Direction	Ramp or Segment	Lanes on Freeway[1]	EAC (2018) AM Peak Hour Density[2]	EAC (2018) AM Peak Hour LOS	EAC (2018) PM Peak Hour Density[2]	EAC (2018) PM Peak Hour LOS	EAPC (2018) AM Peak Hour Density[2]	EAPC (2018) AM Peak Hour LOS	EAPC (2018) PM Peak Hour Density[2]	EAPC (2018) PM Peak Hour LOS
I-215	NB	On-Ramp at Auto Center Drive	4	24.6	C	31.4	D	24.7	C	31.6	D
		Off-Ramp at Auto Center Drive	4	8.9	A	10.6	B	9.1	A	10.6	B
	SB	Off-Ramp at Auto Center Drive	5	29.8	D	25.1	C	29.9	D	25.2	C
		Loop On-Ramp (Upstream) at Auto Center Drive	4	27.5	C	29.9	D	27.6	C	30.2	D
		Loop On-Ramp (Downstream) at Auto Center Drive	5	23.4	C	30.4	D	23.5	C	30.9	D
I-10	EB	Off-Ramp at Waterman Avenue	4	24.1	C	19.3	B	24.2	C	19.4	B
		On-Ramp at Waterman Avenue	4	22.2	C	24.0	C	22.2	C	24.2	C
	WB	On-Ramp at Waterman Avenue	4	27.6	F	32.0	F	27.6	F	32.2	F
		Off-Ramp at Waterman Avenue	4	30.6	D	24.1	C	30.7	D	24.2	C

[1] Number of lanes are in the specified direction and is based on existing conditions. No future improvements are currently planned.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2017e, Table 7-6)

Table 4.11-25 Horizon Year Freeway Mainline Analysis

Freeway	Direction	Mainline Segment	Lanes[1]	2040 Without Project								2040 With Project							
				Volume		Truck %		Density[2]		LOS		Volume		Truck %		Density[2]		LOS	
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
I-215	NB	North of Auto Center Dr.	4	6,969	8,255	3%	1%	30.1	**39.5**	D	**E**	6,979	8,283	3%	1%	30.1	**39.7**	D	**E**
		South of Auto Center Dr.	4	9,038	9,224	2%	2%	**48.7**	**51.2**	**F**	**F**	9,066	9,239	3%	2%	**49.7**	**51.4**	**F**	**F**
	SB	North of Auto Center Dr.	5	8,320	6,868	4%	2%	28.3	21.9	D	C	8,344	6,880	4%	2%	28.4	21.9	D	C
		South of Auto Center Dr.	5	8,315	10,271	4%	3%	28.3	**39.9**	D	**E**	8,327	10,304	4%	3%	28.3	**40.2**	D	**E**
I-10	EB	West of Waterman Av.	4	8,975	8,030	10%	8%	**52.8**	**40.0**	**F**	**E**	9,002	8,045	10%	8%	**53.2**	**40.2**	**F**	**E**
		East of Waterman Av.	5	8,363	8,293	11%	8%	30.0	29.0	D	D	8,373	8,322	11%	8%	30.0	29.1	D	D
	WB	West of Waterman Av.	4	9,953	10,634	15%	17%	**80.3**	**118.0**	**F**	**F**	9,959	10,651	15%	17%	**80.5**	**119.2**	**F**	**F**
		East of Waterman Av.	4	10,758	9,015	13%	18%	**113.0**	**59.4**	**F**	**F**	10,782	9,028	14%	18%	**118.0**	**59.7**	**F**	**F**

[1] Number of lanes are in the specified direction and is based on existing conditions. No future improvements are currently planned.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2017e, Table 8-5)

Table 4.11-26 Horizon Year Freeway Ramp Queuing Summary

Intersection	Movement	Available Stacking Distance (Feet)	2040 Without Project				2040 With Project			
			95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Off-Ramp / Auto Center Rd.	SBL	2,695	522 [2]	255 [2]	Yes	Yes	533 [2]	267 [2]	Yes	Yes
	SBL/T	2,230	515 [2]	250	Yes	Yes	528 [2]	252	Yes	Yes
	SBR	465	78	30	Yes	Yes	78	30	Yes	Yes
I-215 NB Off-Ramp / Auto Center Rd.	NBL	925	145	63	Yes	Yes	145	63	Yes	Yes
	NBL/T	1,050	145	67	Yes	Yes	145	67	Yes	Yes
	NBR	275	390 [2]	182	Yes[3]	Yes	405 [2]	188	Yes[3]	Yes
I-10 EB Off-Ramp / E. Redlands Bl.	SBL	100	**550**	406 [2]	**No**	Yes[4]	**550**	406	**No**	Yes[4]
	SBL/T	845	540	395 [2]	Yes	Yes	540	395	Yes	Yes
	SBR	215	**623** [2]	199	**No**	Yes[4]	**623** [2]	199	**No**	Yes[4]
I-10 WB Off-Ramp / E. Hospitality Ln.	NBL	800	485 [2]	258	Yes	Yes	504 [2]	265	Yes	Yes
	NBT	1,575	536 [2]	715 [2]	Yes	Yes	536 [2]	716 [2]	Yes	Yes
	NBR	160	105	227	Yes	Yes[4]	105	227	Yes	Yes[4]

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

[2] 95th percentile volume exceeds capacity, queue may be longer

[3] Although the 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-215 Freeway mainline.

[4] Although the 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-10 Freeway mainline.

Source: (Urban Crossroads, 2017e, Table 8-2)

Table 4.11-27 Horizon Year Freeway Ramp Merge/Diverge Analysis

Freeway	Direction	Ramp or Segment	Lanes on Freeway[1]	2040 Without Project				2040 With Project			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[2]	LOS	Density[2]	LOS	Density[2]	LOS	Density[2]	LOS
I-215	NB	On-Ramp at Auto Center Drive	4	31.1	D	37.3	E	31.1	D	37.6	E
		Off-Ramp at Auto Center Drive	4	14.3	B	16.4	B	14.5	B	16.4	B
	SB	Off-Ramp at Auto Center Drive	5	33.7	D	28.7	D	33.9	D	28.8	D
		Loop On-Ramp (Upstream) at Auto Center Drive	4	33.7	D	37.3	E	33.8	D	37.6	E
		Loop On-Ramp (Downstream) at Auto Center Drive	5	28.3	D	39.4	E	28.4	D	39.9	E
I-10	EB	Off-Ramp at Waterman Avenue	4	30.7	D	25.8	C	30.8	D	25.9	C
		On-Ramp at Waterman Avenue	4	29.1	F	30.5	D	29.2	F	30.8	D
	WB	On-Ramp at Waterman Avenue	4	44.3	F	50.0	F	44.3	F	50.1	F
		Off-Ramp at Waterman Avenue	4	39.7	F	31.8	F	39.7	F	31.9	F

[1] Number of lanes are in the specified direction and is based on existing conditions. No future improvements are currently planned.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

Source: (Urban Crossroads, 2017e, Table 8-6)

Table 4.11-28 Horizon Year Intersection Analysis – With Mitigation

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1] Northbound L	T	R	Southbound L	T	R	Eastbound L	T	R	Westbound L	T	R	Delay[2] (secs.) AM	PM	Level of Service AM	PM
3	E St. / Auto Center Rd. / Orange Show Rd.																	
	- 2040 Without Project																	
	- Without Improvements[4]	TS	1	2	0	2	2	1>	2	2	1	2	2	1>	**61.9**	**98.2**	**E**	**F**
	- With Improvements[5]	TS	**2**	2	0	2	2	1>	2	2	**1>**	2	2	1>	36.3	33.8	D	C
	- 2040 With Project																	
	- Without Improvements[4]	TS	1	2	0	2	2	1>	2	2	1	2	2	1>	**68.2**	**102.7**	**E**	**F**
	- With Improvements[5]	TS	**2**	2	0	2	2	1>	2	2	**1>**	2	2	1>	37.5	36.3	D	D
9	S. Waterman Av. / Orange Show Rd.																	
	- 2040 Without Project																	
	- Without Improvements	TS	1	2	d	1	2	d	1	2	d	1	2	d	53.4	**58.8**	D	**E**
	- With Improvements	TS	**2**	2	**1**	1	2	d	1	2	d	1	2	d	49.7	51.8	D	D
	- 2040 With Project																	
	- Without Improvements	TS	1	2	d	1	2	d	1	2	d	1	2	d	**65.6**	**62.3**	**E**	**E**
	- With Improvements	TS	**2**	2	**1**	1	2	d	1	2	d	1	2	d	51.1	52.9	D	D
13	S. Waterman Av. / I-10 WB On-Ramp																	
	- 2040 Without Project																	
	- Without Improvements	CSS	1	2	0	0	3	0	0	0	0	0	0	0	14.7	**>100.0**	B	**F**
	- With Improvements	**TS**	1	2	0	0	3	0	0	0	0	0	0	0	8.1	24.0	A	C
	- 2040 With Project																	
	- Without Improvements	CSS	1	2	0	0	3	0	0	0	0	0	0	0	14.7	**>100.0**	B	**F**
	- With Improvements	**TS**	1	2	0	0	3	0	0	0	0	0	0	0	8.1	24.4	A	C

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; **1** = Improvement

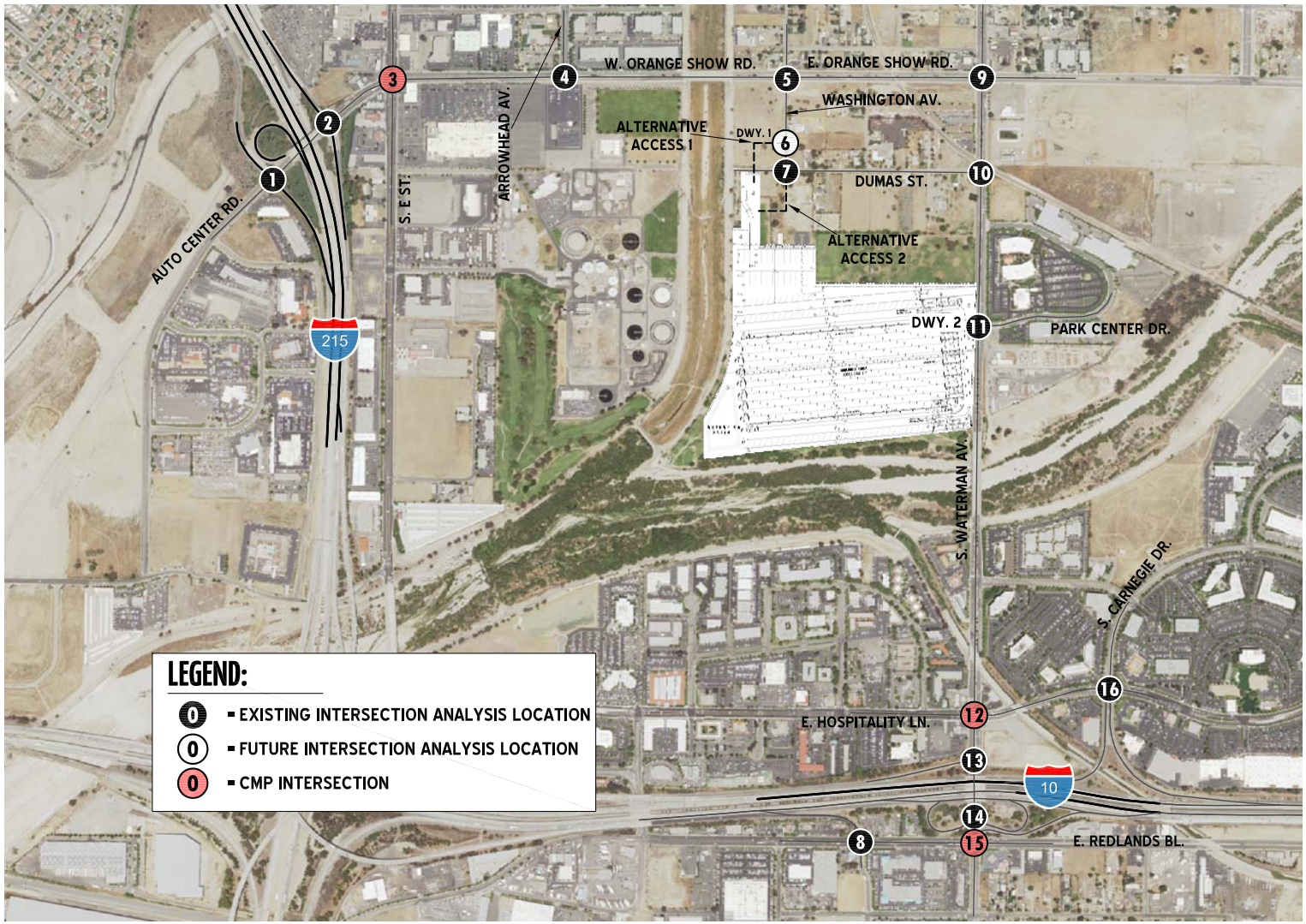
[2] Per the 2010 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross-Street Stop; TS = Traffic Signal

[4] Although there is a second northbound left turn lane, the analysis has been performed assuming a single left as vehicles headed onto the I-215 Northbound often block the inner left turn lane. As a result, the inner left turn lane does not get adequately utilized each cycle.

[5] Improvement includes lengthening the northbound left turn pocket as to improve the access to the inner left turn lane.

Source: (Urban Crossroads, 2017e, Table 8-4)

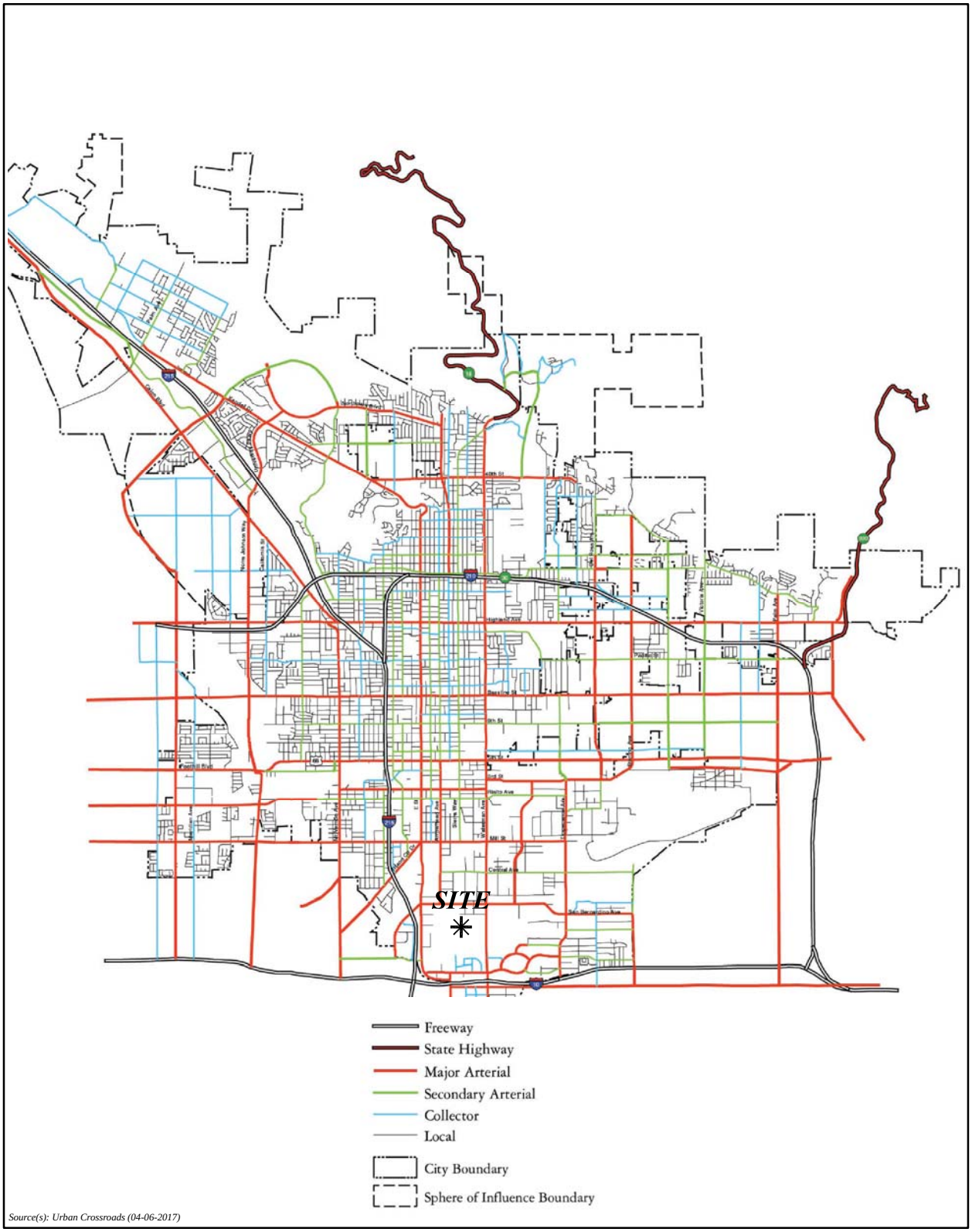


Source(s): Urban Crossroads (04-06-2017)

Figure 4.11-1

NOT TO SCALE

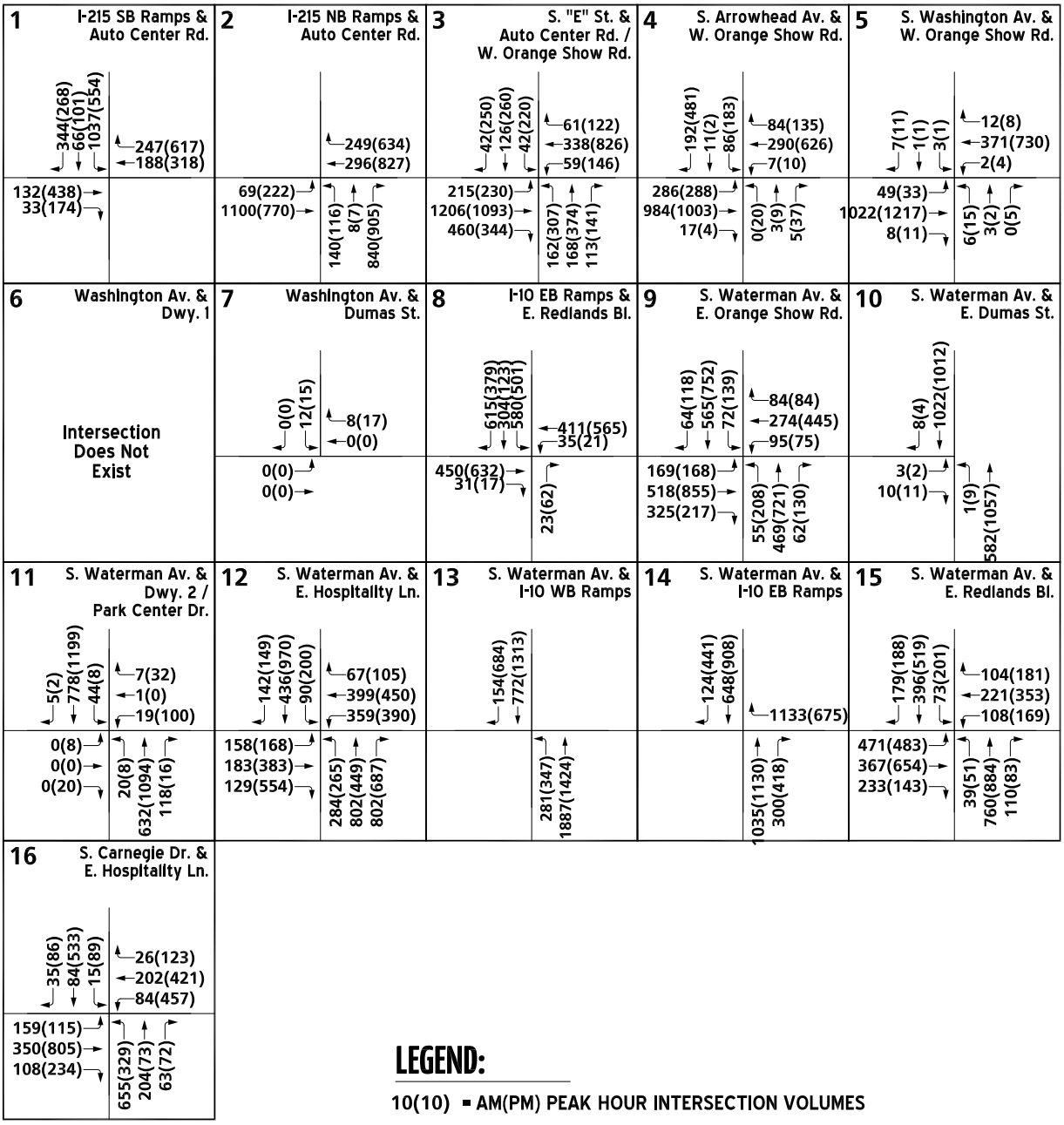
PROJECT STUDY AREA INTERSECTION LOCATION MAP



Source(s): Urban Crossroads (04-06-2017)

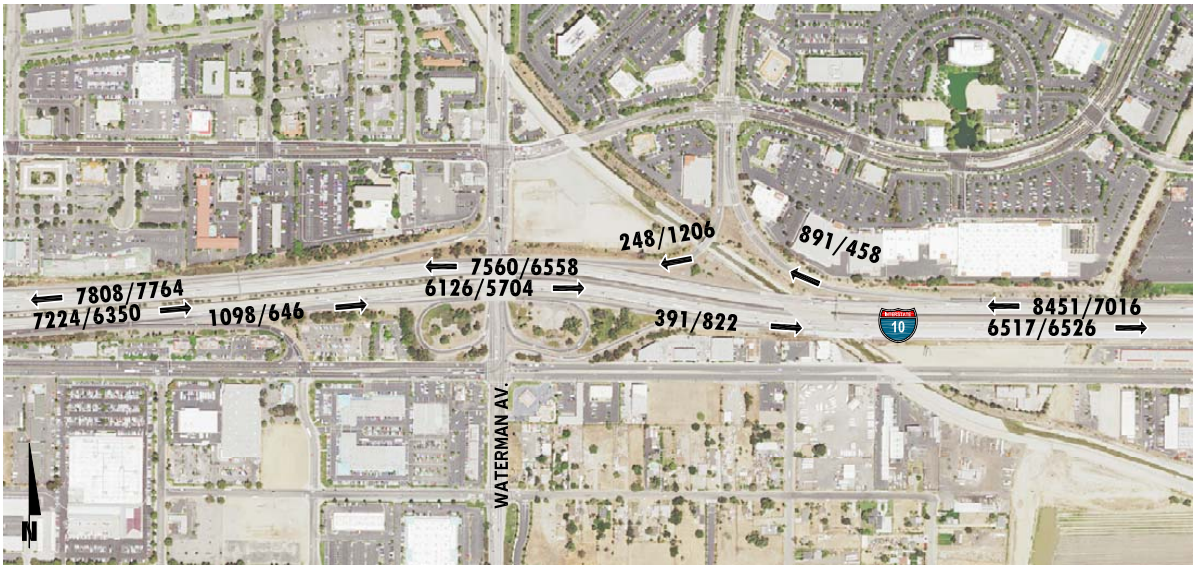
NOT TO SCALE

Figure 4.11-2
CITY OF SAN BERNARDINO GENERAL PLAN CIRCULATION ELEMENT



Source(s): Urban Crossroads (04-06-2017)

Figure 4.11-3
EXISTING PEAK HOUR INTERSECTION TRAFFIC VOLUMES



LEGEND:

⟵ 100/200 = AM/PM PEAK HOUR VOLUMES

NOTE: VOLUMES IN ACTUAL VEHICLES (NOT PCE)

Source(s): Urban Crossroads (04-06-2017)

Figure 4.11-4

NOT TO SCALE

EXISTING PEAK HOUR FREEWAY TRAFFIC VOLUMES

Source(s): Urban Crossroads (04-06-2017)

NOT TO SCALE

Figure 4.11-5

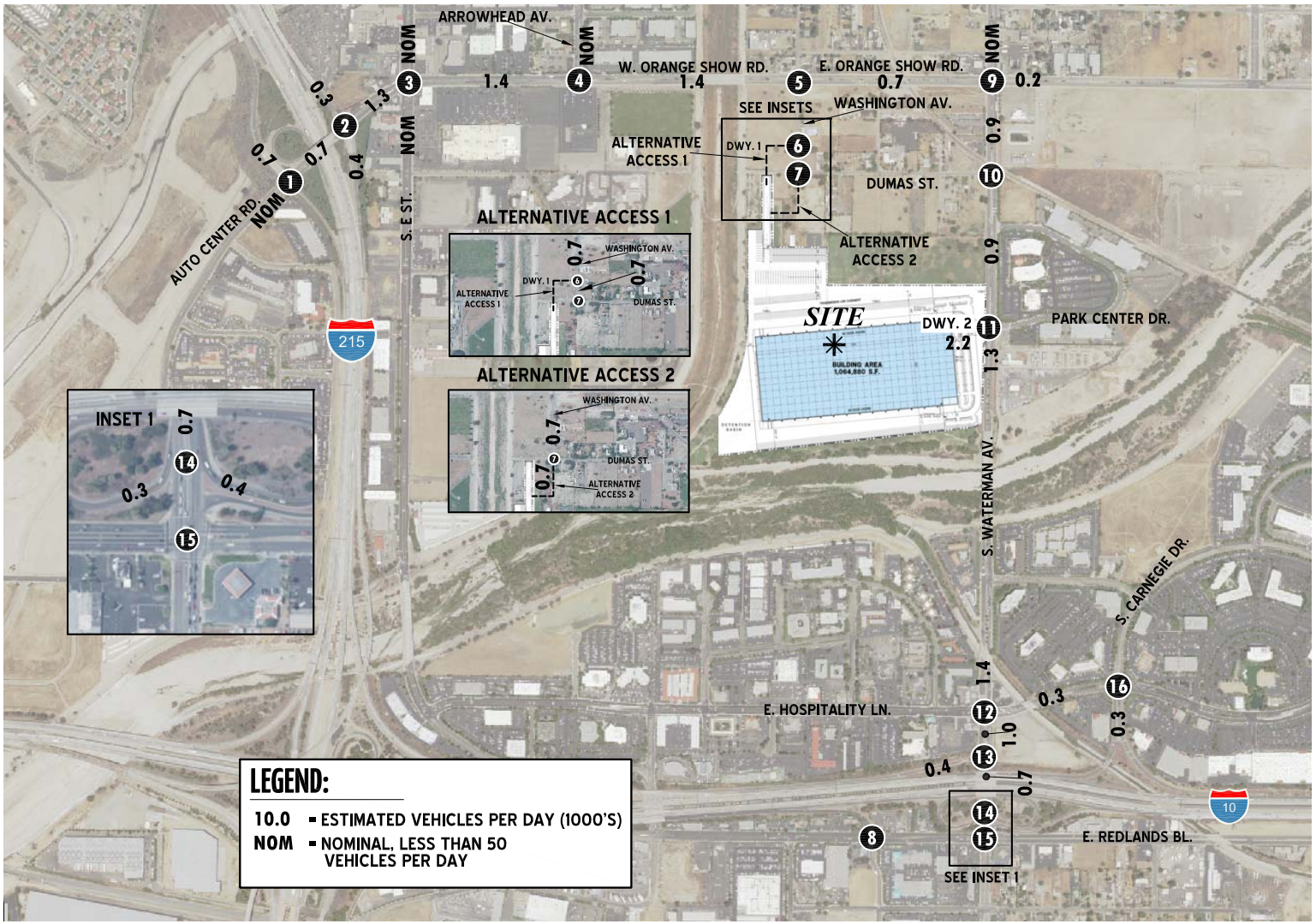
PROJECT TRUCK TRIP DISTRIBUTION

Source(s): Urban Crossroads (04-06-2017)

Figure 4.11-6

NOT TO SCALE

PROJECT PASSENGER CAR TRIP DISTRIBUTION

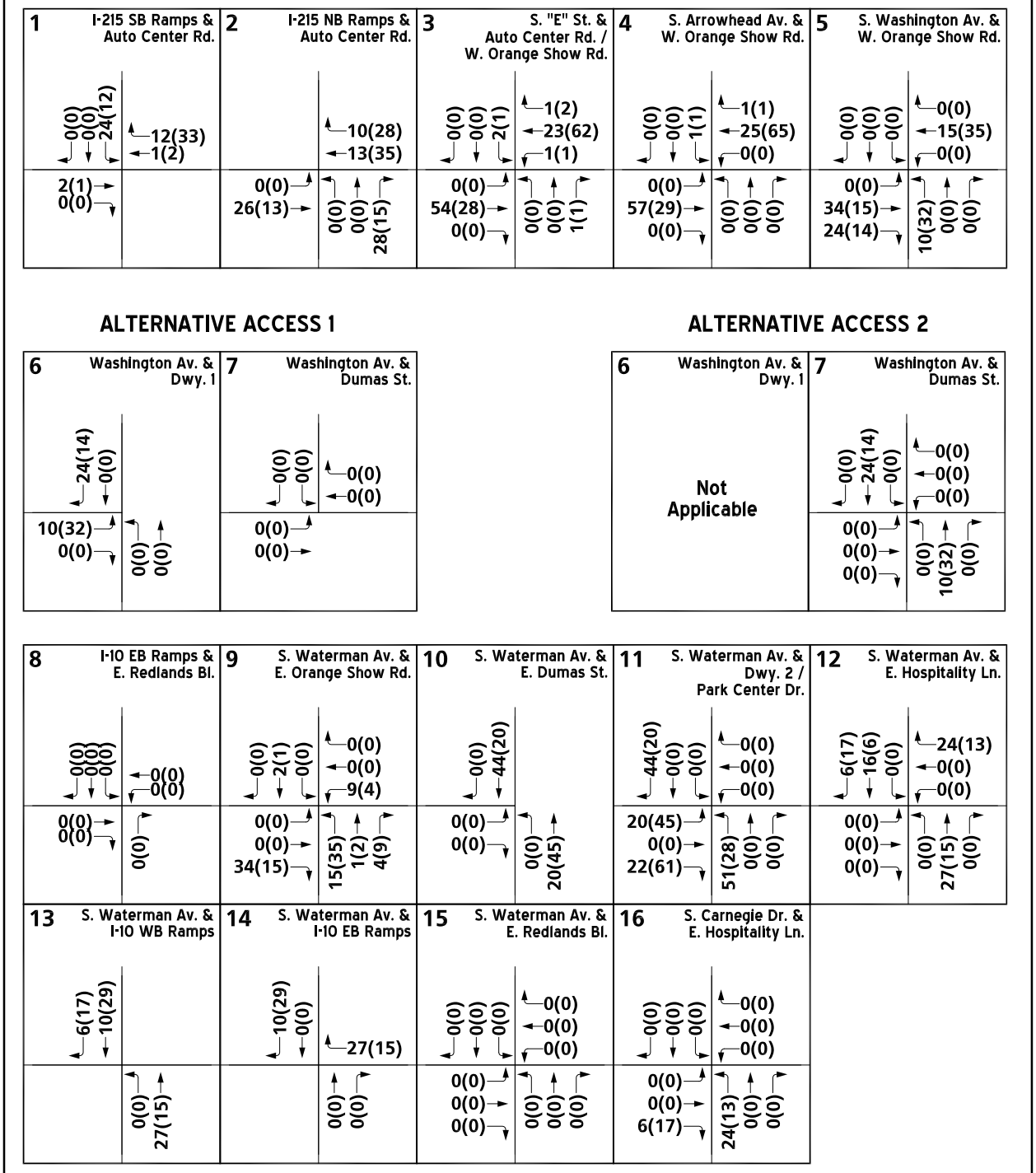


Source(s): Urban Crossroads (04-06-2017)

Figure 4.11-7

NOT TO SCALE

PROJECT AVERAGE DAILY TRAFFIC



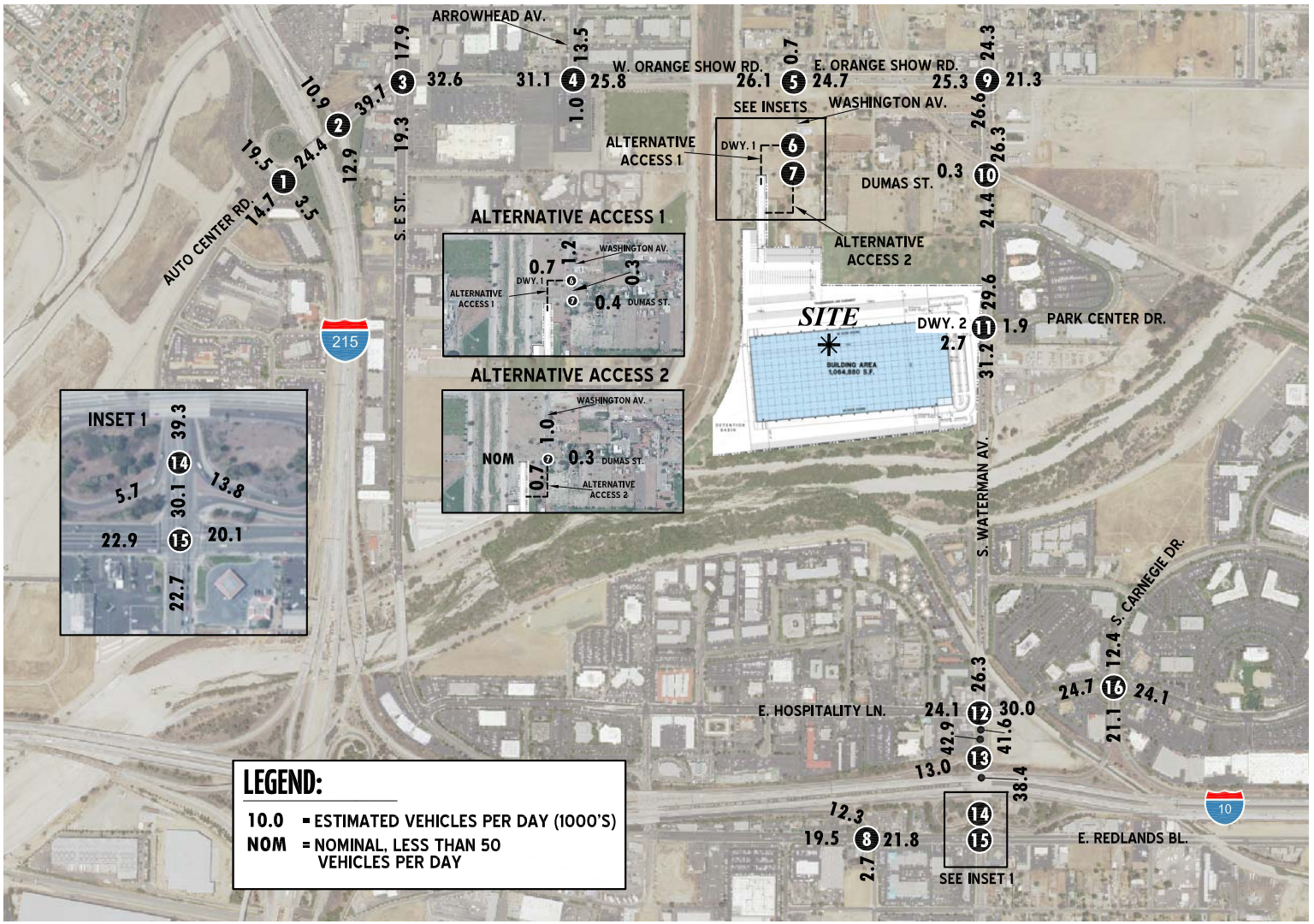
LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

Source(s): Urban Crossroads (04-06-2017)

Figure 4.11-8

PROJECT PEAK HOUR TRAFFIC VOLUMES

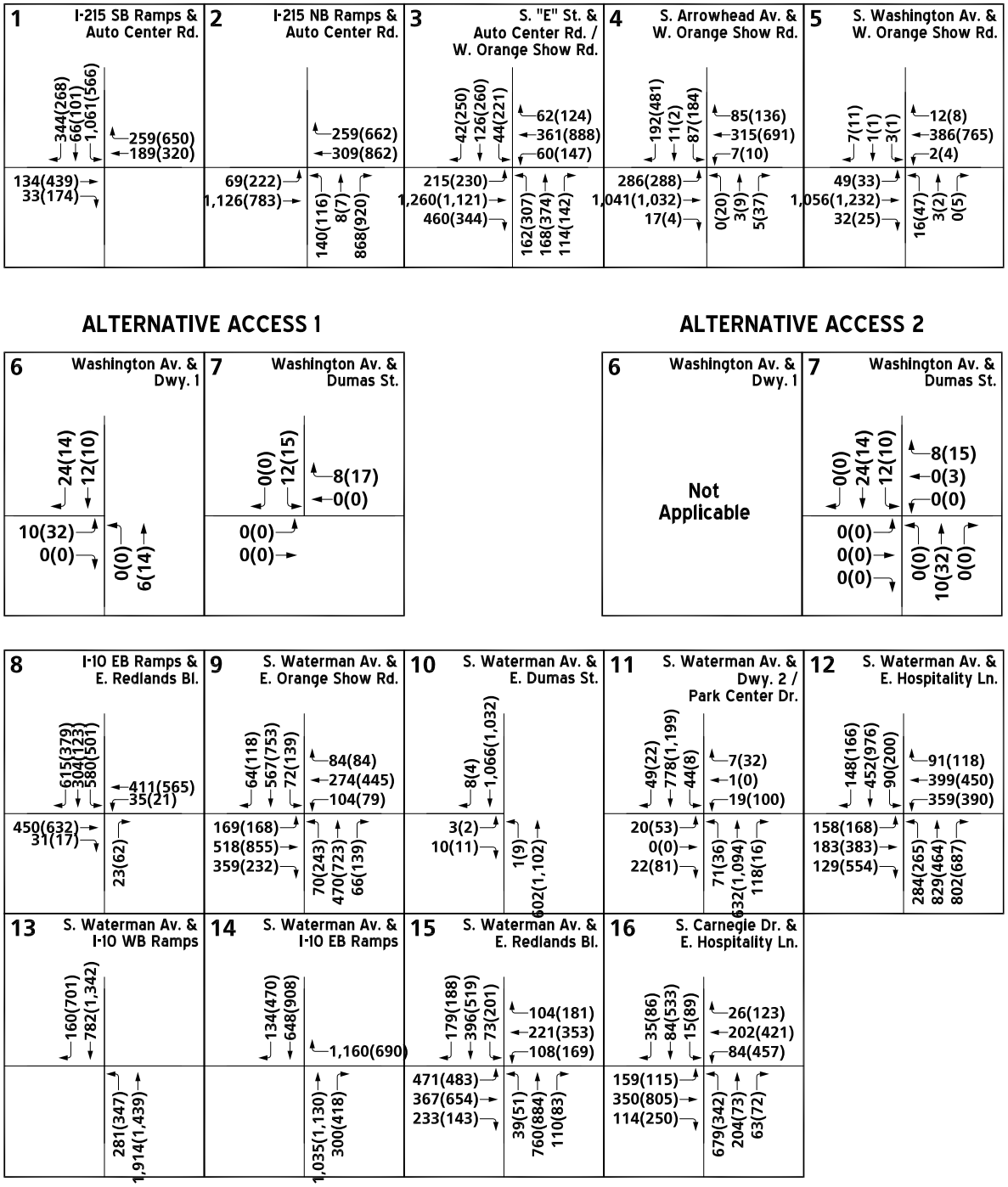


Source(s): Urban Crossroads (04-06-2017)

Figure 4.11-9

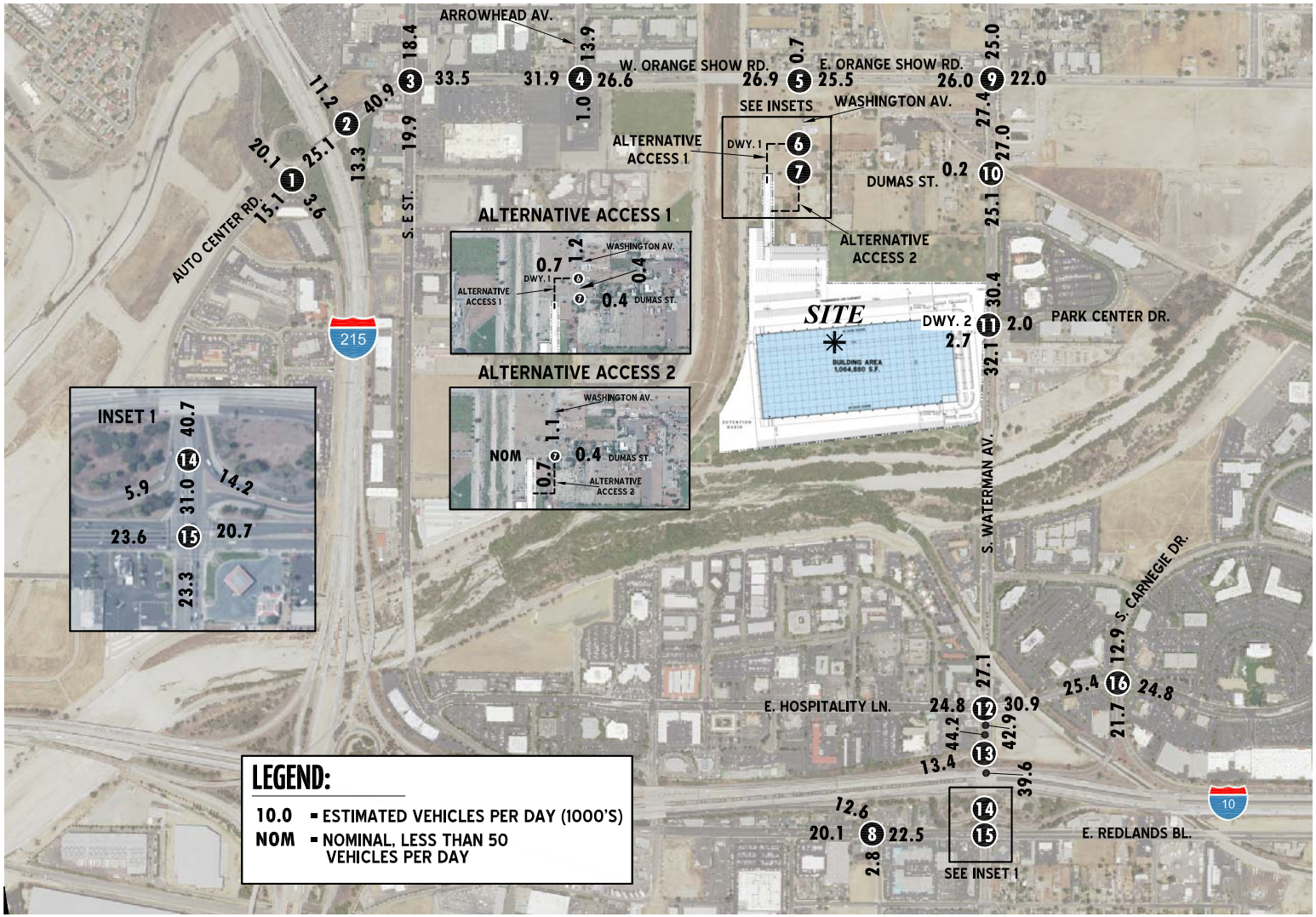
NOT TO SCALE

EXISTING PLUS PROJECT AVERAGE DAILY TRAFFIC



Source(s): Urban Crossroads (04-06-2017)

Figure 4.11-10
EXISTING PLUS PROJECT PEAK HOUR TRAFFIC VOLUMES

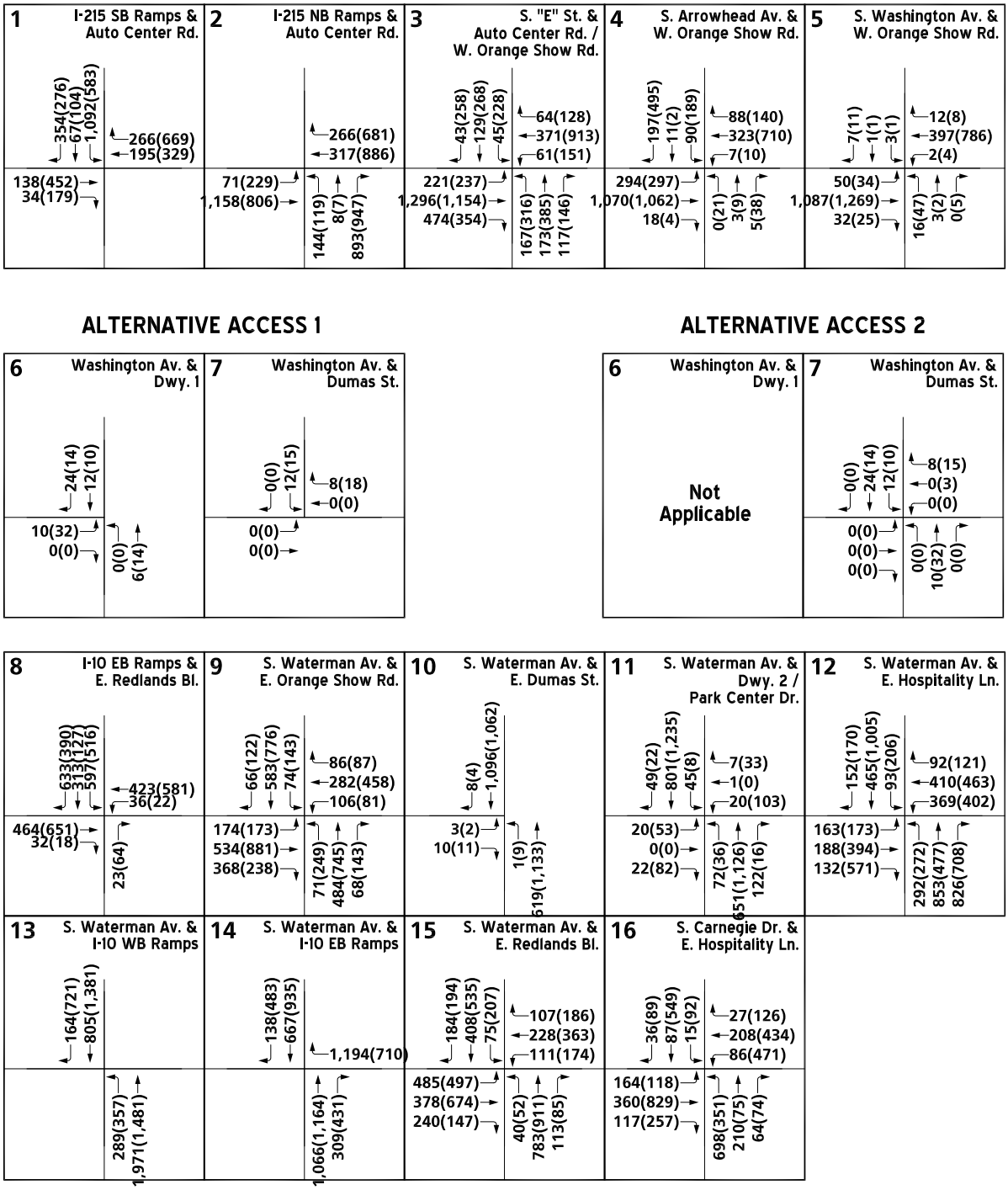


Source(s): Urban Crossroads (04-06-2017)

Figure 4.11-11

NOT TO SCALE

OPENING YEAR AVERAGE DAILY TRAFFIC



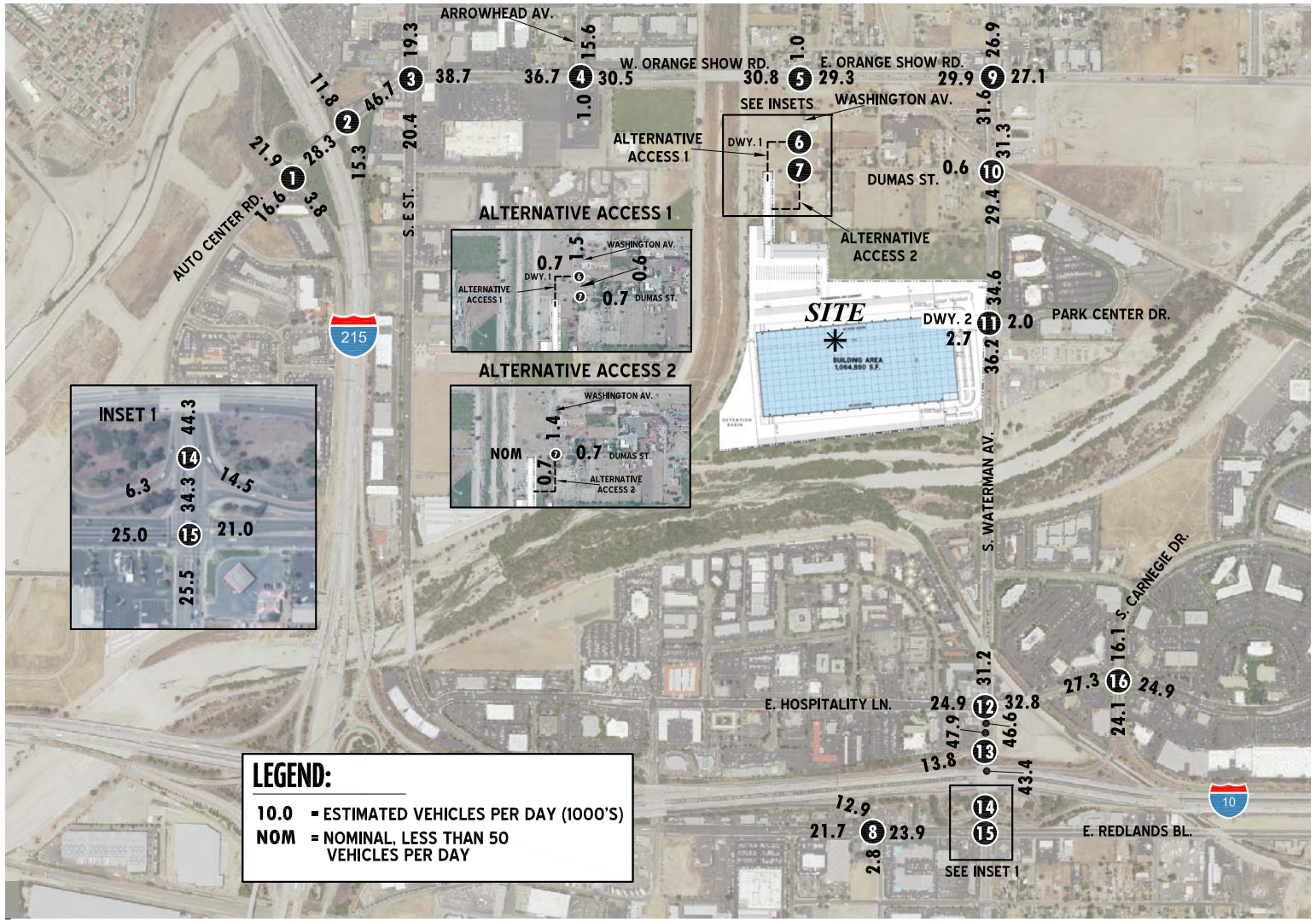
LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

Source(s): Urban Crossroads (04-06-2017)

Figure 4.11-12

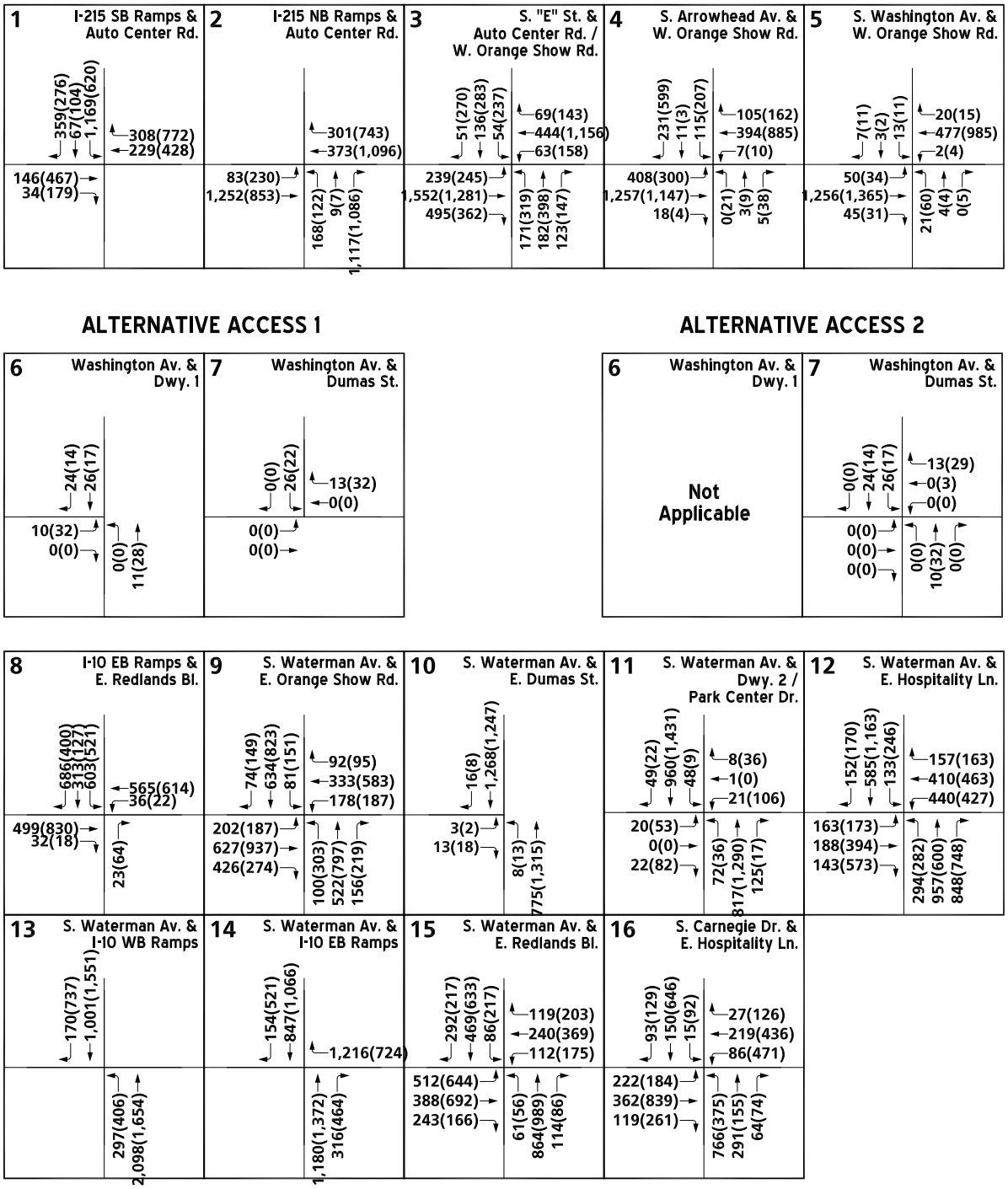
OPENING YEAR PEAK HOUR TRAFFIC VOLUMES



Source(s): Urban Crossroads (04-06-2017)

Figure 4.11-13

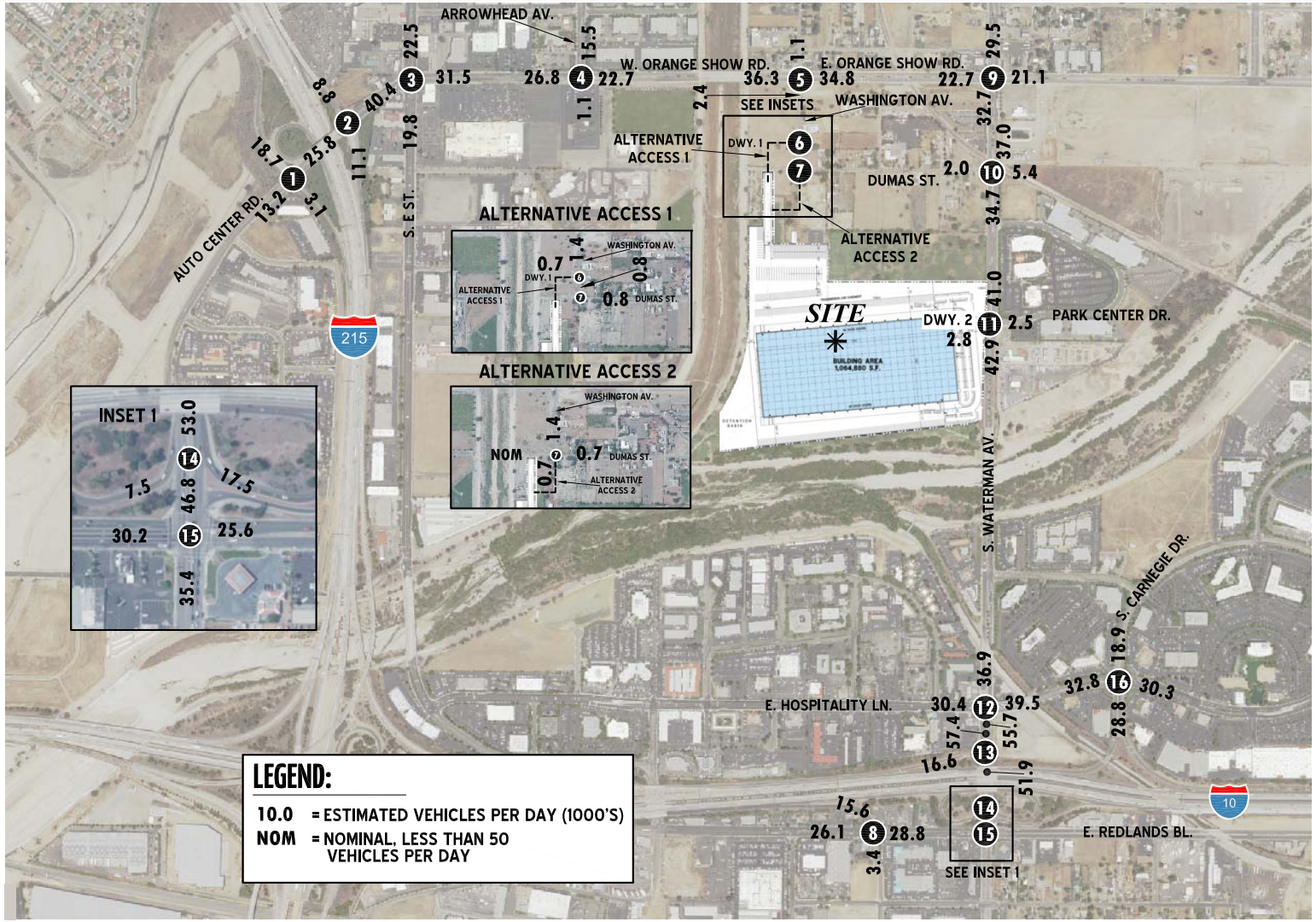
OPENING YEAR PLUS CUMULATIVE AVERAGE DAILY TRAFFIC



Source(s): Urban Crossroads (04-06-2017)

Figure 4.11-14

OPENING YEAR PLUS CUMULATIVE PEAK HOUR TRAFFIC VOLUMES

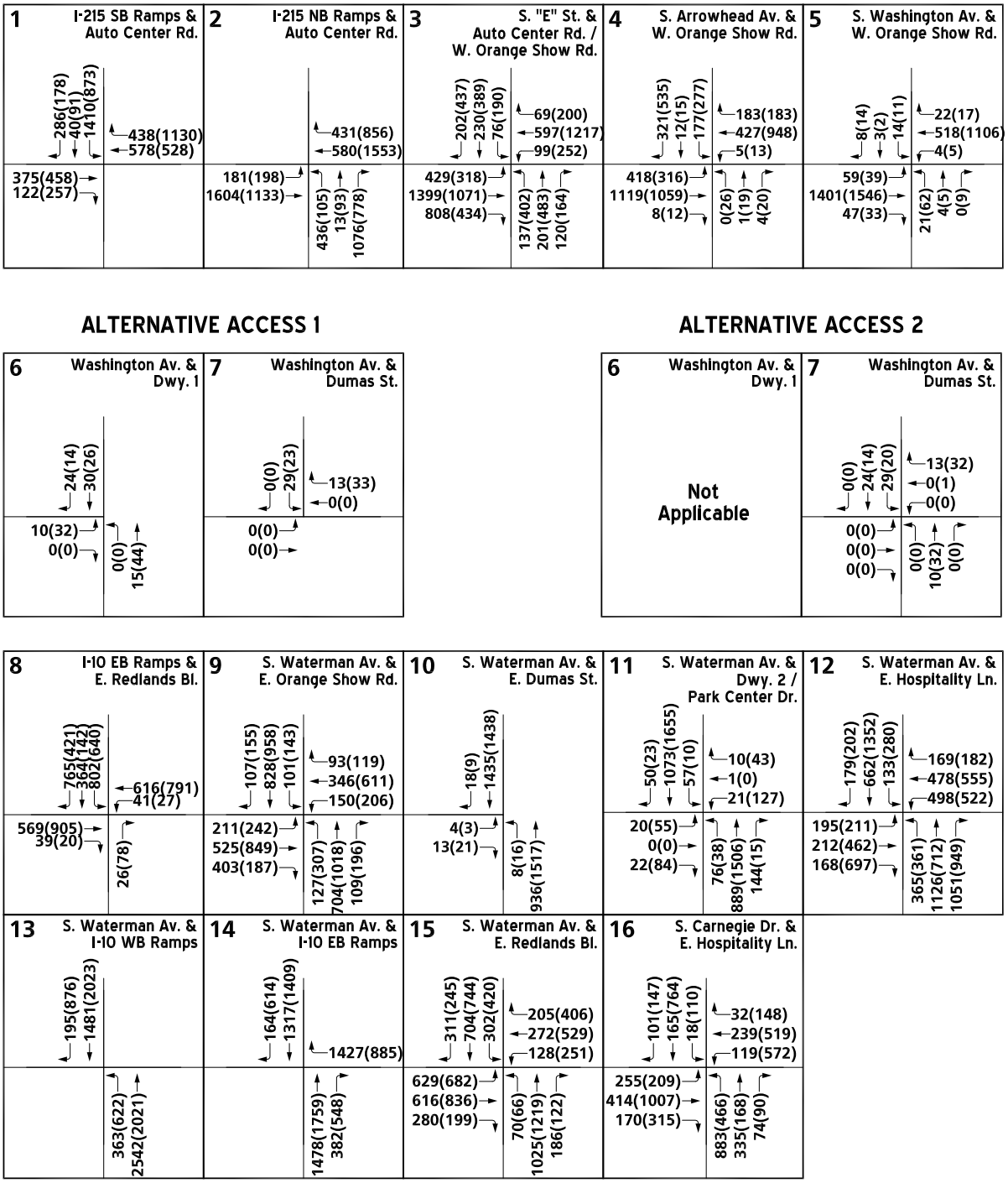


Source(s): Urban Crossroads (04-06-2017)

Figure 4.11-15

NOT TO SCALE

HORIZON YEAR AVERAGE DAILY TRAFFIC



Source(s): Urban Crossroads (04-06-2017)

Figure 4.11-16

HORIZON YEAR PEAK HOUR TRAFFIC VOLUMES

LEGEND:

⟵ 100/200 = AM/PM PEAK HOUR VOLUMES

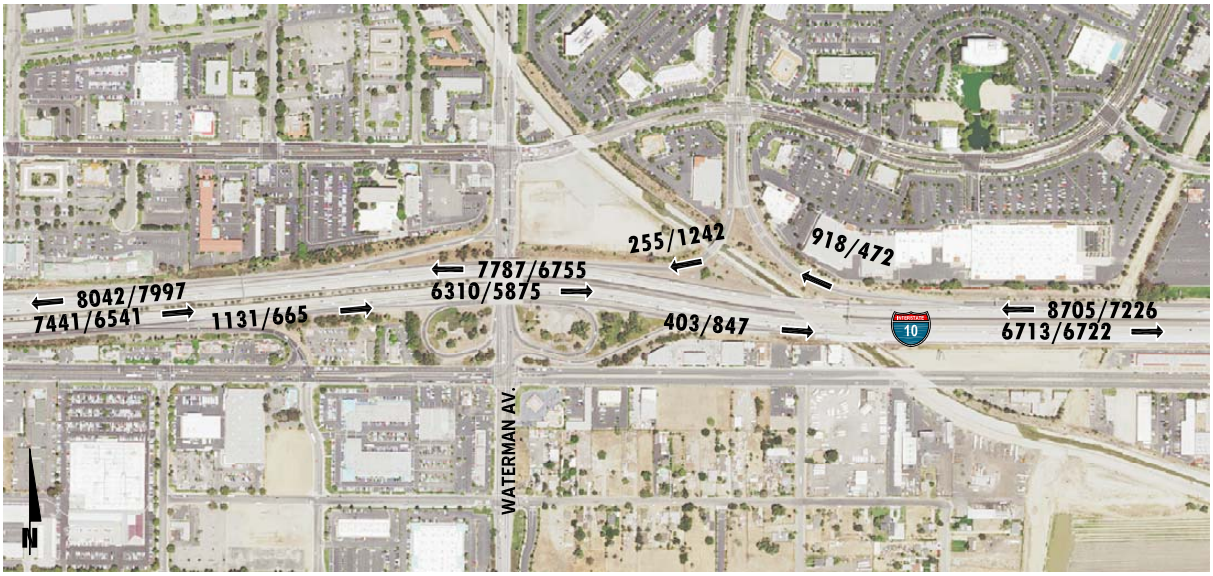
NOTE: VOLUMES IN ACTUAL VEHICLES (NOT PCE)

Source(s): Urban Crossroads (04-06-2017)

NOT TO SCALE

Figure 4.11-17

EXISTING PLUS PROJECT PEAK HOUR FREEWAY MAINLINE VOLUMES



LEGEND:

⟵ 100/200 ▪ AM/PM PEAK HOUR VOLUMES

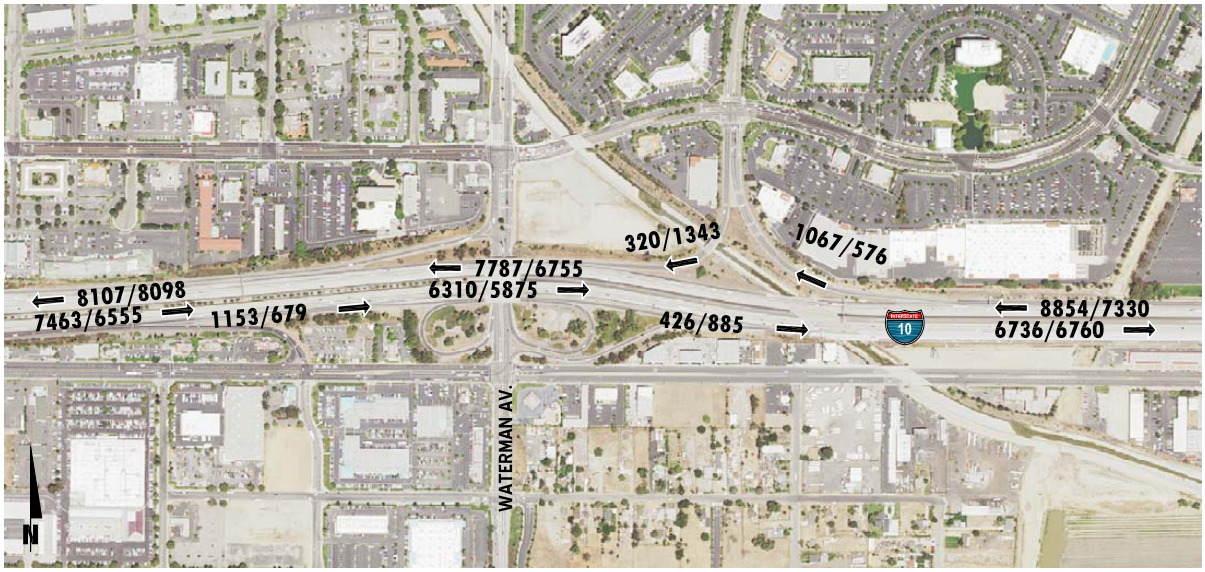
NOTE: VOLUMES IN ACTUAL VEHICLES (NOT PCE)

Source(s): Urban Crossroads (04-06-2017)

NOT TO SCALE

Figure 4.11-18

OPENING YEAR PEAK HOUR FREEWAY MAINLINE VOLUMES



LEGEND:

⟵ 100/200 = AM/PM PEAK HOUR VOLUMES

NOTE: VOLUMES IN ACTUAL VEHICLES (NOT PCE)

Source(s): Urban Crossroads (04-06-2017)

NOT TO SCALE

Figure 4.11-19

OPENING YEAR PLUS CUMULATIVE PEAK HOUR FREEWAY MAINLINE VOLUMES

Source(s): Urban Crossroads (04-06-2017)

NOT TO SCALE

Figure 4.11-20
HORIZON YEAR PEAK HOUR FREEWAY MAINLINE VOLUMES

4.12 UTILITIES / SERVICE SYSTEMS

This Subsection addresses the topics of water service and supply; wastewater collection and treatment; storm water drainage facilities; and solid waste collection and disposal. Also, because City of Riverside Public Utilities/Water Department (RPU) water wells and pipelines occur on the Project site under existing conditions, the abandonment, relocation and the protection in place of on- and off-site water wells is discussed in this Subsection.

The information concerning water supply and the Project's estimated water demand is based in part on information contained in the *Water Supply Assessment Hillwood Gateway South Building 4 Project* dated May 24, 2017, prepared by the San Bernardino Municipal Water District (SBMWD), and appended to this EIR as *Technical Appendix K* (SBMWD, 2017). The analysis contained in this Subsection also is based on information contained in the Project's hydrology study titled, *Preliminary Hydrology Calculations*, prepared by Thienes Engineering, Inc. (herein, Thienes), dated October 28, 2016, Revised March 2017, and appended to this EIR as *Technical Appendix H1* (Thienes, 2017a). The information in this Subsection regarding water wells is based on information contained in the *Warren 4R Well & Rice-Thorne Pipeline Replacement (Final Planning and Water Resources Report)* prepared by the City of Riverside Public Utilities/Water Department (RPU). The Report is not dated. The Report is appended to this EIR as *Technical Appendix M* (RPU, n.d.).

The analysis in this Subsection is also based in part on information contai*ned in the 2015 San Bernardino Valley Regional Urban Water Management Plan (WSC, 2016)* and the *Water Facilities Master Plan Report* prepared for the San Bernardino Municipal Water Department)(Kennedy/Jenks, 2015). All other references used in this Subsection are included in EIR Section 7.0, *References*.

4.12.1 EXISTING CONDITIONS

A. City of Riverside Public Utilities/Water Department Well Abandonment/Relocation

As discussed in EIR Section 3.0, *Project Description*, according to the RPU, under existing conditions, there are several RPU water wells and pipelines that are present on the Project site and in the off-site roadway improvement area. The RPU is proposing to abandon and replace the existing Warren 4 well and approximately 1,250 linear feet (LF) of the existing Rice-Thorne pipeline in the Warren Tract within the City of San Bernardino that are located within the limits of the Project site. A new well (Warren 4) and a realigned section of 24-inch Rice-Thorne pipeline would be constructed as part of the proposed Project. (RPU, n.d.)

The existing Warren 4 well is part of the Waterman system which produces potable water out of the Bunker Hill Basin. The existing Warren 4 well is located approximately 255 feet west of S. Waterman Avenue and was originally drilled by the City of Riverside in 1948 to a depth of 1,102 feet below ground surface (bgs) and screened from 1,008 to 1,102 feet bgs. Warren 4 is a naturally developed 20-inch diameter well and discharges to the Waterman Transmission Main (TM). The static water level for Warren 4 is estimated to be about 130-feet bgs and the pumping water level is estimated to be 200-feet bgs. The existing Warren 4 well's pumping water level is 230-feet bgs. The

well provides high water quality to the Waterman TM. RPU is planning to locate the Warren 4R replacement well approximately 1,200 feet northwest of the existing well and approximately 840 feet southeast of the existing Thorne 12 well. (RPU, n.d.)

The existing Rice-Thorne pipeline conveys non-potable groundwater from the Bunker Hill Basin to the Riverside Canal via gravity flow. It is also used to convey blow-off water from the Warren 1 well and serve as a drain for the Waterman TM when needed. The existing 18-inch/30-inch portion of the Rice-Thorne pipeline was installed in 1940. The approximately 1,250 LF portion to be relocated runs west by northwest across the property and is located within the footprint of the Project's proposed building and thus will need to be relocated. (RPU, n.d.)

1. Other On-Site Water Wells

RPU wells that are present within the Project site include the Thorne 5 (non-potable, inactive), Thorne 6 (non-potable, inactive), Thorne 7 (non-potable inactive), Thorne 8 (non-potable, inactive), Thorne 9 (monitoring, active), Thorne 10 (non-potable, active), Thorne 11 (non-potable, active), Thorne 12 (potable, active), Warren 2 (potable, inactive), Warren 3 (potable, inactive), and Warren 4 (potable, active) wells. Also, located on the Project site are segments of the Thorne pipeline (supply main, active), Warren 3 and 4 pipeline (supply main, active), and the Rice-Thorne Pipeline (non-potable TM). Under existing conditions, the Thorne 10 and 11 wells are used to irrigate the on-site golf course. The existing 36-inch RCP segment of the Waterman TM was installed in 1946 and is a major water supply line to the City of Riverside. The waterline runs along S. Waterman Avenue and partially onto RPU property at the existing San Bernardino Public Golf Course. (RPU, n.d.)

2. Off-Site Water Wells

The existing Warren 1 well is an active potable well located on San Bernardino County Flood Control property between the southern boundary of the Project site and the Santa Ana River. The Warren 1 well discharges to the Waterman TM and blows-off to the Rice Thorne pipeline. Thorne 3 is an active irrigation well that is used for monitoring purposes. Thorne 3 is located along the Flood Control levee, outside of the southwest corner of the Project site. There is an existing 24-inch waterline along Dumas Street with a capacity of 8,460 gallons per minute (GPM) at a maximum velocity of 6-feet per second (FPS). (RPU, n.d.)

3. Assets to Protect in Place

There are several RPU water wells that are not a part of the Project as analyzed in this EIR; however, the RPU assets described below shall be protected in place and remain active throughout the proposed Project's construction process. (RPU, n.d.)

Thorne 12 is an active potable well located within the northwest section of the property and provides high quality groundwater to the Waterman TM. The existing Warren 1 is an active potable well located on San Bernardino County Flood Control (Flood Control) property, between the southern property boundary and the Santa Ana River. According to RPU Water Operations staff, electricity to

Warren 1 is provided by an electrical connection fed from the existing Warren 2 well. Thorne 3 is an inactive irrigation well that is used for monitoring purposes. Thorne 3 is located along the Flood Control levee, outside of the southwest property corner. (RPU, n.d.)

The existing 36-inch RCP segment of the Waterman TM was installed in 1946 and is a major water supply line to the City of Riverside. The Waterman TM runs along S. Waterman Avenue and partially onto RPU property at the existing San Bernardino Golf Course. (RPU, n.d.)

B. San Bernardino Municipal Water Department (SBMWD)

The Project site is located within the service area of the SBMWD. SBMWD has a service area of approximately 45 square miles and provides water service to customers within the City of San Bernardino. SBMWD relies solely on water extracted from the Bunker Hill Groundwater Basin the underlying aquifer, to meet its demand. SBMWD's water distribution system consists of pipelines, storage reservoirs, pumping stations, hydroelectric generating stations, manual and automatic control valves, fire hydrants, and water meters located throughout the various individual pressure zones. SBMWD has 700 miles of pipeline varying in size from 2-inches to 78-inches in diameter, approximately 42,000 metered water services, 13,800 valves, and 4,000 fire hydrants. SBMWD has 44 water storage reservoirs containing a total of 112 million gallons of domestic water storage capacity. SBMWD also has 54 groundwater production wells. (Kennedy/Jenks, 2015, ES-I , ES-II) SBMWD produces all of its water supply from wells in the San Bernardino Basin Area (SBBA). In addition to potable water, SBMWD provides wastewater collection and treatment services and is developing a recycled water system for groundwater recharge and non-potable use. (WSC, 2016, p. 1-10)

The SBMWD is located in the San Bernardino Valley Municipal Water District (Valley District) Service Area (WSC, 2016, Figure ES-1-1). The Valley District is the regional agency that plans the long-range water supply for the San Bernardino Valley. The *2015 San Bernardino Valley Regional Urban Management Plan (RUWMP)* is a document that provides a summary of anticipated supplies and demands for the years 2015 to 2040 for several agencies within the San Bernardino Valley Municipal Water District (wholesale water agency), including the SBMWD (WSC, 2016, ES-I). Valley District imports water into its service area through participation in the State Water Project (SWP) and manages groundwater storage within its boundaries and also provides stormwater disposal, recreation, and fire protection services. Valley District does not deliver water directly to retail customers. Valley District is responsible for long-range water supply management, including supplemental water, and is responsible for storage management of the groundwater basins within its boundaries and for groundwater extraction. (WSC, 2016, pp. 1-6, 1-7)

Legislation effective in January 2002, Senate Bills 221 and 610, require that a water supply assessment be prepared to document the sufficiency of an available water supply for the City and the proposed Project. The laws require the water purveyor, SBMWD, to furnish substantial evidence that adequate water supply is available to meet the water demands of existing and new customers, through normal, single dry and multiple years for the next 20 years. Using demand projections,

SBMWD determines water supply requirements for development projects. If the additional system load exceeds the current system supply capacities, SBMWD shall condition a developer to develop added supply by construction of infrastructure. Such infrastructure may include the construction of wells, pumping facilities, transmission mains or reservoirs as determined by the SBMWD. (SBMWD, 2006, p. 2-1 through 2-4)

C. Wastewater Service and Treatment

Under existing conditions, the San Bernardino Public Golf Club utilizes two 750 gallon and 500-gallon septic tanks (Terracon Consultants Inc., 2016, p. 17).

The SBMWD Water Reclamation Plant (WRP) is a 33 million gallon a day (MGD) Regional Secondary Treatment facility that is operated by the SBMWD and provides wastewater treatment services to the City of San Bernardino and surrounding areas. This facility is located approximately 0.9 miles from the Project site's northwest boundary on the opposite side of East Twin Creek. The SBMWD WRP receives approximately 28 MG of wastewater each day. The wastewater discharged is required to meet the discharge limits specified in San Bernardino Municipal Code (SBMC) Chapter 13.32. Primary and secondary treatment processes are employed to meet the discharge standards specified in the National Pollutant Discharge Elimination Permit (NPDES) issued to the WRP by the State of California Regional Water Quality Control Board (RWQCB). Secondary treated wastewater from the WRP discharges to an offsite tertiary treatment facility operated jointly by the cities of San Bernardino and Colton. The Rapid Infiltration and Extraction (RIX) facility receives approximately 33 MGD of secondary treated wastewater from the WRP and Colton's treatment facility. Natural bio-filtration is employed through the use of percolation basins and ultra-violet disinfection is used to meet the State of California Title 22 tertiary standards, in addition to the discharge standards specified in a separate NPDES permit issued to the RIX facility. RIX treated wastewater consistently meets or exceeds required discharge standards and is often superior in quality to effluent produced through conventional tertiary facilities. (City of San Bernardino, 2017a)

D. Solid Waste Collection and Disposal

Under existing conditions, the San Bernardino Public Golf Club generates a negligible amount of solid waste.

The City of San Bernardino Public Works-Integrated Waste Management Division is responsible for solid waste collection and disposal in the City of San Bernardino. Effective April 1, 2016, the City entered into an exclusive franchise agreement with Burrtec Waste Industries (Burrtec) to provide trash, recycling and some rights-of-way services to City residents and businesses. (City of San Bernardino, 2017b)

Upon existing conditions, solid waste within the Project area is being disposed at the Mid-Valley Landfill. The Mid-Valley Landfill is permitted to accept a maximum of 7,500 tons of solid waste per day with a remaining capacity of 67,520,000 cubic yards. The types of solid waste accepted at the

Landfill include mixed municipal, construction/demolition, industrial, tires, and green materials. The Mid-Valley Landfill has available disposal capacity until at least 2033. (CalRecycle, 2010)

4.12.2 APPLICABLE ENVIRONMENTAL REGULATIONS

A. Water Supply and Water Quality Regulations

1. Federal Water Pollution Control Act (Clean Water Act)

The Federal Water Pollution Control Act (also known as the Clean Water Act (CWA)) is the principal federal statute that addresses water resources. The statute employs a variety of regulatory and non-regulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. The broad goal is to restore and maintain the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water." Section 402 of the CWA authorizes the National Pollutant Discharge Elimination System (NPDES) permit program that covers point sources of pollution discharging to a water body. The NPDES program also requires operators of construction sites one acre or larger to prepare a Storm Water Pollution Prevention Plan (SWPPP) for construction activities and obtain authorization to discharge storm water under an NPDES construction storm water permit. The NDPES program also requires certain land uses (e.g., industrial uses) to prepare a SWPPP for operational activities and to implement a long-term water quality sampling and monitoring program, unless an exemption has been granted.

2. Federal Safe Drinking Act

The Safe Drinking Water Act (SDWA, Health and Safety Code, §§ 116350–116405) was passed in 1974 and is intended to protect public health by regulating the nation's public drinking water supply. The Federal SDWA authorizes the US EPA to set national standards for drinking water to protect against contaminants. Amendments in 1996 expanded the focus of the SDWA from primarily water treatment to enhanced source water protection, operator training, funding for water system improvements, and public information as important components of protecting drinking water supplies. The SWDA applies to every public water system in the United States and sets the enforceable maximum contaminant levels (MCLs) for drinking water supplies.

3. California Safe Drinking Water Act

California enacted its own Safe Drinking Water Act and granted primary enforcement responsibility to the California Department of Health Services (DHS). Title 22 of the California Code of Regulations (CCR) (Division 4, Chapter 15, "Domestic Water Quality and Monitoring Regulations") established DHS authority and provides drinking water quality and monitoring requirements, which are equal to or more stringent than federal standards.

4. Urban Water Management Planning Act

The Urban Water Management Planning Act (UWMP Act) (California Water Code, Division 6, Part 2.6, Section 10610 et seq.) was enacted in 1983. The UWMP Act applies to municipal water suppliers that serve more than 3,000 customers or provide more than 3,000 acre-feet per year (AFY) of water. The UWMP Act requires these suppliers to update their Urban Water Management Plan (UWMP) every five years to demonstrate an appropriate level of reliability in supplying anticipated short-term and long-term water demands during normal, dry, and multiple dry years.

5. California Water Code Section 10910 (SB 610)

Pursuant to Senate Bill 610 (SB 610), California Water Code Section 10910 requires cities and counties to request that water purveyors prepare water supply assessments for certain projects (as defined in Water Code Section 10912) subject to CEQA. In accordance with Section 10912 (a)(5) of the California Water Code, a proposed industrial, manufacturing, processing plant, or industrial park planned to employ more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 s.f. of floor area must have a water supply assessment (WSA). A WSA is required to identify if projected supply for the next 20 years (based on normal, single dry, and multiple dry water years) would meet the water demand projected for a proposed Project plus the water purveyor's other commitments to deliver water.

6. Senate Bill 221 (SB 221)

SB 221 requires land use planning agencies, such as San Bernardino County, to include (as a condition in any tentative map that includes a subdivision involving more than 500 dwelling units) a requirement to obtain written verification that sufficient water supplies are available for the subdivision from the applicable public water system, or, where there is no existing water supplier, from a consultant directed by the County. SB 221 also addresses the issue of land use and water supply, but at a different point in the planning process than does SB 610. SB 221 requires a city or county to deny approval of a tentative or parcel map if the city or county finds that the project does not have a sufficient, reliable water supply as defined in the bill.

7. California Senate Bill 901

The Safe Drinking Water Act (SDWA) authorizes the United States Environmental Protection Agency (EPA) to set national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. The EPA, states, and water systems work in collaboration to ensure the standards are met.

8. Water Conservation in Landscaping Act (AB1881)

The Water Conservation in Landscaping Act of 2006 (Assembly Bill 1881) required cities and counties, including charter cities and charter counties, to adopt landscape water conservation ordinances by January 1, 2010. The Department of Water Resources (DWR) prepared an updated Model Water Efficient Landscape Ordinance, as contained in California Code of Regulations Title

23, Division 2, Chapter 2.7. Cities and counties had the option to adopt DWR's ordinance or to develop their own. If a local agency had not adopted its own ordinance on or before January 1, 2010, the DWR ordinance became applicable to the jurisdiction of the local agency.

DWR's ordinance identifies the landscape documentation that needs to be submitted to the local agency, including a completed Water Efficient Landscape Worksheet that estimates total water use and compares it to the Maximum Applied Water Allowance (MAWA) based on the annual reference evapotranspiration value for the project area. The MAWA is considered the water budget and should not be exceeded by the estimated water use. Standards for soil management, landscape design, irrigation design, and efficiency, grading design, irrigation scheduling, maintenance, audit, and survey of water use, recycled water, storm water management, public education, and wastewater prevention are provided to reduce irrigation water demand.

9. Water Conservation Act of 2009 (Senate Bill 7)

Senate Bill 7 (SB 7) was enacted in November 2009, requiring all water suppliers to increase water use efficiency. The bill also requires, among other things, that the DWR, in consultation with other state agencies, develop a single standardized water use reporting form, which would be used by both urban and agricultural water agencies. The legislation sets an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020. The State was required to make incremental progress towards this goal by reducing per capita water use by at least 10 percent by December 31, 2015. Each urban retail water supplier also was required to develop water use targets and an interim water use target by July 1, 2011. Additionally, SB 7 requires agricultural water suppliers to adopt a pricing structure for water customers based at least in part on the quantity delivered. Effective 2013, agricultural water suppliers who do not meet the water management planning requirements established by this bill became ineligible for state water grants or loans. (DWR, 2016)

10. Municipal Code Chapter 19.28 Landscaping Standards

Municipal Code Chapter 19.28, *Landscaping Standards*, sets forth general landscaping regulations, screening requirements, standards for parking areas, setback and parkway treatment standards, setback and parkway treatment standards, corner treatment standards, installation and maintenance of landscaping, removal or destruction of trees, erosion control landscaping, water efficient landscaping standards, and applicable regulations.

B. Solid Waste Regulations

1. Resource Conservation and Recovery Act (RCRA)

The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 and is the principal federal law in the United States governing the disposal of solid waste and hazardous waste. The U.S. Environmental Protection Agency (US EPA) oversees waste management regulation pursuant to Title 40 of the Code of Federal Regulations. Under RCRA, however, states are authorized to carry out many of the functions of the federal law through their own hazardous waste programs and laws,

as long as they are at least as stringent (or more so) than the federal regulations. Thus, CalRecycle manages the State of California's solid waste and hazardous materials programs pursuant to US EPA approval.

2. California Integrated Waste Management Act (AB 939)

The California Integrated Waste Management Act (AB 939) required local jurisdictions to meet solid waste diversion goals of 25 percent by 1995 and 50 percent by 2000. The California Integrated Waste Management Board (CIWMB) determines this diversion by looking at the base-year solid waste generation (waste normally disposed of into landfills) to determine the amount of solid waste diverted. To help increase diversion rates, each jurisdiction is required to maintain and enforce an Integrated Waste Management Plan that looks at recycling programs, purchasing of recycled products, and waste minimization. (CalRecycle, 1997)

3. California Solid Waste and Recycling Access Act of 1991 (AB 1327)

Signed into law in 1991, the California Solid Waste Reuse and Recycling Access Act (AB 1327) added Chapter 18 to Part 3 of Division 30 of the Public Resources Code. Chapter 18 required the CIWMB to develop a model ordinance for adoption of recyclable materials in development projects (It should be noted that the CIWMB no longer exists and its duties have been assumed by CalRecycle). Local agencies were then required to adopt the model, or an ordinance of their own, in order to govern adequate areas for collection and loading of recyclable materials in development projects. This Act requires all development projects that are commercial, industrial, institutional, or marina in nature and where solid waste is collected and loaded, to provide an adequate area for collecting and loading recyclable materials over the lifetime of the project. The area is required to be provided before building permits are issued.

4. Mandatory Commercial Recycling Program (AB 341)

AB 341 made a legislative declaration that it is the policy goal of the state that not less than 75% of solid waste generated be source reduced, recycled, or composted by the year 2020, and required the Department of Resources Recycling and Recovery, by January 1, 2014, to provide a report to the Legislature that provides strategies to achieve that policy goal. This bill increased diversion requirements by an additional 25% over Business as Usual (BAU) as was defined under AB 939 and SB 1322 which were signed into law as the Integrated Waste Management Act of 1989, which as of the year 2000 only required 50 percent diversion.

5. CalRecycle

CalRecycle is the term the State of California uses for its Department of Resources Recycling and Recovery, formerly known as the California Integrated Waste Management Board (CIWMB). This state agency performs a variety of regulatory functions pursuant to CCR Title 27 and other regulations. Among other things, CalRecycle sets minimum standards for the handling and disposal of solid waste designed to protect public health and safety, as well as the environment (CCR § 20050,

for example). It is also the lead agency for implementing the State of California municipal solid waste program deemed adequate by the US EPA for compliance with RCRA. (CalRecycle, 2017)

6. Countywide Integrated Waste Management Plan

The Countywide Integrated Waste Management Plan (CIWMP) was prepared in accordance with the California Integrated Waste Management Act of 1989, Chapter 1095 (AB 939), and is updated every five years. The CIWMP outlines and codifies the goals, policies, and programs the County of San Bernardino and its cities are implementing to create an integrated and cost-effective waste management system that complies with the provisions of AB 939 and its diversion mandates. The CIWMP's components include the Countywide Summary Plan, the Countywide Siting Element, the Source Reduction and Recycling Element, the Household Hazardous Waste Element, and Non-Disposal Facility Element. Each of these Elements addresses plans for both San Bernardino County and each of its cities. The San Bernardino Countywide Integrated Waste Management Plan was approved by the California Integrated Waste Management Board in September of 1996 and has subsequently been updated at five-year intervals as required by law. (CIWMP, 2012, p. 1)

C. California Well Standards

California Department of Water Resources (DWR) has the responsibility under the Water Code for developing well construction, alteration, and destruction standards, for the purpose of protecting water quality. DWR are published under the Bulletin 74 Series. Through a process detailed in the Water Code, the State Water Resources Control Board has authority to adopt DWR Well Standards into a statewide Model Well Ordinance; and cities, counties, or water agencies have authority to adopt a local ordinance that meets or exceeds DWR Well Standards. If no local ordinance is adopted, the Model Well Ordinance takes effect in that jurisdiction. Well ordinances are enforced by Local Enforcing Agencies. (DWR, 2017)

1. Riverside Municipal Code Chapter 6.28 Water and Other Wells

Riverside Municipal Code Chapter 6.28, *Water and Other Wells*, provides minimum standards for construction, reconstruction, abandonment and destruction of all wells in order to a) protect underground water resources; and b) provide safe water to persons within the City of Riverside. (RMC, 1990)

4.12.3 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to utilities / service systems if the Project or any Project-related component would:

a. *Exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board;*

b. *Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects;*

c. *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;*

d. *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;*

e. *Result in 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;*

f. *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or*

g. *Comply with Federal, State, and local statutes and regulations related to solid waste.*

4.12.4 IMPACT ANALYSIS

Threshold a) Would the Project exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board?

Wastewater collection services would be provided to the Project site by the City of San Bernardino and wastewater treatment services would be provided by the SBMWD. The SBMWD is required to operate the WRP in accordance with the waste treatment and discharge standards and requirements set forth in by the Santa Ana Regional Water Quality Control Board (RWQCB). Based on typical usage rates for industrial warehouse buildings, the Project is estimated to result in an indoor water demand of 88 gallons per minute (gpm) or 142 acre-feet per year (ac-ft/yr). Therefore, the Project's contribution of an estimated 88 gpm or 142 ac-ft/yr to the WRP would have no potential to exceed wastewater treatment requirements of the Santa Ana RWQCB. Further, the proposed Project does not propose to install or utilize septic systems or alternative wastewater treatment systems. Therefore, the Project would have no potential to exceed the wastewater treatment requirements of the Santa Ana RWQCB. Accordingly, no impact would occur and no mitigation is required.

Threshold b) Would the Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects?

A. SBMWD Water and Sewer Conveyance

As shown in Figure 3-12, *Water Plan*, and Figure 3-13, *Sewer Plan*, in EIR Section 3.0, *Project Description*, the proposed Project would connect to the water and sewer lines that exist beneath S. Waterman Avenue. The existing SBMWD off-site water and sewer conveyance infrastructure is adequately sized to serve the proposed Project's conveyance of water and wastewater; therefore, the

Project would not require or result in the construction of new off-site water and wastewater facilities or expansion of existing facilities. Therefore, impacts would be less than significant and no mitigation is required.

Construction-related activities associated with trenching for and installation of water and sewer lines within the Project site would result in potential physical impacts to the environment; these potential impacts are inherent in the Project's construction phase and are evaluated throughout this EIR accordingly. There would be no significant environmental effects specifically related to the installation of water and sewer facilities during the Project's construction. In instances where significant impacts have been identified for the Project's construction phase for which feasible mitigation is available, mitigation measures are recommended in each applicable EIR Subsection. Therefore, the installation of water and sewer lines to serve the proposed Project would not result in any significant physical effects on the environment that are not already identified and disclosed as part of this EIR. Accordingly, additional mitigation measures for Threshold (b) would not be required.

B. City of Riverside Public Utilities/Water Department (RPU) Facilities

The City of Riverside Public Utilities/Water Department (RPU) is proposing to abandon and replace the existing Warren 4 well and approximately 1,250 LF of the existing Rice-Thorne pipeline that are located on the Project site. A new well (Warren 4R) and re-aligned section of 24-inch Rice-Thorne pipeline will be constructed by the proposed Project to facilitate development of the Project site for the Project's building. The Warren 4 well is part of the Waterman System which produces potable water out of the Bunker Hill Basin. The existing 18-inch/30-inch diameter Rice-Thorne irrigation pipeline conveys non-potable groundwater from the Bunker Hill Basin to the Riverside Canal. (RPU, n.d.)

1. Rice-Thorne Pipeline

The Project will relocate the existing 18-inch portion of the Rice-Thorne pipeline that runs west by northwest across the Project site and within the building's footprint. The replacement pipeline will consist of approximately 1,700 LF of 24-inch pipeline running along the southern and western property boundary of the Project site. The pipeline will be designed to maintain a sufficient slope to facilitate a minimum flow of 3,000 gpm under gravity flow. RPU Water Planning estimates a constant minimum slope of 0.07% to provide the minimum required flow rate within a 24-inch pipeline. (RPU, n.d.)

2. Warren 4 Well

The existing Warren 4 well is located approximately 255 feet west of S. Waterman Avenue. Warren 4 is a naturally developed 20-inch diameter well and discharges to the Waterman TM. The well provides high water quality to the Waterman TM. RPU is planning to locate the Warren 4R replacement well approximately 1,200 LF northwest of the existing well and approximately 840 feet southeast of the existing Thorne 12 well. (RPU, n.d.)

3. RPU Facilities to Protect in Place

The existing Warren 1 is an active potable well located on San Bernardino County Flood Control (Flood Control) property, between the southern property boundary and the Santa Ana River. Warren 1 well discharges to the Waterman TM and blows-off to the Rice-Thorne pipeline. According to RPU Water Operations staff, electricity to Warren 1 is provided by an electrical connection fed from the existing Warren 2 well. The proposed Project would establish a new electrical service to Warren 1 prior to abandonment of Warren 2. Warren 1 shall be protected in place and must remain active throughout the Project's construction process. (RPU, n.d.)

Thorne 12 is an active potable well located within the northwest section of the property and provides high quality groundwater to the Waterman TM. Thorne 12 shall be protected in place and must remain active throughout the Project's construction process. Thorne 12 currently discharges into the 24-inch Dumas Street pipeline via a 10-inch steel (STL) waterline. It is proposed to replace this 10-inch STL waterline with a new 24-inch waterline which will serve as a combined discharge pipeline for both the Thorne 12 and replacement Warren 4R wells. An existing blow-off pipeline runs south approximately 240 feet from Thorne 12 and heads west 190 feet along the property line and across the levee, discharging into the Flood Control East Twin Creek Channel. (RPU, n.d.)

Thorne 3 is an inactive irrigation well that is used for monitoring purposes. Thorne 3 is located along the Flood Control levee, outside of the southwest corner of the Project site. Thorne 3 shall be protected in place and continue to be used for monitoring purposes. (RPU, n.d.)

The existing 36-inch RCP segment of the Waterman TM must be kept in operation throughout the Project's construction. This waterline runs along S. Waterman Avenue and partially onto RPU property at the existing San Bernardino Public Golf Club. The Project will protect this pipeline in place during construction work and minimize earthmoving equipment loading above the pipe. If over-excavation above the pipeline is required, the Project's construction contractor will notify RPU and confirmatory pot-holing will be performed to verify pipeline depth. RPU inspectors will be required to be on-site for any potholing and excavation activities occurring over the pipeline. (RPU, n.d.)

4. RPU Water Facility Abandonments

The Thorne 5, Thorne 6, Thorne 7, Thorne 8, Thorne 9, Thorne 10, Thorne 11, Warren 2, Warren 3, and Warren 4 wells located on the property will require proper well abandonment. Warren 4 is an active production well that provides high quality groundwater to the Waterman TM, and abandonment of this well must be coordinated with the construction of the proposed replacement Warren 4R well. Thorne 10 and Thorne 11 wells are actively used by the current tenant to irrigate the golf course; therefore, and abandonment of these two wells will be coordinated with the current tenants. Appendix A of the Well Report (*Technical Appendix M*) presents a list of facilities and the necessary actions needed. (RPU, n.d.)\

A 16-inch pipeline connecting Warren 4 and Warren 3 to the Waterman Pipeline will o be properly abandoned, in addition to the existing 18-inch/30-inch segment of the Rice-Thorne pipeline to be relocated. If the portion of the Rice-Thorne pipeline to be abandoned is not removed during grading activities, it would be backfilled with appropriate material to prevent future pipeline collapse. Careful coordination with RPU will occur during the pipeline abandonment work to ensure that water is not introduced into the Rice-Thorne pipeline and the Warren 1 well remains active during abandonment work. (RPU, n.d.)

All abandonment and demolition work of the aforementioned water wells shall be performed as per State of California regulations and any applicable local regulations. The Project's developer will provide RPU with copies of the well destruction reports upon completion of the well abandonment work. (RPU, n.d.)

Construction-related activities associated with abandonment, replacement, and relocation of RPU water facilities would result in potential physical impacts to the environment; these potential impacts are inherent in the Project's construction phase and are evaluated throughout this EIR accordingly. There would be no significant environmental effects specifically related to the RPU water facilities during the Project's construction. In instances where significant impacts have been identified for the Project's construction phase for which feasible mitigation is available, mitigation measures are recommended in each applicable EIR Subsection. Therefore, the abandonment, replacement, and relocation of RPU water facilities would not result in any significant physical effects on the environment that are not already identified and disclosed as part of this EIR. Accordingly, additional mitigation measures associated with the abandonment, replacement, and relocation of RPU water facilities under Threshold (b) would not be required.

Threshold c) Would the Project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

As shown in Figure 3-14, *Storm Drain Improvement Plan*, in EIR Section 3.0, *Project Description*, there is an existing storm drain line beneath S. Waterman Avenue. The Project's stormwater flows would be captured by on-site storm drains and routed to a water/quality detention basin to be constructed in the southwest corner of the Project site and then discharged to the Santa Ana River. In addition, as part of the off-site interim roadway access improvements, the Project would construct storm drain lines, a cross gutter, and storm drain catch basins in the off-site interim roadway area.

Construction-related activities associated with trenching for and installation of storm water drainage would result in potential physical impacts to the environment; these potential impacts are inherent in the Project's construction phase and are evaluated throughout this EIR accordingly. There would be no significant environmental effects specifically related to the installation of storm drainage facilities during the Project's construction. In instances where significant impacts have been identified for the Project's construction phase for which feasible mitigation is available, mitigation measures are

recommended in each applicable EIR Subsection (refer to EIR Subsection *Hydrology/Water Quality*. Therefore, the installation of storm water drainage facilities to serve the proposed Project would not result in any significant physical effects on the environment that are not already identified and disclosed as part of this EIR. Accordingly, additional mitigation measures for Threshold (c) would not be required.

Threshold d) Would the Project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

For the purpose of providing potable water to the Project site, the proposed Project would install new potable water lines interior to the Project site that would connect to the existing potable water lines within the right-of-way for S. Waterman Avenue.

As discussed in the *2015 San Bernardino Valley Regional Urban Water Management Plan* (June 2016 Draft), which applies to and was adopted by the SBMWD, adequate regional supplies are anticipated for years 2012-2040 under normal, dry, and multiple dry-weather years. (WSC, 2016, pp. 4-1 through 4-4) SBMWD forecasts for projected water demand are based on the population projections of the Southern California Association of Governments (SCAG) 2012 Adopted Growth Forecast, which relies on the adopted land use designations contained within the general plans that cover the geographic area within SBMWD's service area (i.e., City of San Bernardino General Plan and County of San Bernardino General Plan) (WSC, 2016, p. 14-3)

SBMWD prepared a water supply assessment (WSA) (*Technical Appendix K*) for the proposed Project to assess the ultimate effect of the Project's water demand and service needs. As documented in the Project's WSA, SBMWD estimates that the proposed Project would generate an indoor water demand of 88 gallons per minute (gpm) or 142 acre-feet per year (ac-ft/yr), and an outdoor water demand of 40 gpm or 65 ac-ft/yr, for a total incremental demand of 128 gpm or 201 ac-ft/yr. This amount (201 ac-ft/yr) represents an estimated 0.06 percent increase in the total 2015 demand in the Valley District's service area. The additional demand would result in an average deficit that can be easily addressed through water conservation, groundwater recharge, and/or future recycled water direct use. Based on the supply reliability of Valley District and SBMWD supply sources, the it is concluded that the SBMWB has sufficient water supplies to meet the demand of the Project, along with other projected municipal water demands. (SBMWD, 2017, pp. 2,19) Therefore, sufficient water supplies are available to serve the proposed Project and development of the proposed Project would not result in the need for new or expanded entitlements. Thus, impacts would be less than significant and no mitigation is required.

Threshold e) Would the Project result in 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?

As documented in the Project's WSA, SBMWD estimates that the proposed Project would generate an indoor water demand of 88 gallons per minute (gpm) or 142 acre-feet per year (ac-ft/yr). As discussed in Subsection 4.12.1, the SBMWD WRP has the capacity for 33 million gallons a day (MGD) and it currently receives approximately 28 MG of wastewater each day which leaves a capacity surplus of 5 MGD (33 MGD – 28 MGD = 5 MGD). (City of San Bernardino, 2017a) The proposed Project would utilize approximately 0.003% of the total capacity of the SBMWD WRP (88 gpm = 126,720 gpd ÷ 33 MGD (33,000,000 GPD) = .003). Therefore, because the SBMWD already has a daily capacity surplus of 5 MGD and the proposed project would generate approximately 0.003% of the total capacity of the SBMWD WRP; the analysis shows that when the proposed Project's generation of wastewater is taken into consideration in addition to the SBMWD's existing commitments, the SBWMD WRP would have adequate capacity to serve the proposed Project. Therefore, the Project would not cause the SBMWD to exceed its existing wastewater treatment commitments. Thus, the Project's impacts would be less than significant and no mitigation is required.

Threshold f) Would the Project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Construction and operation of the proposed Project would result in the generation of solid waste, requiring disposal at a landfill.

A. Construction Impact Analysis

During construction of the proposed Project, solid waste in the form of demolition debris and construction material would require disposal in a landfill. Based on the maximum building square footage of 1,063,852 s.f) and the U.S. EPA's construction waste generation factor of 4.34 pounds per square foot, approximately 2,309 tons of waste (1,063,852 s.f. × 4.34 lbs per s.f. × 0.0005 tons = 2,309 tons) would be generated during the building construction phase (EPA, 2009). The Project's building construction would occur over a period of approximately 405 days, which corresponds to approximately 5.7 tons per day (2,309 tons ÷ 405 days = 5.7 tons) of construction waste being generated per day of building construction activity. Additional waste would be expected from infrastructure installation and other Project-related construction activities.

Construction wastes associated with the proposed Project that are not recycled or reused would require disposal at the Mid-Valley Landfill. According to the City of San Bernardino GP EIR, the Mid-Valley Landfill has a permitted daily capacity of 7,500 tons per day (tpd), with an average intake of between 3,000 to 5,000 tpd (City of San Bernardino, 2005b, Table 5.15-3; CalRecycle, 2010; Nelson, 2015). The remaining tpd capacity would be approximately 2,500 tpd (7,500-5,000=2.500). Construction waste generated by the Project would comprise approximately 0.22

percent (5.7 tpd ÷ 2,500 remaining tpd × 100% = 0.22%) of the reported remaining daily capacity at the Mid-Valley Landfill. Thus, the Project would be served by a landfill that has adequate disposal capacity to receive construction waste generated by the Project. Impacts would be less than significant and no mitigation is required.

B. Operational Impact Analysis

Based on a daily waste generation factor of 1.42 pounds of waste per 100 square feet of building area obtained from CalRecycle (CalRecycle "Industrial Sector: Estimated Solid Waste Generation Rates"), long-term, on-going operation of the proposed 1,063,852 s.f light industrial warehouse building would generate approximately 7.6 tons of waste per day (tpd) (1,063,852 s.f. × (1.42 lbs ÷ 100 s.f.) × 0.0005 tons = 7.6 tons). At least 50% is required to be recycled. Therefore, up to 3.8 tpd would be sent to the landfill.

Non-recyclable solid waste generated during long-term operation of the Project would be disposed at the Mid-Valley Landfill. During long-term operation, solid waste generated by the Project would represent approximately 0.15% (3.8 tons ÷ 2,500 remaining tpd × 100% = 0.15%) of the daily disposal capacity at the Mid-Valley Landfill. This landfill receives below the maximum permitted daily disposal volume; thus, solid waste generated by the Project would not cause this landfill to exceed its maximum permitted daily disposal volume. Because the Project would generate a relatively small amount of solid waste per day as compared to the permitted daily capacities at the receiving landfill, impacts to regional landfill facilities during the Project's long-term operational activities would be less than significant and no mitigation is required.

Threshold g) Would the Project comply with Federal, State, and local statutes and regulations related to solid waste?

The Project would be required to comply with the City of San Bernardino's waste reduction programs, including recycling and other diversion programs to divert the amount of solid waste deposited in landfills. As such, the Project Applicant or developer would be required to work with future refuse haulers to develop and implement feasible waste reduction programs, including source reduction, recycling, and composting. Additionally, in accordance with the California Solid Waste Reuse and Recycling Act of 1991 (Cal Pub Res. Code § 42911), the Project would provide adequate areas for collecting and loading recyclable materials where solid waste is collected. The collection areas are required to be shown on construction drawings and be in place before occupancy permits are issued. The implementation of these programs would reduce the amount of solid waste generated by the Project and diverted to landfills, which in turn will aid in the extension of the life of affected disposal sites. The Project would comply with all applicable solid waste statutes and regulations; as such, impacts would be less than significant and no mitigation is required.

4.12.5 CUMULATIVE IMPACT ANALYSIS

Because the Project's potential impacts were analyzed in relation to the existing capacity of SBMWD facilities, the Project's cumulatively considerable impacts were considered in the analysis in Subsection 4.12.4. In addition, because the Project's potential impacts were analyzed in relation to the existing capacity of the Mid-Valley Landfill, the Project's cumulatively considerable impacts were considered in the analysis in Subsection 4.12.4. Accordingly, as analyzed in Subsection 4.12.4, the Project's cumulatively considerable impacts would be less than significant. In summary:

- **Wastewater Conveyance and Treatment Capacity (Thresholds a, b, and e)**

The cumulative study area for wastewater conveyance and treatment capacity is the SBMWD's service area. As previously discussed, construction of additional or expanded off-site conveyance lines and regional wastewater treatment facilities would not be required for this Project. Wastewater generated by the proposed Project would be conveyed via local sewer lines into the SBMWD's WRP, which is a 33 million gallon a day (MGD) Regional Secondary Treatment facility located approximately 0.9 miles from the Project site's northwest boundary on the opposite side of East Twin Creek. The SBMWD WRP operates within discharge limits specified in San Bernardino Municipal Code (SBMC) Chapter 13.32 and has adequate capacity to service the Project site in addition to existing and cumulative project commitments. Therefore, the Project's impacts to wastewater treatment and conveyance facilities are determined to be less-than-cumulatively considerable.

- **Water Supplies and Facilities (Thresholds b, d, and f)**

The cumulative study area for water supply and water service-related issues is the SBMWD's service area. Future development within SBMWD's service area would create a demand for additional quantities of water. Increases in population and development intensity would contribute to increases in the overall water demand. According to the WSA prepared by the SBMWD for the proposed Project (see EIR *Technical Appendix K*), and based on the demonstrated reliability of its water supply sources at the time the WSA was prepared, the SBMWD has sufficient, reliable, and sustainable water supplies to meet Project water demands in addition to existing and future demands over the next 20 years, including during single and multiple dry years. For these reasons, less-than-significant cumulatively considerable impacts on water infrastructure or water supply would result from construction or operation of the proposed Project.

- **Solid Waste Collection and Disposal (Thresholds f and g)**

The cumulative study area for solid waste collection and disposal is the area served by the Mid-Valley Landfill. Near-term construction activities associated with the Project would generate approximately 5.7 tons of waste per day. Construction wastes associated with the proposed Project that are not recycled or reused would require disposal at the Mid-Valley Landfill. The Project's construction waste represents only 0.22 percent of the reported remaining daily capacity at the Mid-Valley Landfill. Thus, the Project would be served by a landfill that has adequate disposal capacity to receive construction waste generated by the Project. Impacts would be less-than-cumulatively considerable.

Under long-term operating conditions, the Project would generate approximately 7.6 tons of waste per day (tpd), of which a maximum of 3.8 tpd would be conveyed to the landfill for disposal; at least 50% is required to be recycled. The 3.8 tpd that would be generated by the Project upon buildout would comprise approximately 0.15 percent of the daily capacity at the Mid-Valley Landfill. Due to the Project's small percentage of landfill capacity need compared to the amount of available capacity, the Project's operational impacts associated with solid waste would be less than cumulatively considerable.

Additionally, the Project and other cumulative developments in landfill's service area would be required to comply with all applicable solid waste statutes and regulations, including the requirement to divert at least 50 percent of solid waste materials from landfills. Accordingly, the Project and other cumulative developments have no potential to conflict with federal, state, and local statutes and regulations related to solid waste, and impacts would be less than significant on a cumulative basis, and the Project's contribution would be less than cumulatively considerable.

- **Stormwater Drainage (Threshold c)**

The proposed Project's stormwater flows are designed to be captured by on-site storm drains and routed to a water/quality detention basin to be constructed in the southwest corner of the Project site and then discharged to the Santa Ana River. There would be no connections to other off-site storm water drainage infrastructure. The Santa Ana River has capacity to accept the Project's stormwater, as occurs under existing conditions as sheet flow. Thus, the Project's impacts associated with the installation of stormwater facilities would be less than significant and less-than-cumulatively considerable.

4.12.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold (a): No Impact. The proposed Project would not exceed the wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board (RWQCB). The San Bernardino Municipal Water Department (SBMWD) is required to operate all of its treatment facilities in accordance with applicable waste treatment and discharge standards and requirements as set forth by the RWQCB. The proposed Project would not install or use septic systems or alternative wastewater treatment systems.

Threshold (b): Less-than-Significant Impact. The existing San Bernardino Municipal Water Department (SBMWD) off-site water and sewer conveyance infrastructure are adequate to serve the proposed Project. Thus, the Project would not result in any physical impacts associated with off-site water or sewer infrastructure facilities.

Threshold (c): Less-than Significant Impact. Stormwater would be collected on the Project site by an on-site drainage system installed during the Project's construction. With the exception of on-site stormwater conveyance facilities, drains, and the water quality/detention basin, that would be

installed during the Project's construction, the Project would not require or result in the construction of new off-site storm water drainage facilities or expansion of existing facilities.

Threshold (d): Less-than-Significant Impact. San Bernardino Municipal Water Department (SBMWD) would provide wastewater treatment services to the Project site via the San Bernardino Water Reclamation Plant (WRF). The WRF has adequate capacity to service the proposed Project and no new or expanded facilities would be needed.

Threshold e): Less-than-Significant Impact. When the proposed Project's generation of wastewater is taken into consideration in addition to the San Bernardino Municipal Water Department's (SBMWD) existing commitments, the SBWMD Water Reclamation Plant (WRP) would have adequate capacity to serve the proposed Project.

Threshold (f): Less-than-Significant Impact. The Mid-Valley Landfill has sufficient permitted capacity to accept the solid waste that would be generated by the proposed Project.

Threshold (g): Less-than-Significant Impact. The Project would comply with all applicable federal, state and local statutes and regulations related to solid waste and recycling.

4.12.7 MITIGATION

No potentially significant impacts associated with utilities/service systems would occur as a result of the proposed Project; therefore, no mitigation is required.

5.0 OTHER CEQA CONSIDERATIONS

5.1 SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

The CEQA Guidelines require that an EIR disclose the significant environmental effects of a project which cannot be avoided if the proposed project is implemented (CEQA Guidelines § 15126(b)). As described in detail in Section 4.0, *Environmental Analysis*, of this EIR, the proposed Project is anticipated to result in impacts to the environment that cannot be reduced to below a level of significance after implementation of relevant standard conditions of approval, compliance with applicable regulations, and application of feasible mitigation measures. The significant impacts that cannot be mitigated to a level below significant consist of the following:

- Air Quality – Significant and Unavoidable Direct and Cumulatively Considerable Impact (AQMP Compliance). Because the SCAQMD's daily significance thresholds for air pollutants would be exceeded during the Project's operation even after the implementation of feasible mitigation measures (see below), the Project would not fully mitigate its conflict with the *Final 2016 AQMP*.

- Air Quality - Significant and Unavoidable Direct and Cumulatively Considerable Impact (Project Operation). The Project would exceed the applicable SCAQMD regional thresholds for NOx emissions during operation. Emissions of NOx also would contribute to an existing air quality violation in the SCAB (i.e., ozone – NOx is a precursor for ozone). As such, Project-related emissions would violate SCAQMD air quality standards and contribute to the non-attainment of a criteria pollutant (i.e., NOx and ozone). The effects to human health from NO_X exposure in the SCAB are decreases in lung function, such as asthma and pulmonary diseases. Mitigation measures would reduce the Project's operational NO_X emissions by reducing demand for certain types of energy resource to operate the building. However, mobile source (tailpipe) emissions account for approximately 94 percent, by weight, of the Project's total operational emissions. Mobile source emissions are regulated by standards imposed by federal and State agencies, not local governments. The types of vehicle engines and the types of fuel used by trucking companies and vehicle operators that may access the Project site are well beyond the direct control of the City of San Bernardino. CEQA Guidelines § 15091 provides that mitigation measures must be within the responsibility and jurisdiction of the Lead Agency in order to be implemented. No other mitigation measures are available that are feasible for the Project Applicant to implement and the City of San Bernardino to enforce that have a proportional nexus to the Project's level of impact.

- Greenhouse Gas Emissions – Significant and Unavoidable Cumulatively Considerable Impact. The Project is calculated to generate approximately 18,515.33 $MTCO_2e$ annually, which would exceed the SCAQMD screening threshold of 10,000 $MTCO_2e$ for greenhouse

gas emissions. Required compliance with the California Code of Regulations Titles 20 and 24, and the application of mitigation measures would reduce Project-related greenhouse gas emissions; however, these measures would not substantially reduce Project-related mobile source emissions, which comprise approximately 85 percent of the Project's total greenhouse gas emissions. Mobile source emissions are regulated by State and federal laws pertaining to vehicle engines and fuel, and are outside of the control of the Project Applicant, future Project occupants, and the City of San Bernardino. CEQA Guidelines § 15091 provides that mitigation measures must be within the responsibility and jurisdiction of the Lead Agency in order to be implemented. No other mitigation measures are available that are feasible for the Project Applicant to implement and for the City of San Bernardino to enforce that have a proportional nexus to the Project's level of impact.

- Land Use /Planning - Significant and Unavoidable Impact. The Project would be inconsistent with the growth projections for the Project site assumed by the *Final 2016 AQMP*, and the inconsistency would result in a significant environmental impact due to long-term criteria pollutant emissions. Because the *Final 2016 AQMP* is a long-range plan intended to reduce impacts to the environment, the Project's inconsistency is regarded as a significant direct and cumulatively considerable land use/planning impact.

- Noise - Significant and Unavoidable Direct and Cumulatively Considerable Off-Site Traffic-Related Noise Impact. Off-site Project-related traffic noise impacts would be significant for all analyzed traffic scenarios (Existing plus Project; Existing plus Ambient 2018; Existing plus Ambient Plus Cumulative 2018; and Horizon Year 2040) for the one roadway segment identified as Washington Avenue south of Orange Show Road (ID #1) because the Project would increase the noise level by a perceptible amount at receiver locations. Under existing conditions, the properties adjacent to this roadway segment are non-conforming residential uses located on properties designated by the San Bernardino General Plan as "Industrial-Industrial Light (IL)." Mitigation measures considered by the City of San Bernardino to address this impact were dismissed because they would be ineffective or infeasible.

- Transportation / Circulation - Significant and Unavoidable Cumulatively Considerable Impact. The Project would not cause any study area intersection to operate at unacceptable LOS; however, the Project would result in a cumulatively considerable impact at two intersections in the Horizon Year (2040) – the E Street / Auto Center Drive / Orange Show Road intersection (a Congestion Management Plan (CMP) intersection) and the Waterman Avenue / I-10 Westbound On-Ramp intersection, which are calculated to operate an unacceptable LOS with or without the addition of Project traffic. Mitigation measures would require the Project to pay development impact fees and participate in fair-share funding programs for improvements. However, to achieve acceptable LOS conditions, these intersections require improvements that either: 1) are not under the sole jurisdictional authority of the City of San Bernardino (meaning the City of San Bernardino cannot assure

that the recommended improvements would be implemented); and/or 2) are not included in any existing mitigation funding program to ensure a date-certain installation.

5.2 SIGNIFICANT IRREVERSIBLE CHANGES WHICH COULD BE CAUSED BY THE PROPOSED PROJECT SHOULD IT BE IMPLEMENTED

The CEQA Guidelines require EIRs to address any significant irreversible environmental changes that would be involved in the proposed action should it be implemented (CEQA Guidelines § 15126.2(c)). An environmental change would fall into this category if: a) the project would involve a large commitment of non-renewable resources; b) the primary and secondary impacts of the project would generally commit future generations to similar uses; c) the project involves uses in which irreversible damage could result from any potential environmental accidents; or d) the proposed consumption of resources are not justified (e.g., the project results in the wasteful use of energy).

Determining whether the proposed Project may result in significant irreversible environmental changes requires a determination of whether key non-renewable resources would be degraded or destroyed in such a way that there would be little possibility of restoring them. Natural resources in the form of construction materials and energy resources would be used in the construction of the proposed Project, but development of the Project site as proposed would have no measurable adverse effect on the availability of such resources, including resources that may be non-renewable (e.g., fossil fuels). Construction and operation of the proposed Project would not involve the use of large sums or sources of non-renewable energy. Additionally, the Project is required by law to comply with the California Building Standards Code (CALGreen), compliance with which reduces a building operation's energy volume that is produced by fossil fuels. A more detailed discussion of energy consumption is provided below in Subsection 5.4, *Energy Conservation*.

EIR Subsection 4.7, *Hazards & Hazardous Materials,* provides an analysis of the proposed Project's potential to transport or handle hazardous materials which, if released into the environment, could result in irreversible damage to the environment. As concluded in the analysis, compliance with federal, state, and local regulations related to hazardous materials would be required of all contractors working on the property during the Project's construction and of all users that occupy the Project's building. As such, construction and long-term operation of the proposed Project would not have the potential to cause significant irreversible damage to the environment, including damage that may result from hazardous materials upset or accident conditions.

As discussed in Subsection 5.4 below, the proposed Project would not result in the wasteful consumption of energy. Accordingly, the proposed Project would not result in a significant, irreversible change to the environment related to energy use.

5.3 GROWTH-INDUCING IMPACTS OF THE PROPOSED PROJECT

CEQA requires a discussion of the ways in which the proposed Project could be growth inducing. The CEQA Guidelines identify a project as growth inducing if it would foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment (CEQA Guidelines §15126.2(d)). New employees and new residential populations represent direct forms of growth. These direct forms of growth have a secondary effect of expanding the size of local markets and inducing additional economic activity in the area.

Because user(s) of the Project's building are not yet known, the number of jobs that the Project would generate cannot be precisely determined; therefore, for purposes of analysis, employment estimates were calculated using the San Bernardino General Plan's Square Feet/Employee Factor. Per the General Plan, employment for commercial, industrial, and office land uses are calculated by dividing the total number of building square feet by the SF/Employee factor. The SF/Employee factor for Light Industrial (IL) is 1,500. Therefore, because the building is proposed to be 1,063,852 s.f., the number of employees calculated to be generated by the proposed Project would be approximately 709 (1,063,852 ÷ 1,500 =709). (City of San Benardino, 2005a, Appendix 5, Methodology Report). The proposed Project also would create short-term construction jobs. It is expected that the majority of the construction-related employees would be drawn from the existing labor force that would be available in San Bernardino County.

According to regional population projections included in SCAG's *2016 RTP/SCS*, the City of San Bernardino is projected to experience 21.47 percent population growth between 2012 and 2040, which corresponds to an approximately 0.70 percent annual population growth rate. Over this same time period, employment within San Bernardino is projected to increase by 44.99 percent, which corresponds to an approximately 1.34 percent annual employment growth rate. (Urban Crossroads, Inc., 2017e) A project could indirectly induce growth at the local level by increasing the demand for additional goods and services associated with an increase in population or employment and thus reducing or removing the barriers to growth. This typically occurs in suburban or rural environs where population growth results in increased demand for service and commodity markets responding to the new population of residents or employees. Economic growth would likely take place as a result of the proposed Project's operation as a high cube logistics warehouse building. The Project's construction-related and operational-related employees would purchase goods and services in the region, but any secondary increase in employment associated with meeting these goods and services needs is expected to be marginal, accommodated by existing goods and service providers, and highly unlikely to result in any new physical impacts to the environment based on the amount of available commercial and retail services available in areas near the Project site, including the Cities of Colton, Grand Terrace, Loma Linda, Redlands and Highland. In addition, the Project would create jobs which would likely serve the housing units either already built or planned for development within the City of San Bernardino. Accordingly, because it is anticipated that the Project's future employees would already be living in the area, the Project's on-site employment generation would not induce substantial growth in the area.

Under CEQA, growth inducement is not considered necessarily detrimental, beneficial, or of substantial significance to the environment. Typically, growth-inducing potential of a project would be considered significant if: 1) development fosters growth or a concentration of population in excess of what is assumed in pertinent master plans, land use plans, or in projections made by regional planning agencies such as SCAG; or 2) if a project provides infrastructure or service capacity to accommodate growth beyond the levels currently permitted by local or regional plans and policies. In general, growth induced by a project is considered a significant impact if it can be demonstrated that the potential growth significantly affects the environment in some other way.

The Project would install new public infrastructure improvements, including roads, drainage infrastructure, and other utility improvements; however, these infrastructure improvements are sized to primarily serve the Project and to provide a future connection point for land uses planned by the San Bernardino General Plan. As shown in Figure 2-1, *Surrounding Land Uses and Development*, and Figure 2-2, *Existing General Plan Land Use Designations* in EIR Section 3.0, *Project Description*, the proposed Project is located in an area that is surrounded by flood control channels and commercial and office development that is designated with "Public Facility/Quasi-Public-Publicly Owned Flood Control Channel (PFC)," "Industrial-Industrial Light (IL)" and "Industrial-Office Industrial Park (OIP)" land uses. Development of the Project site with one high cube logistics warehouse building may place short-term development pressure on several surrounding and nearby parcels that are designated for "Industrial-Industrial Light (IL)" uses that are currently either undeveloped or developed with non-conforming residential land uses. The land uses proposed by the Project would differ substantially from the land uses permitted under existing conditions; however, because surrounding and nearby parcels would be developed with "Industrial-Industrial Light (IL)" land uses, growth-inducing impacts of the Project would be less than significant. Accordingly, because surrounding and nearby parcels are planned for "Industrial-Industrial Light (IL)" land uses, the Project is not expected to induce growth or land use changes on other parcels in the vicinity of the Project site.

Based on the foregoing, the Project is not expected to directly or indirectly induce growth in the local area.

5.4 ENERGY CONSERVATION

This Subsection is based in part on a technical report titled, *Gateway South Building 4, Energy Analysis, City of San Bernardino*, prepared by Urban Crossroads, Inc., dated April 17, 2017, and appended to this EIR as *Technical Appendix L* (Urban Crossroads, Inc., 2017g).

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation (DOT), the United States Department of Energy (DOE), and the United States Environmental Protection Agency (EPA) are three federal agencies with substantial influence over energy policies and programs. On the state level, the Public Utilities Commission (PUC) and the California Energy Commissions (CEC) are two

agencies with authority over different aspects of energy. Relevant federal and state energy-related laws and plans are summarized below and Project consistency with the applicable federal and state regulations is presented below each regulation.

5.4.1 APPLICABLE FEDERAL AND STATE POLICIES AND REQUIREMENTS

A. Federal Regulations

1. Intermodal Surface Transportation Efficiency

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions. (Urban Crossroads, Inc., 2017g, p. 14)

Project Consistency: Transportation and access to the Project site is provided primarily by the local and regional roadway systems. The Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be realized pursuant to the ISTEA because SCAG is not planning for intermodal facilities on or through the Project site. (Urban Crossroads, Inc., 2017g, p. 14)

2. Transportation Equity Act for the 21st Century (TEA-21)

The Transportation Equity Act for the 21st Century (TEA-21) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of wise transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety. (Urban Crossroads, Inc., 2017g, p. 14)

Project Consistency: The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access, acts to reduce vehicle miles traveled, takes advantage of existing infrastructure systems, and promotes land use compatibilities through co-location of similar uses. The Project supports the strong planning processes emphasized under TEA-21. The Project is therefore consistent with, and would not otherwise interfere with, nor obstruct implementation of TEA-21. (Urban Crossroads, Inc., 2017g, p. 14)

B. California Regulations

1. Integrated Energy Policy Report

Senate Bill 1389 (Bowen, Chapter 568, Statutes of 2002) requires the California Energy Commission (CEC) to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing California's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (Public Resources Code §25301a). The CEC prepares these assessments every two years with updates in alternate years, as part of the Integrated Energy Policy Report. (Urban Crossroads, Inc., 2017g, p. 15)

The *Final 2016 Integrated Energy Policy Report Update (Final 2016 IEPR Update)* was released on February 28, 2017. The report examines how the state is transforming its electricity sector and identifies other improvements that are still needed to achieve the state's energy and climate policy goals. The report covers a broad range of topics, including the environmental performance of the electricity generation system, landscape-scale planning, the response to the gas leak at the Aliso Canyon natural gas storage facility, transportation fuel supply reliability issues, updates on the Southern California electricity reliability, methane leakage, climate adaptation activities for the energy sector, climate and sea level rise scenarios, and the California Energy Demand Forecast. (Urban Crossroads, Inc., 2017g, p. 16)

Project Consistency: The *Final 2016 IEPR Update* is s State Policy report. An individual project, such as the proposed Project, has no ability to comply with or conflict with the report.

2. State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access. (Urban Crossroads, Inc., 2017g, pp. 16-17)

Project Consistency: The Project would comply with the energy efficiency building codes, appliance standards, and utility energy efficiency programs applicable to the Project. The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access and may reduce vehicle miles traveled through its proximate location to the Ports. The Project shall comply with mandatory state measures, such as Low Carbon Fuel Standards. As a Project design feature, the Project shall provide preferential parking for low-emitting, fuel-efficient, and carpool/van vehicles. Furthermore, the Project shall install and provide for future vehicle charging stations consistent to CalGreen Standards. The Project therefore supports,

is consistent with, and would not otherwise interfere with, nor obstruct implementation of the State of California Energy Action Plan. (Urban Crossroads, Inc., 2017g, p. 17)

3. California Code Title 24, Part 6, Energy Efficiency Standards

California Code Title 24, Part 6 (also referred to as the California Energy Code), was promulgated by the CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption. To these ends, the California Energy Code provides energy efficiency standards for residential and nonresidential buildings. California's building efficiency standards are updated on an approximately three-year cycle. The 2016 Standards for building construction, which went into effect on January 1, 2017 improved upon the former 2013 Standards for residential and nonresidential buildings. (Urban Crossroads, Inc., 2017g, p. 17)

Project Consistency: The proposed Project is required by State law to be designed, constructed, and operated to meet or exceed Title 24 Energy Efficiency Standards. On this basis, the proposed Project is determined to be consistent with, and would not interfere with, nor otherwise obstruct implementation of Title 24 Energy Efficiency Standards. (Urban Crossroads, Inc., 2017g, p. 17)

4. Assembly Bill 1493, Pavley

On September 24, 2009, the California Environmental Protection Agency (CalEPA) Air Resources Board (ARB) adopted amendments to the "Pavley" regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016. These amendments are part of California's commitment toward a nation-wide program to reduce new passenger vehicle GHGs from 2012 through 2016. ARB's September amendments will cement California's enforcement of the Pavley rule starting in 2009 while providing vehicle manufacturers with new compliance flexibility. The amendments will also prepare California to harmonize its rules with the federal rules for passenger vehicles. (CalEPA ARB, 2017)

Project Consistency: AB 1493 requires registry in consultation with the State ARB, to adopt procedures and protocols for the reporting and certification of reductions in greenhouse gas emissions from mobile sources for use by the State ARB in granting emission reduction standards. (AB1493, 2002). An individual project, such as the proposed Project does not have the ability to comply with or conflict with AB 1493.

5. California Renewable Portfolio Standards (SB 1078)

California Renewable Portfolio Standards (SB 1078) requires electric corporations to increase the amount of energy obtained from eligible renewable energy resources to 20 percent by 2010 and 33 percent by 2020.

Project Consistency: Energy directly or indirectly supplied to the proposed Project by electric corporations is required by law to comply with SB 1078.

5.4.2 ENERGY CONSUMPTION ANALYSIS

In compliance with CEQA Guidelines Appendix F, this Subsection provides an analysis of the proposed Project's anticipated energy use to determine if the Project would result in the wasteful, inefficient or unnecessary consumption of energy, or result in a substantial increase in demand or transmission service, resulting in the need for new or expanded sources of energy supply or new or expanded energy delivery systems or infrastructure.

In addition, CEQA Guidelines Appendix F states that the means of achieving the goal of energy conservation includes the following:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on fossil fuels such as coal, natural gas and oil; and
- Increasing reliance on renewable energy sources.

A. Methodology

Information from the CalEEMod 2016.3.1 outputs for the Project's Air Quality Impact Analysis (*Technical Appendix B1)* was utilized in the Project's Energy Analysis (*Technical Appendix L*) and the analysis herein, detailing Project related construction equipment, transportation energy demands, and facility energy demands. These outputs are referenced in Appendix 3.1 of the Project's Energy Analysis *(Technical Appendix L*). (Urban Crossroads, Inc., 2017g, p. 18)

The proposed Project involves the demolition of existing structures and paved surfaces and the construction and operation of one high cube logistics warehouse building supported by up to 188 truck loading dock doors and 1,171 auto and truck parking stalls. Associated improvements to the Project site would include truck courts and drive aisles, landscaping, a water quality/detention basin, utility infrastructure, lighting, signage, and other associated improvements. A Project driveway with access from S. Waterman Avenue is proposed near the northeast corner of the Project site. In addition, interim roadway access improvements are proposed between the Project site and Orange Show Road. Refer to EIR Section 3.0, *Project Description,* for a more detailed description of the proposed Project. As a conservative measure, the analysis in the Project's Energy Analysis (*Technical Appendix L*), the Project's Air Quality Impact Analysis (*Technical Appendix B1*), and therefore herein, evaluates 1,064,880 s.f. of high cube warehouse use (Urban Crossroads, Inc., 2017g, p. 1).

B. Project Construction Energy Use

1. Construction Equipment Electricity Usage

Based on the 2015 National Construction Estimator, the typical power cost per 1,000 s.f of building construction per month is estimated to be $2.28. Based on these numbers, the total power cost of the on-site electricity usage during the construction of the proposed Project is calculated to be approximately $43,702.68. As of June 1, 2016, Southern California Edison's (SCE) general service

rate schedule (GS-1) for an industrial land use is $.08 per kilowatt hours (kWh) of electricity. Accordingly, the total electricity usage from on-site Project construction related activities is calculated to be approximately 546,283 kWh. (Urban Crossroads, Inc., 2017g, p. 18)

2. Construction Equipment Fuel Use

Fuel consumed by construction equipment would be the primary energy resource expended over the course of Project construction. Eight-hour daily use of all equipment is assumed. The aggregate fuel consumption rate for all equipment is estimated at 18.5 hp-hr-gal., obtained from California Air Resources Board (CARB) 2013 Emissions Factors Tables and cited fuel consumption rate factors presented in Table D-24 of the Moyer guidelines. For the purposes of this analysis, the calculations are based on all construction equipment being diesel-powered which is standard practice consistent with industry standards. Diesel fuel would be supplied by existing commercial fuel providers serving the County and region. Project construction activities would consume an estimated 106,722 gallons of diesel fuel. Project construction would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose. Refer to Table 4-3 of *Technical Appendix L* for the construction equipment fuel consumption estimates. (Urban Crossroads, Inc., 2017g, p. 19)

3. Construction Worker Fuel Use

Urban Crossroads, Inc. applied a reasonable assumption in the Project's Energy Analysis (*Technical Appendix L*) that all construction worker trips are from light duty autos (LDA) along area roadways. With respect to estimated vehicle mile traveled (VMT), the construction worker trips would generate an estimated 102,109 VMT based on an average 14.7-mile average trip length and the number of construction data reported in EIR Section 3.0, *Project Description*. As generated by EMFAC 2014, an aggregated fuel economy of LDAs ranging from model year 1974 to model year 2018 are estimated to have a fuel efficiency of 26.77 miles per gallon (MPG). Urban Crossroads, Inc. calculated that 102,109 gallons of fuel would be consumed related to construction worker trips for the proposed Project. Project construction worker trips would represent a "single-event" gasoline fuel demand and would not require on-going or permanent commitment of fuel resources for this purpose. Refer to Table 4-4 of *Technical Appendix L*, for the construction worker fuel consumption estimates. (Urban Crossroads, Inc., 2017g, p. 21)

4. Construction Vendor/Hauling Fuel Use

With respect to estimated vehicle miles traveled (VMT), the Project's construction vendor trips were calculated to generate approximately 671,232 VMT along area roadways based on a 6.9-mile average and the number of construction days reported in EIR Section 3.0, *Project Description*. In their analysis, Urban Crossroads, Inc., applied a reasonable assumption that 50% of all vendor trips would be from medium-heavy duty trucks (MHD) and 50% would be from heavy-heavy duty trucks (HHD) and that 100% of all hauling trips would be from HHD. As generated by EMFAC 2014, an aggregated fuel economy of MHD trucks ranging from model year 1974 to model year 2018 are estimated to have a fuel efficiency of 8.17 mpg. Additionally, HHD trucks are estimated to have a

fuel efficiency of 5.77 mpg. Based on these numbers, fuel consumption from construction hauling and vendor trips (medium and heavy-duty trucks) is calculated at approximately 69,510 gallons. Project construction vendor trips would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose. Refer to Table 4-5 and 4-6 of *Technical Appendix L* for the construction vendor fuel consumption estimates for MHD and HHD trucks. (Urban Crossroads, Inc., 2017g, p. 22)

5. Summary of Energy and Fuel Use for Project Construction

The Project's construction process would consume electrical energy and fuel. Project construction would represent a "single-event" electric energy and fuel demand and would not require any ongoing permanent commitment of energy or diesel fuel resources for this reason. In summary, the proposed Project's construction process is calculated to consume approximately 546,283 kWh of electricity and an estimated 106, 722 gallons of fuel.

Diesel fuel would be supplied by County and regional commercial vendors. Indirectly, construction energy efficiencies and energy conservation would be achieved through the use of bulk purchases, transport and use of construction materials. The *2016 IEPR* released by the California Energy Commission shows that fuel efficiencies are getting better within on and off-road vehicle engines due to more stringent government requirements.

The amount of energy and fuel use anticipated by the Project's construction activities are typical for the type of construction proposed because there are no aspects of the Project's proposed construction process that are unusual or energy-intensive, and Project construction equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies. CCR Title 13, Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than 5 minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Best available control measures inform construction equipment operators of this requirement. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints. As supported above, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary. (Urban Crossroads, Inc., 2017g, p. 24)

C. Project Operation Energy Use

Energy consumption in support of or related to Project operations would include transportation energy demands (energy consumed by employee and patron vehicles accessing the Project site) and facilities energy demands (energy consumed by building operations and site maintenance activities) (Urban Crossroads, Inc., 2017g, p. 24).

1. Transportation Energy Demands

Energy that would be consumed by Project-generated traffic is a function of total VMT and estimated vehicle fuel economies of vehicles accessing the Project site. Based on the annual vehicle miles

traveled and the average vehicle fuel economy (mpg), the Project-generated traffic annual fuel consumption is calculated to be 1,670,585 gallons of fuel. Refer to Table 4-11 in *Technical Appendix L* for the Project-generated traffic annual fuel consumption for all vehicles. (Urban Crossroads, Inc., 2017g, pp. 24-26)

2. Facility Energy Demands

Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building such as for plug-in appliances. In California, the California Building Standards Code Title 24 governs energy consumed by the built environment, mechanical systems, and some types of fixed lighting. (Urban Crossroads, Inc., 2017g, pp. 26-27)

Project building operations and Project site maintenance activities would result in the consumption of natural gas and electricity. As part of the Project's design, all on-site outdoor cargo handling equipment (CHE) (including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and other on-site equipment) will be powered by non-diesel fueled engines (e.g., electric or natural gas) and all on-site indoor forklifts shall be electric (Urban Crossroads, Inc., 2017g, p. 1).

Natural gas would be supplied to the Project by The Gas Company and electricity would be supplied to the Project by Southern California Edison (SCE). As shown in Table 5-1, *Annual Operational Energy Demand Summary,* Project facility operational energy demands are calculated at 2,076,520 kBTU/year of natural gas and 3,346,564 kWh/year of electricity. (Urban Crossroads, Inc., 2017g, p. 26)

Energy efficiency/energy conservation attributes of the Project would be complemented by increasingly stringent state and federal regulatory actions addressing vehicle fuel economies and vehicle emissions standards; and enhanced building/utilities energy efficiencies mandated under California building codes (e.g., Title 24, California Green Building Code) (Urban Crossroads, Inc., 2017g, p. 27).

The Project proposes conventional warehouse use that reflects contemporary energy efficient/energy conserving designs and operational programs. Uses proposed by the Project are not inherently energy intensive, and the Project energy demands in total would be comparable to, or less than, other warehouse projects of similar scale and configuration because the Project would be required to adhere to the current Title 24 energy efficiency and building standards in effect at the time of building construction, additionally mitigation require that the Project would be designed to achieve a LEED "certified" rating which would require additional contemporary energy features to be implemented. Based on the preceding, Project facility energy demands and energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary. (Urban Crossroads, Inc., 2017g, pp. 27-28)

Table 5-1 Annual Operational Energy Demand Summary

Natural Gas Demand	kBTU/year
Parking Lot	0
Unrefrigerated Warehouse	2,076,520
Total Project Natural Gas Demand	**2,076,520**

Electricity Demand	kWh/year
Parking Lot	801,504
Unrefrigerated Warehouse	2,545,060
Total Project Electricity Demand	**3,346,564**

(Urban Crossroads, Inc., 2017g, Table 4-12)

D. Energy Consumption Summary

Project design features, mandatory compliance with California Buildings Standards Code Title 24 (CalGreen) energy efficiency requirements and the implementation of the mitigation measures contained in the site-specific Air Quality Impact Analysis (*Technical Appendix B1*), Mobile Source Diesel Health Risk Assessment (*Technical Appendix B2*), and the Greenhouse Gas Analysis (*Technical Appendix F1*), demonstrate evidence of the Project's efficient use of energy. The Project would provide for, and promote, energy efficiencies beyond those required under other applicable federal or State of California standards and regulations; therefore, the Project would meet or exceed all CalGreen regulations. Moreover, energy consumed by the Project is calculated by Urban Crossroads, Inc. to be comparable to, or less than, energy consumed by other industrial uses of similar scale and intensity than are currently constructed and operating in California. On this basis, the Project would not result in the inefficient, wasteful, or unnecessary consumption of energy. Furthermore, the Project would not cause or result in the need for additional energy facilities or energy delivery systems. (Urban Crossroads, Inc., 2017g, p. 2)

As supported by the preceding analyses, Project construction and operations would not result in the inefficient, wasteful or unnecessary consumption of energy. Further, the energy demands of the Project can be accommodated within the context of available resources and energy delivery systems. The Project would therefore not cause or result in the need for additional energy producing or transmission facilities. The Project would not engage in the wasteful or inefficient uses of energy and the Project aims to achieve energy conservation goals within the State of California. Thus, the Project would not have any long-term effects on an energy providers' future energy development or energy conservation strategies. (Urban Crossroads, Inc., 2017g, pp. 28-29)

5.5 EFFECTS FOUND NOT TO BE SIGNIFICANT AS PART OF THE INITIAL STUDY PROCESS

CEQA Guidelines § 15128 requires that an EIR:

"…contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR."

An Initial Study was prepared for the proposed Project, which is included as *Technical Appendix A* to this EIR. Through the Initial Study process, the City of San Bernardino determined that the proposed Project could potentially cause adverse effects, and an EIR is required. Five environmental issue areas were determined by the City to have no potential to be significantly impacted by the Project, as concluded by the Project's Initial Study. Therefore, these issue areas are not required to be discussed in Section 4.0, *Environmental Analysis*, of this EIR. A brief summary of the five environmental issue areas found not to be significant is presented below, with a more detailed analysis provided in the Project's Initial Study contained in *Technical Appendix A.*

A. Agriculture and Forestry Resources

According to maps pursuant to the Farmland Mapping and Monitoring Program (FMMP), the Project site contains lands classified as "Urban and Built Up Land" and does not contain any lands mapped by the California Department of Conservation as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) (State of California Department of Conservation, 2014a). As such, implementation of the proposed Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to a non-agricultural use. Thus, no impact would occur.

Under existing conditions, the Project site is a public golf course and is zoned "Open Space - Public/Commercial Recreation (PRC)" and Industrial – Industrial Light (IL)" by the City of San Bernardino. There are no properties zoned for agricultural use and no lands under Williamson Act Contract in the City of San Bernardino (City of San Bernardino, 2016) (City of San Bernardino, 2005b, A-30) Because the Project site, and all other lands within the City of San Bernardino, are not zoned for agricultural use nor are any lands within the City under Williamson Act Contract, the Project has no potential to conflict with existing zoning for agricultural use or a Williamson Act Contract. Thus, no impact would occur.

Neither the Project site nor any other lands within the City of San Bernardino are zoned for forest land, timberland, or timberland zoned Timberland Production. Therefore, the Project has no potential to conflict with zoning for, or the loss of, forest land, timberland, or timberland zoned Timberland Production. Thus, no impact would occur.

As discussed above, the Project site is not mapped as Farmland or forest land. Because the Project has no potential to 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 the conversion of forest land to non-forest use, no impact would occur.

B. Mineral Resources

The California Department of Conservation (CDC) has published three reports focused on mineral resource deposits in the San Bernardino region. The first report, titled "Special Report 143: Mineral Land Classification of the Greater Los Angeles Area, Part VII: Classification of Sand and Gravel Resource Areas, San Bernardino Production-Consumption Region" (hereafter "SR 143, Part VII") was first published in 1984 and re-printed in 1987. Subsequently, two additional reports were prepared to update and expand on the findings of SR 143, Part VII. In 1995, the California Department of Conservation prepared "Open File Report 94-08: Mineral Land Classification of A Part of Southwestern San Bernardino County: The San Bernardino Valley Area, California" (hereafter "OFR 94-08"), followed up by the 2008 publication of "Special Report 206: Update of Mineral Land Classification for Portland Cement Concrete-Grade Aggregate in the San Bernardino Production-Consumption Region, San Bernardino and Riverside Counties, California" (hereafter "SR 206"). These reports classify areas into Mineral Resource Zones (MRZs). SR 143, Part VII mapped the Project site as a MRZ-2 resource area for Portland cement concrete-grade (PCC) aggregate. MRZ-2 areas are known to contain significant mineral deposits or have a high likelihood of containing significant deposits. The conclusions of SR 143, Part VII, as they pertain to the potential for the Project site to contain, or likely contain, significant PCC aggregate deposits, were re-affirmed by OFR 94-08 and SR 206.

The mineral resource zone classifications assigned by the CDC focus solely on geologic factors and the potential value and marketability of a mineral resource, without regard to existing land use and ownership or the compatibility of surrounding land uses. As part of the General Plan Update process in 2005, the City of San Bernardino determined that there were areas of the City with the potential to contain important mineral resources as mapped by the CDC where mining activities were not suitable because of incompatible surrounding land uses. The Project site is designated "Open Space-Public/Commercial Recreation" (PCR)" and "Industrial- Industrial Light (IL)." The General Plan only allows mineral resource extraction activities in areas with the "Industrial Extractive" land use designation. (City of San Benardino, 2005a) Thus, the General Plan does not allow mineral extraction activities to occur on the Project site. Furthermore, the "Industrial- Industrial Light (IL)" zoning designation applied to the subject property also prohibits mining land uses (City of San Bernardino, 2013, p. II-19.08-4))

Because mining of the Project site is already precluded by the City of San Bernardino General Plan and Development Code, the Project would not result in the loss of availability of a known mineral resource. The CDC acknowledged that mineral resource extraction activities could not occur on the Project site due to incompatibilities with surrounding land uses and local land use designations (CDC, 2008). The use of the Project site for non-mining land uses as called for by the General Plan was previously addressed by the City of San Bernardino's General Plan EIR (SCH No. 2004111132), which found that implementation of the General Plan would not result in a significant effect related to the loss of mineral resources of value to the region or state. Accordingly, impacts to the environmental issue area of Mineral Resources would not occur.

C. Population and Housing

The proposed Project is an employment use and not a population-generating use. Under existing conditions, the Project site is developed as a golf course that is served by existing public roadways and utility infrastructure in the area. Growth in the City of San Bernardino generally occurs per the City's General Plan. Although the Project proposes a GPA to change the land use designation for a portion of the Project site from "Open Space-Public/Commercial Recreation (PCR) to "Industrial-Industrial Light (IL)," which may induce the development of nearby properties that are presently undeveloped or under-developed, the lands surrounding the Project site with development potential are already designed for "Industrial - Industrial Light (IL)" and "Industrial-Office Industrial Park (OIP)" uses. Workers that would be employed at the proposed Project would be housed in residential areas in the surrounding area, and new, unplanned residential growth is not anticipated. As such, implementation of the proposed Project would not induce substantial growth in the area either directly or indirectly beyond what is already envisioned by the City's General Plan and other long-range planning documents.

The Project site does not contain any residential structures under existing conditions. Accordingly, implementation of the Project would not displace substantial numbers of existing housing and would not necessitate the construction of replacement housing elsewhere. Thus, no impact would occur.

D. Public Services

1. Fire Protection Services

Under existing conditions, a majority of the Project site is a golf course which is serviced by the San Bernardino City Fire Department. The nearest fire stations to the Project site are the City of San Bernardino Fire Department Station 231, located approximately 0.7 miles southeast of the Project site at 450 E. Vanderbilt Way and the City of San Bernardino Fire Department Station 230 located approximately 2.0 miles northwest of the Project site at 502 S Arrowhead Ave.

The proposed Project would be required to provide a minimum of fire safety and support fire suppression activities, including type of building construction, fire sprinklers, a fire hydrant system, and paved access to the Project site. Furthermore, the proposed Project is required to comply with the provisions of Municipal Code Chapter 3.27.40, which requires the payment of fire protection fees that the City can use to finance the fire protection facilities described in Municipal Code Chapter 3.27.40 or identified in the Fire Protection Facilities section of the Master Facility Plan. (City of San Bernardino, 2017c) Buildout of the proposed Project would not directly result in or require the physical construction of any new or expanded fire stations or fire protection facilities Mandatory compliance with Municipal Code Chapter 3.27.40 would be required prior to the issuance of building permits. With payment of the fire protection fees pursuant to Municipal Code Chapter 3.27.40, impacts would be less than significant.

2. Police Protection Services

Pursuant to City Municipal Code Chapter 3.27.30, Law Enforcement Facilities, Vehicles, and Equipment Impact Fee, the development of residential, commercial, and industrial property will create a need to increased police protection services and as a result additional officers will be needed to maintain the current level of service. The law enforcement facilities fee is imposed on new residential, commercial, and industrial development and can be collected only to finance the law enforcement facilities described in Municipal Code Chapter 3.27.30 or identified in the Law Enforcement facilities section of the Master Facility Plan (City of San Bernardino, 2017c). Buildout of the proposed Project would not directly result in or require the physical construction of any new or expanded law enforcement facilities Mandatory compliance with Municipal Code Chapter 3.27.30 would be required prior to the issuance of building permits. With payment of the law enforcement facilities fee pursuant to Municipal Code Chapter 3.27.30, impacts would be less than significant.

3. Schools

The Project site would contain non-residential uses that would not generate any school-aged children requiring public education; therefore, development of the Project site as proposed by the Project would not create a direct demand for public school services. The proposed Project is not expected to draw a substantial number of new residents to the region and would therefore not indirectly generate school-aged students requiring public education. Because the proposed Project would not directly generate students and is not expected to indirectly draw students to the area, the proposed Project would not cause or contribute to a need to construct new or physically altered public school facilities. Although the Project would not create a demand for additional public school services, the Project Applicant would be required to contribute development impact fees to the San Bernardino Unified High School District in compliance with California Senate Bill 50 (Greene) (SB 50, 1998). Mandatory payment of school fees would be required prior to the issuance of building permits. Therefore, impacts to public schools would be less than significant.

4. Parks

As discussed below, the proposed Project would not create a demand for public park facilities and would not result in the need to modify existing or construct new park facilities. Accordingly, implementation of the proposed Project would not adversely affect any park facility. Thus, no impact would occur.

5. Other Public Facilities

The proposed Project is not expected to result in a demand for other public facilities/services, including libraries, community recreation centers, and animal shelters. As such, implementation of the Project would not adversely affect other public facilities or require the construction of new or modified facilities. Thus, no impact would occur.

E. Recreation

The Project proposes to redevelop the Project site with one high cube logistics warehouse building. The Project does not propose any type of residential use or other land use that may generate a population that would substantially increase the use of existing neighborhood and regional parks or other recreational facilities in the Project site's vicinity. However, because a majority of the Project site is a golf course under existing conditions, development of the proposed Project could result in the displacement of golfers to other golf courses in the surrounding area. Golf courses in the general area include but are not limited to Colton Golf Club, Arrowhead Country Club, Shandin Hills Golf Club, Sierra Lakes Golf Club, Redlands Country Club, Oak Quarry Golf Club, Fairmont Golf Course, Yucaipa Valley Golf Club, and more. It would be highly speculative to assume which golf courses the golfers would use that currently use the on-site San Bernardino Golf Club. Golf courses are regularly maintained and professionally managed and it is not reasonably foreseeable that other golf courses would physically deteriorate should they be used by golfers that currently use the San Bernardino Golf Club. Thus, the physical deterioration of recreational facilities is not reasonably expected to occur.

The Project proposes to redevelop the Project site with one high cube logistics warehouse building. The Project does not propose to construct any new on- or off-site recreation facilities nor does the Project propose to expand any existing off-site recreational facilities. Therefore, implementation of the proposed Project has no potential to result in adverse environmental physical effects related to the recreational facilities or the construction or expansion of recreational facilities. As such, no impact would occur to the environmental issue of Recreation as a result of implementation of the Project.

6.0 ALTERNATIVES TO THE PROPOSED PROJECT

CEQA Guidelines § 15126.6(a) describes the scope of analysis that is required when evaluating alternatives to proposed projects, as follows:

> *"An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selection of a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason."*

As discussed in Section 4.0, *Environmental Analysis*, the proposed Project would result in significant adverse environmental effects that cannot be mitigated to below levels of significance after the implementation of Project design features, mandatory regulatory requirements, and feasible mitigation measures. The unavoidable significant impacts are:

- Air Quality – Significant and Unavoidable Direct and Cumulatively Considerable Impact (AQMP Compliance). Because the SCAQMD's daily significance thresholds for air pollutants would be exceeded during the Project's operation even after the implementation of feasible mitigation measures (see below), the Project would not fully mitigate its conflict with the *Final 2016 AQMP*.

- Air Quality - Significant and Unavoidable Direct and Cumulatively Considerable Impact (Project Operation). The Project would exceed the applicable SCAQMD regional thresholds for NO_X emissions during operation. Emissions of NO_X also would contribute to an existing air quality violation in the SCAB (i.e., ozone – NOx is a precursor for ozone). As such, Project-related emissions would violate SCAQMD air quality standards and contribute to the non-attainment of a criteria pollutant (i.e., NO_X and ozone). The effects to human health from NO_X exposure in the SCAB are decreases in lung function, such as asthma and pulmonary diseases. Mitigation measures would reduce the Project's operational NO_X emissions by reducing demand for certain types of energy resource to operate the building. However, mobile source (tailpipe) emissions account for approximately 94 percent, by weight, of the Project's total operational emissions. Mobile source emissions are regulated by standards imposed by federal and State agencies, not local governments. The types of vehicle engines and the types of fuel used by trucking companies and vehicle operators that may access the Project site are well beyond the direct control of the City of San Bernardino. CEQA Guidelines §15091 provides that mitigation measures must be within the responsibility and jurisdiction of the Lead Agency

in order to be implemented. No other mitigation measures are available that are feasible for the Project Applicant to implement and the City of San Bernardino to enforce that have a proportional nexus to the Project's level of impact.

- Greenhouse Gas Emissions – Significant and Unavoidable Cumulatively Considerable Impact. The Project is calculated to generate approximately 18,515.33 MTCO2e annually, which would exceed the SCAQMD screening threshold of 10,000 MTCO2e for greenhouse gas emissions. Required compliance with the California Code of Regulations Titles 20 and 24, and the application of mitigation measures would reduce Project-related greenhouse gas emissions; however, these measures would not substantially reduce Project-related mobile source emissions, which comprise approximately 85 percent of the Project's total greenhouse gas emissions. Mobile source emissions are regulated by State and federal laws pertaining to vehicle engines and fuel, and are outside of the control of the Project Applicant, future Project occupants, and the City of San Bernardino. CEQA Guidelines § 15091 provides that mitigation measures must be within the responsibility and jurisdiction of the Lead Agency in order to be implemented. No other mitigation measures are available that are feasible for the Project Applicant to implement and for the City of San Bernardino to enforce that have a proportional nexus to the Project's level of impact.

- Land Use /Planning - Significant and Unavoidable Impact. The Project would be inconsistent with the growth projections for the Project site assumed by the *Final 2016 AQMP*, and the inconsistency would result in a significant environmental impact due to long-term criteria pollutant emissions. Because the *Final 2016 AQMP* is a long-range plan intended to reduce impacts to the environment, the Project's inconsistency is regarded as a significant direct and cumulatively considerable land use/planning impact.

- Noise - Significant and Unavoidable Direct and Cumulatively Considerable Off-Site Traffic-Related Noise Impact. Off-site Project-related traffic noise impacts would be significant for all analyzed traffic scenarios (Existing plus Project; Existing plus Ambient 2018; Existing plus Ambient Plus Cumulative 2018; and Horizon Year 2040) for the one roadway segment identified as Washington Avenue south of Orange Show Road (ID #1) because the Project would increase the noise level by a perceptible amount at receiver locations. Under existing conditions, the properties adjacent to this roadway segment are non-conforming residential uses located on properties designated by the San Bernardino General Plan as "Industrial-Industrial Light (IL)." Mitigation measures considered by the City of San Bernardino to address this impact were dismissed because they would be ineffective or infeasible.

- Transportation / Circulation - Significant and Unavoidable Cumulatively Considerable Impact. The Project would not cause any study area intersection to operate at unacceptable LOS; however, the Project would result in a cumulatively considerable impact at two intersections in the Horizon Year (2040) – the E Street / Auto Center Drive / Orange Show Road intersection (a Congestion Management Plan (CMP) intersection) and the Waterman Avenue / I-10

Westbound On-Ramp intersection, which are calculated to operate an unacceptable LOS with or without the addition of Project traffic. Mitigation measures would require the Project to pay development impact fees and participate in fair-share funding programs for improvements. However, to achieve acceptable LOS conditions, these intersections require improvements that either: 1) are not under the sole jurisdictional authority of the City of San Bernardino (meaning the City of San Bernardino cannot assure that the recommended improvements would be implemented); and/or 2) are not included in any existing mitigation funding program to ensure a date-certain installation.

6.1 ALTERNATIVES UNDER CONSIDERATION

CEQA Guidelines § 15126.6(e) requires that an EIR include an alternative that describes what would reasonably be expected to occur on the property in the foreseeable future if the Project were not approved, based on current plans and consistent with available infrastructure and community services (i.e., "no project" alternative). For development projects that include a revision to an existing land use plan, the "no project" alternative is considered to be the continuation of the existing land use plan into the future. For projects other than a land use plan (for example, a development project on an identifiable property), the "no project" alternative is considered to be a circumstance under which the project does not proceed (CEQA Guidelines § 15126(e)(3)(A-B). For the alternatives analysis in this EIR, the potential circumstance where the Project does not proceed is considered to be the No Project Alternative.

The following circumstances are identified by the City of San Bernardino as potential alternatives to implementation of the proposed Project.

6.1.1 NO PROJECT ALTERNATIVE

The No Project Alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project to an alternative that would leave the property in its existing condition as the San Bernardino Public Golf Club.

6.1.2 EASTERN ACCESS ONLY ALTERNATIVE

The Eastern Access Only Alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project to an alternative that would not install a northern access driveway between the Project site and Orange Show Road. This alternative would instead only provide ingress/egress to/from the east via a driveway connection to existing S. Waterman Avenue.

6.1.3 SMALLER BUILDING WITH TRUCK TRAILER PARKING ALTERNATIVE

The Smaller Building with Truck Trailer Parking Alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project to an alternative that would grade the entire property but develop a smaller 600,000 s.f. building on the Project site, with the remainder of the site developed with a truck trailer parking area to service the on-site building.

6.1.4 SMALLER BUILDING ALTERNATIVE – THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The Smaller Building Alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project to an alternative that would develop the Project site with a smaller 600,000 s.f. building and leave the remaining property not required for building development as open space, as an abandoned portion of the existing San Bernardino Public Golf Club.

6.2 ALTERNATIVES CONSIDERED AND REJECTED

An EIR is required to identify any alternatives that were considered by the Lead Agency but were rejected as infeasible. Among the factors described by CEQA Guidelines § 15126.6 in determining whether to exclude alternatives from detailed consideration in the EIR are: a) failure to meet most of the basic project objectives, b) infeasibility, or c) inability to avoid significant environmental impacts. With respect to the feasibility of potential alternatives to the proposed Project, CEQA Guidelines § 15126.6(f) (1) notes:

> *"Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries…and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site…"*

In determining an appropriate range of alternatives to be evaluated in this EIR, alternative sites were considered and, for a variety of reasons, rejected. One other alternative, the No Project/Existing General Plan Designation Alternative, was considered but rejected from consideration. Alternatives can be dismissed from analysis because either: 1) they could not accomplish the basic objectives of the Project, 2) they would not have resulted in a reduction of significant adverse environmental impacts, or 3) they were considered infeasible to construct or operate. A summary of the alternatives that were considered but rejected from further evaluation are described below.

6.2.1 NO PROJECT / EXISTING GENERAL PLAN DESIGNATION ALTERNATIVE

The City of San Bernardino General Plan designates the majority of the Project site for "Open Space-Public/Commercial Recreation (PCR)" with intended uses as intensive recreational uses, such as golf courses, sports complexes, and fair grounds, as approved through the public review process (City of San Benardino, 2005a. Table LU-2). A small area in the northwest portion of the Project site is designated "Industrial-Industrial Light (IL)." The Lead Agency considered but rejected the No Project /Existing General Plan Designation Alternative because the use of the site as a golf course is already addressed under the No Project Alternative and the development of a sports park or fair ground on the Project site is highly speculative and would not meet any of the Project's objectives.

6.2.2 ALTERNATIVE SITES

CEQA does not require that an EIR always include an analysis of alternative sites. However, if the surrounding circumstances make it reasonable to consider an alternative site then this alternative

should be considered and analyzed in the EIR. In making the decision to include or exclude analysis of an alternative site, the "*key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR"* (CEQA Guidelines § 15126.6(f) (2)).

Under existing conditions, the majority of the Project site is developed and operating as the San Bernardino Public Golf Club. The Project site is located approximately 1.3 miles east of I-215 and approximately 0.50 miles north of I-10, both of which provide accessibility to/from the Project site to the existing regional transportation system that facilitates the efficient movement of goods as part of the California goods movement network.

The Project site is located in an area surrounded mainly by lands designated as "Industrial-Industrial Light (IL)," "Industrial - Office Industrial Park (OIP)," and "Public Facility /Quasi Public – Publicly Owned Flood Control (PFC)." Existing surrounding uses include the following:

North: Directly north of the Project site is a golf driving range. North of the driving range is land developed with scattered residences and the First Presbyterian Church and its associated infrastructure, all with access via E. Dumas Street. Located north of a small portion of the Project site is Dumas Street. Dumas Street is currently an unimproved roadway. North of Dumas Street is vacant undeveloped land, S. Washington Avenue, land developed with scattered residential homes, truck trailer parking lots, S. Amos Street, and the Atchison, Topeka, and Santa Fe Railway (ATSF).

South: Located south of the Project site is the Santa Ana River and Wash. The San Timoteo Wash joins the Santa Ana River and Wash southeast of the Project site. South of the Santa Ana River and Wash and the San Timoteo Wash is the Santa Ana River Trail. South of the Santa Ana River Trail is land developed with office and commercial uses.

East: S. Waterman Avenue forms the eastern boundary of the Project site. East of S. Waterman Avenue are commercial and office uses and a portion of the Santa Ana River and Wash.

West: Located directly west of the Project site is East Twin Creek and an associated unpaved trail that traverses along the bank of the channel. West of East Twin Creek is the San Bernardino Water Reclamation Facility (WRF).

Based on review of aerial photography, the San Bernardino General Plan Land Use Map, and a list of approved/pending development proposals within the City of San Bernardino (refer to Table 4.0-1, *Cumulative Development Land Use Summary* and 4.0-1, *Cumulative Development Projects Location Map* in EIR Section 4.0, *Environmental Analysis)*, there are no other available properties in the City of San Bernardino of similar size and accessibility to the regional goods movement system that the

Project Applicant has the reasonable possibility of controlling and that would have fewer developmental and environmental constraints than the Project site evaluated in this EIR.
Development of the Project in an alternative location would have similar impacts, with the potential for greater impacts, as would occur with implementation of the Project at its proposed location. In addition, most parcels of land of similar size to the Project site and that could accommodate the proposed Project's development are located farther from I-215 and I-10 than the Project site or are undeveloped and have greater environmental sensitivity than the site of the San Bernardino Public Golf Club. Because developing the Project at a location further from the major roadways would require vehicles traveling to and from the Project to travel a farther distance on local roadways to access the state highway system, environmental operational impacts associated with traffic, vehicular noise, and air pollutant emissions would be greater than those of the proposed Project. Also, because developing the Project on an undeveloped property as compared to property that has already been developed as a golf course, there is much greater potential for impacts to occur to the natural physical environment, such as biological resources, cultural resources, and geology/soils.

According to SCAG's *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)*, by 2040, the SCAG region may experience a shortfall of more than 527 million square feet of warehouse space, relative to demand (SCAG, 2016a, p. 55). Thus, given the regional demand for logistics and warehousing space in the SCAG region, it is likely that the selection of an alternative site would not eliminate the Project's environmental effects, but merely displace the development activity proposed by the Project to another location resulting in the same or greater environmental effects in the region.

For the reasons discussed above, an alternative sites analysis is not required for the proposed Project.

6.2.3 ALTERNATIVES ANALYSIS

The following discussion compares the impacts of each alternative considered by the Lead Agency with the impacts of the proposed Project, as detailed in Section 4.0, *Environmental Analysis*, of this EIR. A conclusion is provided to indicate if selection of the alternative would result in one of the following: (1) reduction or elimination of the proposed Project's impact, (2) a greater impact than would occur under the proposed Project, (3) the same impact as the proposed Project, or (4) a new impact in addition to the proposed Project's impacts. Table 6-1, *Alternatives to the Proposed Project – Comparison of Environmental Impacts* at the end of this Section compares the environmental impacts of the alternatives with those of the proposed Project and identifies the ability of each alternative to meet the basic objectives of the Project.

The underlying purpose of the proposed Project is to facilitate the reuse of the San Bernardino Public Golf Club in the City of San Bernardino for commerce and employment-generating purposes. The following objectives are intended to achieve this underlying purpose:

A. To remove the existing San Bernardino Public Golf Club and expeditiously redevelop the property.

B. To redevelop the San Bernardino Public Golf Club property with an employment-generating use that is compatible with existing and planned industrial warehousing development found in the surrounding area.

C. To develop a logistics warehouse use that capitalizes on the transportation and locational strengths of San Bernardino.

D. To develop a logistics warehouse use that meets industry standards for modern, operational design criteria and can accommodate a wide variety of users.

E. To attract new employment-generating business to San Bernardino, thereby reducing the needs of the local workforce to commute outside of the area for employment.

F. To develop a logistics warehouse use that offers truck loading docks and truck trailer parking in close proximity to the regional transportation system in order to facilitate the efficient movement of goods as part of the southern California goods movement network.

G. To develop a high cube logistics warehouse use that is economically competitive with similar industrial warehouse buildings in the County of San Bernardino and the surrounding region.

H. To increase the amount of available industrial warehouse space in the City of San Bernardino to attract new businesses and jobs to the City.

6.2.4 NO PROJECT ALTERNATIVE

The No Project Alternative considers no development/disturbance on the Project site beyond that which occurs under existing conditions. As such, this alternative assumes that the San Bernardino Public Golf Club would remain in operation on the site for the foreseeable future. If the golf club is closed in the future due to economic or other conditions, it would be speculative to foresee if the site would attract another golf club tenant or if the site would be left as an abandoned golf course. However, because the location of an existing driving range located north of the Project site has already been approved for the development of a warehouse building, the more likely scenario is an abandoned golf course. Regardless, the analysis of the No Project Alternative considered in this EIR assumes continuation of the San Bernardino Public Golf Club.

The entire approximately 62.02-acre site would remain developed as described in Subsection 6.2.2 and in EIR Section 2.0, *Environmental Setting*. In summary, under existing conditions, the 18-hole golf course comprises the majority of the central and southern portion of the site. The golf course contains a variety of ornamental landscaping including expansive grass lawns (fairways), mature trees and shrubs, golf cart trails, numerous sand pits, and four water features. The golf course is generally dominated by small hills and slopes as is typical for a golf course. Site improvements associated with the golf course are located north of the golf course fairways and include a clubhouse/restaurant, parking

lot, maintenance building, and driving range. Several Southern California (SCE) transmission lines transect the central portion of the site from east to west.

Under the No Project Alternative, no further improvements would be made to the Project site and none of the Project's roadway, utility, or other infrastructure improvements would be constructed. This alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project with an alternative that would leave the property in its existing condition. Because this alternative would avoid all of the Project's adverse environmental impacts, it warrants consideration as the "environmentally superior alternative." However, pursuant to CEQA Guidelines § 15126.6(e)(2), if a no project alternative is identified as the "environmentally superior alternative" then the EIR shall also identify an environmentally superior alternative among the other alternatives. The Smaller Building Alternative, as described in Subsection 6.2.7, below, is identified as the "environmentally superior alternative."

A. Aesthetics

As described in EIR Subsection 4.1, *Aesthetics*, the Project site does not contain any scenic vistas and does not offer unique views of any visually prominent aesthetic features. The Project site is not visible from a state scenic highway and the site contains no scenic resources visible from a state scenic highway. Under the No Project Alternative, the visual character of the site would remain as it is under existing conditions. Although the proposed Project would result in a change to the existing visual character of the site (a public golf course to a high cube logistics warehouse building with associated improvements), the Project incorporates a number of site design, architectural, and landscaping elements that would ensure the provision of a high-quality development as seen from public viewing areas and the visual character of the site would not be substantially degraded. In addition, because the Project site does not contain any scenic vistas, does not offer unique views of any visually prominent aesthetic features, is not visible from a state scenic highway, and contains no scenic resources visible from a state scenic highway; the No Project Alternative would result in similar impacts associated with aesthetics as compared to the proposed Project.

In conclusion, the proposed Project would result in less-than-significant aesthetic impacts. This alternative would result in no aesthetic impacts; thus, the Project's less-than-significant aesthetic impacts would be avoided.

B. Air Quality

Under the No Project Alternative, the Project site would not be developed with one high cube logistics warehouse building and therefore would not generate any new traffic; thereby avoiding the proposed Project's energy-source, area-source, and mobile-source air pollutant emissions. Also, all construction-related air quality emissions associated with the Project's construction would be avoided. Because the No Project Alternative would not result in new air pollutant emissions, including long-term emissions of NO_X that would exceed SCAQMD's air quality standards on a daily basis and would not result in long-term emissions of NO_X that would cumulatively contribute to an existing air quality

violation in the SCAB (i.e., ozone concentrations) as well as cumulatively contribute to the net increase of a criteria pollutant for which the SCAB is in non-attainment (i.e., federal and state ozone concentrations), impacts associated with air quality would be less under the No Project Alternative as compared to the proposed Project. Under this alternative, impacts associated with air quality would be less than significant; whereas, the proposed Project's air quality impacts would be significant and unavoidable.

Although selection of the No Project Alternative would prevent the Project site from new development, it would not necessarily prevent another project of its nature from being developed in another location in response to the demand for warehouse space in the City of San Bernardino and surrounding area. As such, it is possible that selection of the No Project Alternative would merely displace the Project's air pollutant emissions to another location in the SCAB resulting in the same or greater environmental effects.

In conclusion, the proposed Project would result in significant and unavoidable air quality impacts with mitigation. This alternative would result in no air quality impacts; thus, the Project's significant and unavoidable air quality impacts would be avoided.

C. Biological Resources

As described in EIR Subsection 4.3, *Biological Resources,* the Project site does not contain sensitive habitat communities or sensitive plant species and no sensitive species have the potential to occur on the Project site with the exception of nesting migratory birds. No riparian habitats or special-status plant communities occur within the boundaries of the Project site and the Project site is not located within federally designated Critical Habitat. The Project site is not located within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan and the Project site is not identified as a wildlife corridor or linkage or native wildlife nursery. However, the Santa Ana River, located to the south of the Project site is identified as a wildlife corridor by the San Bernardino County General Plan.

Because the No Development Alternative would continue the site's existing condition, the Project's potential impacts to migratory birds associated with tree removals would be avoided. If any tree removals would occur under this alternative as part of golf course operations, similar to the proposed Project, compliance with the Migratory Bird Treaty Act (MBTA) would be required. Tree removals would be fewer under this alternative; therefore, impacts to biological resources would be reduced compared to the proposed Project.

In conclusion, the proposed Project would result in less-than-significant biological resource impacts with mitigation. This alternative would result in fewer tree removals and thus fewer potential impacts to migratory birds; thus, the Project's biological resource impacts would be reduced.

D. Cultural Resources

As described in EIR Subsection 4.4, *Cultural Resources*, the San Bernardino Public Golf Club does not meet any criteria for listing on the California Register of Historic Places (CRHR) and as such, is not considered a historical resource for the purposes of CEQA. There are no known archaeological resources within the Project area and a low potential for encountering intact buried archaeological deposits within the Project area. In addition, the Quaternary alluvium deposits on the Project site have a low paleontological resource potential because they are too young to contain fossilized materials. Although there are no known archaeological or tribal cultural resources present on the Project site, there is a potential that such resources could be unearthed during the Project's ground-disturbing construction activities and significantly impacted if not properly identified and treated. Under the No Project Alternative, the site would remain in use as a golf course; therefore, there is no potential to uncover previously undiscovered cultural resources as part of a construction operation and potentially impact significant resources.

In conclusion, the proposed Project would result in less-than-significant cultural resource impacts with mitigation. This alternative would result in no cultural resources impacts; thus, the Project's cultural resources impacts would be avoided.

E. Geology / Soils

Because no known earthquake faults underlie the Project site, there is no potential for the Project or the No Project Alternative to expose people or structures to substantial adverse effects, including the risk of loss, injury, or death related to hazards from a rupture of a known earthquake fault. As with most regions of southern California, the Project site is subject to seismic ground shaking. In addition, the Project site is located within a zone of moderate to high liquefaction susceptibility.

Under the No Project Alternative, the existing structures would remain on site. Whereas the high cube logistics warehouse building proposed by the Project would be required to be constructed in accordance with the latest applicable seismic safety guidelines, the most recent California Building Standards Code (CBCS), and the site-specific grading and construction recommendations contained within the Project's geotechnical feasibility study (*Technical Appendix E1*) as conditions of Project approval, the structures that would remain on the Project site under the No Project Alternative are older (the clubhouse was constructed in 1968) and are likely more susceptible to damage as the result of seismic ground shaking and liquefaction as compared to the proposed Project.

While the proposed Project would result in short-term erosion impacts during construction on the Project site, the No Project Alternative is already developed and therefore no short-term erosion due to grading of the site would occur. However, because the Project would be designed with landscaping and more impervious surface area than the No Project Alternative and would be controlled through a storm drain system including a water quality/detention basin, the No Project Alternative would result in more long-term erosion and loss of topsoil than the proposed Project. Because the No Project Alternative comprises lands that have been developed for years as a golf course, the No Project

Alternative would not implement a Storm Water Pollution Plan (SWPPP) or be required to adhere with a Water Quality Management Plan (WQMP) as required of the proposed Project.

Under existing conditions, the Project site contains a golf cart wash down area and sump and two septic tanks and leach fields that would remain on the Project site under the No Project Alternative. (Terracon Consultants Inc., 2016, pp. ii-iii). The Project does not propose the use of septic tanks or alternative wastewater disposal systems and instead would install domestic sewer infrastructure and connect to the City of San Bernardino Municipal Water Department (SBMWD) existing sewer conveyance and treatment system.

In conclusion, the proposed Project would result in less-than-significant geology and soils impacts. This alternative would not avoid all geology and soils impacts associated with the site because the golf course structures would be subject to seismic shaking and erosion has the potential to occur across the golf course surface, although these impacts would also be less-than-significant. Thus, geology and soils impacts are determined to be similar when the proposed Project is compared to the No Project Alternative.

F. Greenhouse Gas Emissions

Under the No Project Alternative, the Project site would continue to be operated as the San Bernardino Public Golf Club. No new development would occur on the Project site; therefore, there would be no potential sources of additional near-term or long-term greenhouse gas (GHG) emissions. Selection of this alternative would avoid all of the proposed Project's near- and long-term effects associated with GHG emissions. No impacts would occur under this alternative.

Although selection of the No Project Alternative would prevent the Project site from new development, it would not necessarily prevent another project of its nature from being developed in another location in response to the demand for warehouse space in the City of San Bernardino and surrounding area. As such, it is possible that selection of the No Project Alternative would merely displace the Project's GHG emissions to another location in the SCAB resulting in the same or greater environmental effects.

In conclusion, the proposed Project would result in significant and unavoidable GHG impacts. This alternative would result in no on-site related GHG emissions impacts; thus, the Project's GHG impact would be avoided.

G. Hazards and Hazardous Materials

Because no warehouse development would occur on the Project site under the No Project Alternative, no impacts related to hazards or hazardous materials would occur beyond those that would occur with ongoing operation of the golf course. Thus, selection of this alternative would avoid the Project's less-than-significant impacts related to hazards and hazardous materials, but would continue the existence of potential hazards associated with the golf course. As discussed in EIR Subsection 4.7, *Hazards and Hazardous Materials*, during site reconnaissance, Terracon observed a golf cart wash down area and

sump, one 1,000-gallon two-compartments gasoline and diesel AST, two septic tanks and leach fields, interior floor drains, one floor-mounted transformer, one solid waste disposal dumpster, and one grease trap.

Similar to the proposed Project and any other development that uses, stores, or transports hazardous materials, the No Project Alternative would be required to comply with the same federal, state, and local regulations as the proposed Project, which would preclude potential significant adverse impacts related to hazardous materials.

In conclusion, the proposed Project would result in less-than-significant hazards and hazardous materials impacts. This alternative would not avoid all hazard and hazardous materials impacts associated with the site because the golf course contains existing materials considered hazardous, although these impacts would also be less-than-significant. Thus, hazards and hazardous materials impacts are determined to be similar when the proposed Project is compared to the No Project Alternative.

H. Hydrology / Water Quality

The No Project Alternative would result in no grading or development of the property; therefore, no changes to existing hydrology or water quality would occur. As described in EIR Subsection 4.8, *Hydrology/Water Quality*, the drainage pattern of the Project site under existing conditions is depicted on Figure 4.8-2, *Existing Condition Hydrology Map.* Runoff from the southerly two-thirds of the site generally drains southwesterly towards the Santa Ana River via several natural drainage courses. Runoff from the existing drive aisle, the parking lot, clubhouse, and areas west of the clubhouse drain westerly towards East Twin Creek.

The proposed Project would incorporate a storm drain system that would reduce the total peak flow for the Project site from existing conditions and the Project would install an on-site water quality/detention basin that would reduce peak flow to less than occurs under the existing condition. In addition, because the Project would be required to comply with the BMPs in the Project's WQMP, the potential for the Project to result in water quality impacts and substantial erosion or siltation on- or off-site is less than the No Project Alternative because in the existing condition, water flows over the golf course surface which carries sediment and pollutants.

In conclusion, the proposed Project would result in less-than-significant hydrology and water quality impacts. This alternative would not avoid all hydrology and water quality impacts associated with the site because runoff over the golf course carries sediment and pollutants, although these impacts would also be less-than-significant. Thus, hydrology and water quality impacts are determined to be similar when the proposed Project is compared to the No Project Alternative.

I. Land Use / Planning

As shown on Figure 2-2, *Existing General Plan Land Use Designations*, in EIR Section 2.0, *Environmental Setting*, the City of San Bernardino General Plan designates the majority of the Project site for "Open Space-Public/Commercial Recreation (PCR)," which is compatible with the on-site golf course. A small area in the northwest portion of the Project site is designated "Industrial-Industrial Light (IL)." Although the Project proposes a warehouse use which is a type of development that is consistent with the land use development patterns established by the General Plan for properties surrounding the Project site, the Project proposes a General Plan Amendment to change the site's PCR land use designation to IL. As such, the Project is not consistent with the site's existing General Plan land use designation or the associated zoning, whereas the No Project Alternative is consistent. Also, because the proposed Project is not consistent with the existing General Plan, which is relied upon by the SCAQMD for growth projections used to set air quality attainment goals documented in the Air Quality Management Plan (AQMP), and the Project would result in unavoidable air quality impacts, the Project is also considered to be inconsistent with the SCAQMD's 2016 AQMP. In comparison, the No Project Alternative would be consistent.

In conclusion, the proposed Project would result in significant and unavoidable land use / planning impacts associated. This alternative would result in no land use / planning impacts; thus, the Project's land use / planning impacts would be avoided.

J. Noise

Because no development would occur on the Project site under this alternative, no construction noise would occur and no new sources of stationary noise would be introduced. Also, because the Project's proposed high cube logistics warehouse building would not be built, no vehicle trips would be generated other than those that already occur under existing conditions associated mainly with employees and customers of the San Bernardino Public Golf Club. Because the No Project Alternative would not generate any new traffic, additional traffic-generated vehicular noise would not occur. In addition, because the No Project Alternative would not construct any Project access roadways north of the Project site, the Project's significant and unavoidable off-site traffic-related noise impact in this area would not occur.

In conclusion, the proposed Project would result in a significant and unavoidable noise impacts after mitigation associated with vehicle noise on the proposed off-site access road. This alternative would result in no noise impacts; thus, the Project's noise impacts would be avoided.

K. Traffic / Circulation

Under the No Project Alternative, the Project site would not be developed with one high cube logistics warehouse building and therefore would not generate any new passenger care equivalent (PCE) trip-ends per day; thereby not adding any new traffic to the surrounding roadways. Selection of the No Project Alternative would avoid the proposed Project's cumulatively considerable traffic impact at two intersections in the Horizon Year (2040) – the E Street / Auto Center Drive / Orange Show Road

intersection (a CMP roadway) and the Waterman Avenue / I-10 Westbound On-Ramp intersection – under Horizon Year (2040) traffic conditions, which are calculated to operate an unacceptable LOS with or without the addition of Project traffic. Because no new development would occur on the Project site under the No Project Alternative, no development impact fees would be paid and no Project-related contributions to fair-share funding programs would benefit the local roadway network.

In conclusion, the proposed Project would result in significant and unavoidable transportation and traffic impacts after mitigation. This alternative would result in no transportation and traffic impacts; thus, the Project's transportation and traffic impacts would be avoided.

L. Utilities / Service Systems

The No Project Alternative considers continuation of the San Bernardino Public Golf Club that generally results in less of a service demand for utilities and service systems than the one high cube logistics warehouse building proposed by the Project. However, the No Project Alternative would result in a greater water demand than the proposed Project because of the need to irrigate the golf course. Under both the proposed Project and the No Project Alternative, impacts associated with utilities / service systems would be less than significant; however, because the No Project Alternative would result in a greater water demand than the proposed Project, the No Project Alternative would result in greater impacts associated with utilities / service systems than the proposed Project. In addition, the No Project Alternative is comprised of the existing condition under which the San Bernardino Public Golf Club utilizes two 750 gallon and 500-gallon septic tanks. Also, numerous City of Riverside Public Utilities/Water Department (RPU) water wells and pipelines occur on the property and the No Project Alternative would not have the financial ability to replace, realign, and abandon these facilities, whereas the replacement, realignment, and abandonment of wells and pipelines are the responsibility of the proposed Project as described in EIR Section 3.0, *Project Description*. In summary, although the No Project Alternative would result in less of a demand for utilities such as electricity, natural gas, and the collection and disposal of solid waste, for the reasons mentioned above, water demand associated with utilities / service systems would be greater under the No Project Alternative than the proposed Project.

In conclusion, the proposed Project would result in less-than-significant utilities and service system impacts. Compared to the proposed Project, this alternative would result in a greater water demand and a lesser demand for other utilities and services, but associated impacts would also be less-than-significant. Thus, utilities / service systems impacts are determined to be similar when the proposed Project is compared to the No Project Alternative.

M. Conclusion

Compared to the proposed Project, the selection of this alternative would avoid or reduce all of the Project's significant adverse effects on the environment, except for impacts associated with geology/soils, hazards and hazardous materials, hydrology/water quality, and utilities/service systems,

which would be similar when the No Project Alternative is compared to the Proposed Project. The No Project Alternative would not meet any of the Project's eight objectives.

6.2.5 EASTERN ACCESS ONLY ALTERNATIVE

Under this Alternative, the Project site would be developed as described in EIR Section 3.0, *Project Description*, with the exception that the Project site would be accessed only via S. Waterman Avenue and no northern access to/from the Project site would be constructed. The proposed Project includes the installation of an off-site access driveway between the northern boundary of the Project site and Orange Show Road. Vehicular noise generated by automobiles and trucks using this driveway would elevate noise levels experienced by adjacent properties to perceptible levels that exceed the significance criteria identified for noise impacts in this EIR. The Eastern Access Only Alternative is intended to avoid the off-site access driveway.

A. Aesthetics

Under the Eastern Access Only Alternative, the visual character of the site would be identical to that of the proposed Project with the exception that no northern access to the Project site would be constructed. Therefore, during short-term construction activities, there would be no immediately adjacent heavy equipment visible to the properties abutting unimproved Dumas Street, existing Washington Avenue, or Orange Show Road. In addition, because no northern access would be constructed, Dumas Street would remain as an unimproved roadway and the public view of the Project site from Orange Show Road would remain as it does under existing conditions. Although the aesthetics of the main portion of the site containing the high cube logistics warehouse building and associated landscaping, parking, and truck drive court would be the same as the proposed Project, because the northern Project access roadways would not be constructed, impacts associated with aesthetics would be slightly reduced under the Eastern Access Only Alternative as compared to the proposed Project.

In conclusion, the proposed Project would result in less-than-significant aesthetic impacts. This alternative would result in slightly fewer aesthetic impacts; thus, the Project's less-than-significant aesthetic impacts would be reduced.

B. Air Quality

Because the Eastern Access Only Alternative would not construct a northern access roadway to the Project site, the number of days that short-term construction air pollutants would occur would be slightly fewer as compared to the proposed Project. The maximum total daily emissions would be the same. Although the Eastern Access Only Alternative would not include a northern access to/from the Project site, it would still result in the same number of vehicle trips per day as the proposed Project and thereby the same amount of mobile air pollutant emissions and operational air emissions. Therefore, under the Eastern Access Only Alternative, air quality impacts would be similar to the proposed Project.

In conclusion, the proposed Project would result in significant and unavoidable air quality impacts with mitigation. This alternative would result in generally the same air quality impacts; thus, the Project's significant and unavoidable air quality impacts would not be reduced or avoided.

C. Biological Resources

Because no northern access to the Project site would be constructed under the Eastern Access Only Alternative, a slightly smaller amount of land would be disturbed by construction and operation of this alternative as compared to the proposed Project. However, there are no sensitive biological resources located in the proposed off-site access road alignment. Similar to the proposed Project, the Eastern Access Only Alternative would result in disturbance of the entire Project site and the removal of trees that have the potential to contain nesting birds. Similar to the proposed Project, this alternative would be required to comply with the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code to protect nesting birds.

In conclusion, the proposed Project would result in less-than-significant biological resource impacts with mitigation. This alternative would result in the same impact to sensitive biological resources; thus, the Project's biological resource impacts would not be reduced or avoided.

D. Cultural Resources

Because no northern access to the Project site would be constructed under the Eastern Access Only Alternative, a slightly smaller amount of land would be disturbed by construction and operation of the Project. Under this alternative, although slightly less land would be disturbed, similar to the proposed Project, there is the potential to uncover previously undiscovered archaeological resources during mass grading and excavation activities, there is the potential to uncover previously unearthed paleontological resources, and although there are no cemeteries or no known human remains on the Project site, there is a potential to uncover previously undiscovered human remains. Thus, the same regulatory requirements and mitigation measures that apply to the Project would apply to this alternative. If archaeological resources are unearthed during construction activities, and they meet the definition of a significant archeological resource as defined by California Code of Regulations § 15064.5, mitigation would be required to ensure the archeological resource(s) is properly identified and treated. In addition, because there is the potential that Project-related ground disturbing activities could extend into sensitive Pleistocene age alluvial deposits that are buried at unknown depth within the boundary of the Project site and unearth significant paleontological resources, mitigation would be required to ensure significant specimens recovered shall be properly recorded, treated, and donated to the San Bernardino County Museum, Division of Geological Sciences, or other repository with permanent retrievable paleontologic storage. Lastly, due to mandatory compliance required of all ground-disturbing activities within the provisions of the California Health and Safety Code § 7050.5 as well as Public Resources Code § 5097 et. seq., human remains would be assured proper treatment if encountered.

In conclusion, the proposed Project would result in less-than-significant cultural resource impacts with mitigation. This alternative would result in slightly less potential to cause cultural resource impacts

due to a smaller disturbance footprint; thus, the Project's cultural resource impacts would be slightly reduced by this alternative.

E. Geology / Soils

Because no known earthquake faults underlie the Project site, there is no potential for the Project or the Eastern Access Alternative to expose people or structures to substantial adverse effects, including the risk of loss, injury, or death related to hazards from a rupture of a known earthquake fault. As with most regions of southern California, the Project site is subject to seismic ground shaking. In addition, the Project site is located within a zone of moderate to high liquefaction susceptibility. The same geology and soils impacts that would occur under the proposed Project would occur under this alternative. However, because no northern access to the Project site would be constructed under the Eastern Access Only Alternative, less property would be graded, resulting in fewer construction-related effects.

In conclusion, the proposed Project would result in less-than-significant geology / soils impacts. This alternative would result in slightly less potential to cause geology / soils impacts due to a smaller disturbance footprint; thus, the Project's geology / soils impacts would be slightly reduced by this alternative.

F. Greenhouse Gas Emissions

Although the Eastern Access Only Alternative would not include a northern access to/from the Project site, it would still result in the same amount of on-site development and the same number of vehicle trips per day as the proposed Project and thereby the same amount of greenhouse gas emissions. Therefore, under the Eastern Access Only Alternative, greenhouse gas impacts would be similar to the proposed Project.

In conclusion, the proposed Project would result in significant and unavoidable GHG impacts. This alternative would result in the same amount of GHG emissions; thus, the Project's GHG impact would not be reduced or avoided.

G. Hazards and Hazardous Materials

Although the Eastern Access Only Alternative would not include a northern access to/from the Project site, it would still result in the same amount of on-site development and the same potential use of hazardous materials as the proposed Project. However, by providing only one access to the surrounding roadway system under the Eastern Access Only Alternative, safety hazards to the site would be increased. Emergency vehicle access routes to the Project site would be limited, creating a potential safety hazard. Also, the driveway access at S. Waterman Avenue would experience a greater degree of congestion, also potentially creating hazards at this location.

In conclusion, the proposed Project would result in less-than-significant hazards and hazardous materials impacts. This alternative would increase potential hazards impacts by limiting access routes

to the site by emergency vehicles and resulting in a potentially significant and unavoidable impact to the environment associated with responding to hazards.

H. Hydrology / Water Quality

The hydrology and water quality conditions of the Project site under this alternative would be the same as those described for the proposed Project in EIR Subsection 4.8, *Hydrology/Water Quality*, except that because there would be no off-site access road to the north of the Project site, no storm drain and water quality features would need to be installed in that area to accommodate runoff from the street surface. Under this alternative and the proposed Project, a storm drain system would be installed on the site and designed to direct on-site runoff to an on-site detention/water quality basin, from which water would be discharged into the Santa Ana River at a peak flow rate that is approximately 25% less than the peak flow rate under existing conditions.

Similar to the proposed Project, the Eastern Access Only Alternative would result in the same potential hydrology /water quality impacts as the proposed Project and would be subject to the same regulations as the proposed Project, including requirements to comply with a Water Quality Management Plan (WQMP) and its best management practices (BMPs), the San Bernardino County's Municipal Storm Water Management Program and the National Pollutant Discharge Elimination System (NPDES) Permit.

In conclusion, the proposed Project would result in less-than-significant hydrology and water quality impacts. This alternative would result in slightly fewer hydrology and water quality impacts due to elimination of the off-site access road; thus, the Project's hydrology and water quality impacts would be slightly reduced.

I. Land Use / Planning

The City of San Bernardino General Plan designates the majority of the Project site for "Open Space-Public/Commercial Recreation (PCR)," and a small area in the northwest portion of the Project site is designated "Industrial-Industrial Light (IL)." Under both the proposed Project and this alternative, a General Plan Amendment would be required to change the site's PCR land use designation to IL. As such, neither the Project or this alternative would be consistent with the site's existing General Plan land use designation or the associated zoning. Similar to the proposed Project, because this alternative would not be consistent with the existing General Plan, which is relied upon by the SCAQMD for growth projections used to set air quality attainment goals documented in the Air Quality Management Plan (AQMP), and this alternative would result in unavoidable air quality impacts, this alternative is also considered to be inconsistent with the SCAQMD's 2016 AQMP. The same conclusion is drawn for the proposed Project.

In conclusion, both the proposed Project and this alternative would result in significant and unavoidable land use / planning impacts; thus, the Project's land use / planning impacts would not be reduced or avoided.

J. Noise

The same level of on-site construction noise and operational noise would occur under the proposed Project and the Eastern Access Only Alternative. Off-site, all construction-related noise associated with the Project's installation of an off-site access road to the north would be avoided because the road would not be installed. Also, because the Eastern Access Only Alternative would not include a northern access to/from the Project site, this alternative would not introduce any vehicular-related noise along this roadway alignment proposed by the Project. The impact that would be avoided by selection of this alternative is the Project's off-site vehicular-related noise impacts for all analyzed traffic scenarios (Existing plus Project; Existing plus Ambient 2018; Existing plus Ambient Plus Cumulative 2018; and Horizon Year 2040) for the one roadway segment identified as Washington Avenue south of Orange Show Road, along which vehicular noise would exceed the significance threshold of 65 dBA CNEL at this location.

K. Traffic / Circulation

Because the Eastern Access Only Alternative would not include a northern access to/from the Project site, all traffic to/from the site would need to access the Project site from S. Waterman Avenue. Because all traffic to/from the Project site would need to access the Project site via S. Waterman Avenue, the Eastern Access Only Alternative would result in additional traffic impacts at the following intersections: a) S. Waterman Avenue / Orange Show Road; b) S. Waterman Avenue / Dumas Street; and c) S. Waterman Avenue / Park Center Drive.

The Eastern Access Only Alternative would result in an increase of approximately 734 passenger car equivalent (PCE) trips per day at the above intersections, with 34 additional PCE trips in the AM peak hour and 46 additional PCE trips during the PM peak hour. The intersection of S. Waterman Avenue / Orange Show Road is calculated to operate at unacceptable level of service under Horizon Year (2040) traffic conditions. In addition, the intersection of S. Waterman Avenue / Park Center Drive is also likely to operate at unacceptable LOS under Horizon Year (2040) traffic conditions with the elimination of the northern access to the Project site.

In conclusion, the proposed Project would result in significant and unavoidable transportation and traffic impacts after mitigation. This alternative would result the same significant transportation and traffic impacts, and increase impacts at three intersections; thus, the Project's transportation and traffic impacts would be increased under this alternative.

L. Utilities / Service Systems

Because the Eastern Access Only Alternative would still construct the same high cube logistics warehouse building as the proposed Project, impacts associated with utilities / service systems would be the same for this alternative as the proposed Project.

M. Conclusion

Compared to the proposed Project, the Eastern Access Only Alternative would result in similar impacts to air quality, greenhouse gas emissions, and land use /planning. Because the Project's physical disturbance footprint would be slightly smaller due to elimination of the off-site access road, this alternative would slightly reduce impacts associated with aesthetics, biological resources, cultural resources; geology/soils; and hydrology /water quality. However, this alternative would result in increased impacts associated with transportation / circulation by concentrating all vehicular traffic entering and exiting the site at the intersection of the Project's driveway connection to S. Waterman Avenue. Further, hazards impacts would increase by limiting emergency vehicle access roads to the site. The Eastern Access Alternative would meet all of the Project's objectives, but would not achieve any substantial environmental benefits and would increase traffic / circulation impacts along S. Waterman Avenue and create a potential safety hazard by limiting access routes to the site by emergency vehicles.

6.2.6 SMALLER BUILDING WITH TRUCK TRAILER PARKING ALTERNATIVE

The Smaller Building with Truck Trailer Parking Alternative would grade the entire property and construct and operate an approximately 600,000 s.f. high cube logistics warehouse building and a truck trailer parking area on the Project site. The parking area would service the proposed on-site building and would not generate more traffic than would generated for the building itself. The parking lot would be paved and fenced and include artificial lighting for safety purposes.

A. Aesthetics

Under the Smaller Building with Truck Trailer Parking Alternative, the aesthetic quality and character of the building and associated improvements would be similar to the building to be constructed by the proposed Project, with the exception that the building would be smaller in size. The addition of a truck trailer parking area would change the aesthetic of the site as compared to the proposed Project; however not to a displeasing aesthetic quality. Although less building square footage would be constructed under this alternative, the reduction in building intensity would occur interior to the subject property and the aesthetics of the site, as seen from off-site, would be similar to that of the proposed Project, with the exception of a smaller building footprint and less graded land. Therefore, the Smaller Building Alternative with Truck Trailer Parking Alternative would result in similar aesthetic impacts as compared to the proposed Project.

In conclusion, the proposed Project would result in less-than-significant aesthetic impacts. This alternative would result in similar aesthetic impacts; thus, the Project's less-than-significant aesthetic impacts would not be reduced or avoided.

B. Air Quality

Because the Smaller Building with Truck Trailer Parking Alternative would construct an approximately 44% smaller building on the site, the construction schedule for this alternative would be slightly shorter in duration than the proposed Project. Also, the construction of a parking area

involves less intense construction activity than does the construction of a building. As such, short-term construction-related air quality emissions would occur over a slightly shorter period of time; whereas total daily emissions during construction activities on the Project site would be the same as the proposed Project's daily emissions. Therefore, the Smaller Building with Truck Trailer Parking Alternative would result in similar air quality pollutant emissions associated with short-term construction as the proposed Project.

Because the Smaller Building with Truck Trailer Parking Alternative would reduce the Project's building area by approximately 44%, the Smaller Building with Truck Trailer Parking Alternative would generate concomitant less traffic. Because this alternative would generate fewer vehicle trips than the proposed Project, the mobile source emissions resulting from the Smaller Building with Truck Trailer Parking Alternative would be concomitantly reduced as compared to the proposed Project. Similarly, air pollutant emissions associated with operation of the building would be proportionately reduced. Emissions of NOx would still exceed the SCAQMD regional threshold of 55 lbs/day by a substantial margin.

Although selection of the Smaller Building with Truck Trailer Parking Alternative would reduce the amount of building space available on the site, it would not necessarily prevent other sites from capturing the building space in response to the demand for warehouse space in the City of San Bernardino and surrounding area. As such, it is possible that selection of the Smaller Building with Truck Trailer Parking Alternative would merely displace the air pollutant emissions that would have otherwise be attributed to development of a larger building on the Project site to another location in the SCAB resulting in the same or greater environmental effects to regional air quality.

In conclusion, the proposed Project would result in significant and unavoidable air quality impacts with mitigation. This alternative would reduce air quality impacts, but not to below a level of significance; thus, the Project's significant and unavoidable air quality impact would be reduced but not avoided.

C. Biological Resources

Because the Smaller Building with Truck Trailer Parking Alternative would disturb the same amount of land as the proposed Project, all of the potential impacts to biological resources would be the same as would occur under the proposed Project.

In conclusion, the proposed Project would result in less-than-significant biological resource impacts with mitigation. This alternative would result in the same impacts and be subject to the same regulatory requirements and mitigation measures. The Project's less-than-significant biological resource impacts would not be reduced or avoided.

D. Cultural Resources

Because the Smaller Building with Truck Trailer Parking Alternative would disturb the same amount of land as the proposed Project, all of the potential impacts to cultural resources would be same as would occur under the proposed Project.

In conclusion, the proposed Project would result in less-than-significant cultural resource impacts with mitigation. This alternative would result in the same impacts and be subject to the same regulatory requirements and mitigation measures. The Project's less-than-significant cultural resource impacts would not be reduced or avoided.

E. Geology / Soils

Although the Smaller Building with Truck Trailer Parking Alternative would construct and operate a smaller building than the proposed Project, in order to construct the smaller building and the truck trailer parking lot, similar to the proposed Project, this alternative would grade the entire site and would include the same site improvements as the proposed Project. Therefore, this alternative would result in similar impacts associated with geology / soils as the proposed Project.

In conclusion, the proposed Project would result in less-than-significant geology / soils impacts. This alternative would result in the same impacts and be subject to the same regulatory requirements. The Project's less-than-significant geology / soils impacts would not be reduced or avoided.

F. Greenhouse Gas Emissions

As shown in Table 4.6-4 of EIR Section 4.6, *Greenhouse Gas Emissions*, the Project would generate approximately 18,515.33 MTCO2e per year, of which approximately 85 percent (15,785.9 MTCO2e) would be generated by mobile sources (i.e., passenger cars and trucks) and the other 15 percent would be generated by building operation, including but not limited to energy and water usage and waste disposal. The Project would generate GHG emissions that exceed the SCAQMD significance criterion of 10,000 MTCO2e per year; therefore, the Project's GHG emissions are determined to have a cumulatively considerable impact on the environment. The Project would be consistent with the CARB Scoping Plan and would not conflict with the greenhouse gas emission reduction mandates of AB 32 or SB 32. In addition, the Project would be consistent with applicable regulations, policies, plans, and policy goals that would further reduce GHG emissions in California.

Because the Smaller Building Alternative with Truck Trailer Parking Alternative would reduce the Project's building area by approximately 44%, the Smaller Building with Truck Trailer Alternative would require less energy to operate and therefore result in a reduction of non-mobile source operational GHG emissions (fossil fuels for building operation) as compared to the proposed Project.

In addition, because the Smaller Building with Truck Trailer Parking Alternative would construct and operate a building that would be approximately 44% smaller than the building proposed by the Project, the Smaller Building Alternative would generate fewer vehicle trips than the proposed Project;

therefore, the mobile source GHG emissions generated by the Smaller Building with Truck Trailer Parking Alternative would be reduced as compared to the proposed Project. It is expected that a building having 600,000 s.f. would generate GHG emissions that fall slightly below the 10,000 MTCO2e threshold of significance.

Although selection of the Smaller Building with Truck Trailer Parking Alternative would reduce the amount of building space available on the site, it would not necessarily prevent other sites from capturing the building space in response to the demand for warehouse space in the City of San Bernardino and surrounding area. As such, it is possible that selection of the Smaller Building with Truck Trailer Parking Alternative would merely displace the GHG emissions that would have otherwise been attributed to development of a larger building on the Project site to another location in the SCAB resulting in the same or greater environmental effects associated with global climate change.

In conclusion, the proposed Project would result in significant and unavoidable GHG impacts. This alternative would result in a lesser amount of GHG emissions; thus, the Project's GHG impact would be reduced to a level that is less than significant.

G. Hazards and Hazardous Materials

The Smaller Building with Truck Trailer Parking Alternative would construct a high cube logistics building and would therefore attract the same type of building users as the proposed Project. Similar to the proposed Project and any other development that uses, stores, or transports hazardous materials, this alternative would be required to comply with the same federal, state, and local regulations as the proposed Project, which would preclude potential adverse impacts related to hazardous materials. Therefore, provided the Smaller Building with Truck Trailer Parking Alternative complies with the required federal, state, and local regulations associated with the use, storage, or transport of hazardous materials, impacts associated with hazards and hazardous materials would be the same as the proposed Project and remain less than significant.

In conclusion, the proposed Project would result in less-than-significant hazards / hazardous materials impacts. This alternative would result in the same hazards / hazardous materials impacts; thus, the Project's hazards / hazardous materials impacts would not be reduced or avoided.

H. Hydrology / Water Quality

Although the Smaller Building Alternative with Truck Trailer Parking Alternative would result in a reduction in building size, this alternative would grade the same amount of land as the proposed Project, implement the same storm drain system, and maintain the same drainage pattern as the proposed Project. The Smaller Building with Truck Trailer Parking Alternative would be subject to mandatory compliance with its Water Quality Management Plan (WQMP) and best management practices (BMPs), the San Bernardino County's Municipal Storm Water Management Program and the National Pollutant Discharge Elimination System (NPDES) Permit, impacts associated with hydrology / water quality would be similar to the proposed Project.

In conclusion, the proposed Project would result in less-than-significant hydrology / water quality impacts. This alternative would result in the same hydrology / water quality impacts; thus, the Project's hydrology and water quality impacts would not be reduced or avoided.

I. Land Use / Planning

The City of San Bernardino General Plan designates the majority of the Project site for "Open Space-Public/Commercial Recreation (PCR)," and a small area in the northwest portion of the Project site is designated "Industrial-Industrial Light (IL)." Under both the proposed Project and this alternative, a General Plan Amendment would be required to change the site's PCR land use designation to IL. As such, neither the Project or this alternative would be consistent with the site's existing General Plan land use designation or the associated zoning. Similar to the proposed Project, because this alternative would not be consistent with the existing General Plan, which is relied upon by the SCAQMD for growth projections used to set air quality attainment goals documented in the Air Quality Management Plan (AQMP), and this alternative would result in unavoidable air quality impacts, this alternative is also considered to be inconsistent with the SCAQMD's 2016 AQMP. The same conclusion is drawn for the proposed Project.

In conclusion, both the proposed Project and this alternative would result in significant and unavoidable land use / planning impacts; thus, the Project's land use / planning impacts would not be reduced or avoided.

J. Noise

Off-site Project-related traffic noise impacts would be significant and unavoidable for all analyzed traffic scenarios (Existing; Existing plus Ambient 2018; Existing plus Ambient Plus Cumulative 2018; and Horizon Year 2040) for the one roadway segment identified as Washington Avenue, south of Orange Show Road (ID #1). Under existing conditions, the properties adjacent to this roadway segment are non-conforming residential uses located on properties designated by the San Bernardino General Plan as "Industrial-Industrial Light (IL)." Mitigation measures considered by the City of San Bernardino to address this impact were dismissed because they would be ineffective or infeasible.

As with the proposed Project, noise associated with the Smaller Building with Truck Trailer Parking Alternative would occur during near-term construction activities and under long-term operation. Because this alternative would construct an approximately 44% smaller building on the site, the construction schedule for this alternative would be slightly shorter than the proposed Project and thus result in a slightly shorter duration of noise from construction activities.

Similar to the proposed Project, under long-term operations, noise would be generated from vehicles traveling to and from the Project site and on-site vehicle idling, maneuvering, and parking. Because the Smaller Building with Truck Trailer Parking Alternative would generate approximately 44% fewer vehicles per day than the proposed Project, the off-site Project-related noise impacts would be reduced as compared to the proposed Project. Also, because this alternative would generate less traffic than

the proposed Project, this alternative also would result in less traffic utilizing the northern access to the Project site which is closest to the non-conforming noise-sensitive land uses and the roadway segment identified as Washington Avenue, south of Orange Show Road (ID #1) that would be significantly impacted by noise. Regardless, traffic along the off-site access road would not be reduced to the extent needed to avoid the significant impact.

In conclusion, the proposed Project would result in a significant and unavoidable noise impact after mitigation associated with vehicle noise on the proposed off-site access road. This alternative would reduce but not avoid this impact.

K. Traffic / Circulation

Because of the reduced size of the building, the Smaller Building with Truck Trailer Parking Alternative would generate approximately 44% less traffic than the proposed Project, therefore, impacts associated with transportation / traffic would be reduced as compared to the proposed Project. Selection of the Smaller Building with Truck Trailer Parking Alternative would reduce but not avoid the proposed Project's cumulatively considerable traffic impact at two intersections in the Horizon Year (2040) – the E Street / Auto Center Drive / Orange Show Road intersection (a CMP roadway) and the Waterman Avenue / I-10 Westbound On-Ramp intersection – under Horizon Year (2040) traffic conditions, which are calculated to operate an unacceptable LOS with or without the addition of Project traffic.

In conclusion, the proposed Project would result in significant and unavoidable traffic / circulation impacts after mitigation. This alternative would reduce traffic / circulation impacts, but not avoid the Project's significant and unavoidable impacts.

L. Utilities / Service Systems

The Smaller Building with Truck Trailer Parking Alternative would construct and operate a building that would be 463,852 s.f. or approximately 44% smaller than the building proposed by the Project. Because the size of the building would be reduced under this alternative, water demand, wastewater generation, electricity, natural gas, and solid waste generation would be reduced as compared to the proposed Project. Regardless, the same types of utility connections to existing water, sewer and storm drainage systems would be required for this alternative as would be required for the proposed Project. Therefore, the Smaller Building Alternative would result in the same impacts associated with the provision of utilities / service systems as compared to the proposed Project.

In conclusion, the proposed Project would result in less-than-significant utilities and service system impacts. Compared to the proposed Project, this alternative would result in the same impacts; thus, the Project's impacts would not be reduced or avoided.

M. Conclusion

The Smaller Building with Truck Trailer Parking Alternative would result in similar impacts to the environmental factors of aesthetics, biological resources, cultural resources, geology /soils, hazards and hazardous materials, land use / planning, hydrology /water quality and utilities /service systems as compared to the proposed Project. This alternative would result in reduced impacts to the environmental factors of air quality, greenhouse gas emissions, noise, and traffic / circulation; however, building a smaller building on the Project site would not reduce the demand for warehouse building space in the City of San Bernardino and surrounding area, so the building space not accommodated for on the Project site could be constructed on another property, thereby displacing the air quality and greenhouse gas emissions rather than reducing them, which would have no environmental benefit to the SCAB or the global climate. The Smaller Building with Truck Trailer Parking Alternative would meet all of the Project's objectives, although several would be met to a lesser degree due to the provision of less building space on the Project site

6.2.7 SMALLER BUILDING ALTERNATIVE – THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The Smaller Building Alternative would construct an approximately 600,000 s.f. high cube logistics warehouse building on the Project site; thereby reducing the Project's building area by approximately 463,852 s.f. (1,063,852 s.f. – 600,000 s.f. = 463,852 s.f.) from the Project's 1,063,852 s.f. building area which is an approximate 44% reduction in building area. Also, because a smaller building would be constructed, less of the Project site would be graded. For purposes of evaluating this alternative, it is assumed that development would occur on the eastern two-thirds of the Project site and northern portion of the Project site and that the western portion of the Project site would remain as open space comprised of an abandoned portion of the San Bernardino Public Golf Club. All other aspects of the proposed Project would remain the same.

This alternative is considered to be environmentally superior to the proposed Project. In addition, because this alternative would reduce all of the Project's impacts to a greater degree than the other alternatives evaluated herein, and meet a majority of the Project's objectives, pursuant to CEQA Guidelines § 15126.6, this alternative is identified as the "environmentally superior alternative."

A. Aesthetics

Under the Smaller Building Alternative, the aesthetic quality and character of the building and associated improvements would be similar to the building to be constructed by the proposed Project, with the exception that the building would be smaller in size. Although less building square footage would be constructed under this alternative, the reduction in building intensity would occur interior to the subject property and the aesthetics of the site, as seen from off-site, would be similar to that of the proposed Project, with the exception of a smaller building footprint and less graded land. Therefore, the Smaller Building Alternative would result in similar aesthetic impacts as compared to the proposed Project.

In conclusion, the proposed Project would result in less-than-significant aesthetic impacts. This alternative would result in similar aesthetic impacts; thus, the Project's less-than-significant aesthetic impacts would not be reduced or avoided.

B. Air Quality

Because the Smaller Building Alternative would construct an approximately 44% smaller building on the site, the construction schedule for this alternative would be slightly shorter in duration than the proposed Project. As such, short-term construction-related air quality emissions would occur over a slightly shorter period of time; whereas total daily emissions during construction activities on the Project site would be the same as the proposed Project's daily emissions. Therefore, the Smaller Building Alternative would result in similar air quality pollutant emissions associated with short-term construction as the proposed Project.

Because the Smaller Building Alternative would reduce the Project's building area by approximately 44%, the Smaller Building Alternative would generate concomitant less traffic. Because this alternative would generate fewer vehicle trips than the proposed Project, the mobile source emissions resulting from the Smaller Building Alternative would be concomitantly reduced as compared to the proposed Project. Similarly, air pollutant emissions associated with operation of the building would be proportionately reduced. Emissions of NOx would still exceed the SCAQMD regional threshold of 55 lbs/day by a substantial margin.

Although selection of the Smaller Building Alternative would reduce the amount of building space available on the site, it would not necessarily prevent other sites from capturing the building space in response to the demand for warehouse space in the City of San Bernardino and surrounding area. As such, it is possible that selection of the Smaller Building Alternative would merely displace the air pollutant emissions that would have otherwise be attributed to development of a larger building on the Project site to another location in the SCAB resulting in the same or greater environmental effects to regional air quality.

In conclusion, the proposed Project would result in significant and unavoidable air quality impacts with mitigation. This alternative would reduce air quality impacts, but not to below a level of significance; thus, the Project's significant and unavoidable air quality impact would be reduced but not avoided.

C. Biological Resources

Because a smaller building would be constructed, a smaller amount of land would be disturbed by construction and operation of this alternative as compared to the proposed Project. However, there are no sensitive biological resources located on the Project site. Similar to the proposed Project, the Smaller Building Alternative would result in the removal of trees that have the potential to contain nesting birds, and fewer trees would be removed under this alternative. Similar to the proposed Project, this

alternative would be required to comply with the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code to protect nesting birds.

In conclusion, the proposed Project would result in less-than-significant biological resource impacts with mitigation. This alternative would result in the same impacts and be subject to the same regulatory requirements and mitigation measures. However, because a smaller amount of land would be disturbed by construction and operation of this alternative as compared to the proposed Project, impacts would be reduced as compared to the Project.

D. Cultural Resources

Under this alternative, although less land would be disturbed, similar to the proposed Project, there is the potential to uncover previously undiscovered archaeological resources during mass grading and excavation activities, there is the potential to uncover previously unearthed paleontological resources, and although there are no cemeteries or no known human remains on the Project site, there is a potential to uncover previously undiscovered human remains. Thus, the same regulatory requirements and mitigation measures that apply to the Project would apply to this alternative. If archaeological resources are unearthed during construction activities, and they meet the definition of a significant archeological resource as defined by California Code of Regulations § 15064.5, mitigation would be required to ensure the archeological resource(s) is properly identified and treated. In addition, because there is the potential that Project-related ground disturbing activities could extend into sensitive Pleistocene age alluvial deposits that are buried at unknown depth within the boundary of the Project site and unearth significant paleontological resources, mitigation would be required to ensure significant specimens recovered shall be properly recorded, treated, and donated to the San Bernardino County Museum, Division of Geological Sciences, or other repository with permanent retrievable paleontologic storage. Lastly, due to mandatory compliance required of all ground-disturbing activities within the provisions of the California Health and Safety Code § 7050.5 as well as Public Resources Code § 5097 et. seq., human remains would be assured proper treatment if encountered.

In conclusion, the proposed Project would result in less-than-significant cultural resource impacts with mitigation. This alternative would result in less potential to cause cultural resource impacts due to a smaller disturbance footprint; thus, the Project's cultural resource impacts would be slightly reduced by this alternative.

E. Geology / Soils

Because no known earthquake faults underlie the Project site, there is no potential for the Project or the Smaller Building Alternative to expose people or structures to substantial adverse effects, including the risk of loss, injury, or death related to hazards from a rupture of a known earthquake fault. As with most regions of southern California, the Project site is subject to seismic ground shaking. In addition, the Project site is located within a zone of moderate to high liquefaction susceptibility. The same geology and soils impacts that would occur under the proposed Project would occur under this

alternative. However, because less property would be graded, this alternative would result in fewer construction-related effects.

In conclusion, the proposed Project would result in less-than-significant geology / soils impacts. This alternative would result in slightly less potential to cause geology / soils impacts due to a smaller disturbance footprint; thus, the Project's geology / soils impacts would be slightly reduced by this alternative.

F. Greenhouse Gas Emissions

As shown in Table 4.6-4 of EIR Section 4.6, *Greenhouse Gas Emissions*, the Project would generate approximately 18,515.33 MTCO2e per year, of which approximately 85 percent (15,785.9 MTCO2e) would be generated by mobile sources (i.e., passenger cars and trucks) and the other 15 percent would be generated by building operation, including but not limited to energy and water usage and waste disposal. The Project would generate GHG emissions that exceed the SCAQMD significance criterion of 10,000 MTCO2e per year; therefore, the Project's GHG emissions are determined to have a cumulatively considerable impact on the environment. The Project would be consistent with the CARB Scoping Plan and would not conflict with the greenhouse gas emission reduction mandates of AB 32 or SB 32. In addition, the Project would be consistent with applicable regulations, policies, plans, and policy goals that would further reduce GHG emissions in California.

Because the Smaller Building Alternative would reduce the Project's building area by approximately 44%, the Smaller Building Alternative would require less energy to operate and therefore result in a reduction of non-mobile source operational GHG emissions (fossil fuels for building operation) as compared to the proposed Project.

In addition, because the Smaller Building Alternative would construct and operate a building that would be approximately 44% smaller than the building proposed by the Project, the Smaller Building Alternative would generate fewer vehicle trips than the proposed Project; therefore, the mobile source GHG emissions generated by the Smaller Building Alternative would be reduced as compared to the proposed Project. It is expected that a building having 600,000 s.f. would generate GHG emissions that fall slightly below the 10,000 MTCO2e threshold of significance.

Although selection of the Smaller Building Alternative would reduce the amount of building space available on the site, it would not necessarily prevent other sites from capturing the building space in response to the demand for warehouse space in the City of San Bernardino and surrounding area. As such, it is possible that selection of the Smaller Building Alternative would merely displace the GHG emissions that would have otherwise been attributed to development of a larger building on the Project site to another location in the SCAB resulting in the same or greater environmental effects associated with global climate change.

In conclusion, the proposed Project would result in significant and unavoidable GHG impacts. This alternative would result in a lesser amount of GHG emissions; thus, the Project's GHG impact would be reduced to a level that is less than significant.

G. Hazards and Hazardous Materials

The Smaller Building Alternative would construct a high cube logistics building and would therefore attract the same type of building users as the proposed Project. Similar to the proposed Project and any other development that uses, stores, or transports hazardous materials, this alternative would be required to comply with the same federal, state, and local regulations as the proposed Project, which would preclude potential adverse impacts related to hazardous materials. Therefore, provided the Smaller Building Alternative complies with the required federal, state, and local regulations associated with the use, storage, or transport of hazardous materials, impacts associated with hazards and hazardous materials would be the same as the proposed Project and remain less than significant.

In conclusion, the proposed Project would result in less-than-significant hazards / hazardous materials impacts. This alternative would result in the same hazards / hazardous materials impacts; thus, the Project's hazards / hazardous materials impacts would not be reduced or avoided.

H. Hydrology / Water Quality

Although the Smaller Building Alternative would result in a reduction in building size, this alternative would implement the same storm drain system, and maintain the same drainage pattern as the proposed Project. Similar to the proposed Project, the Smaller Building Alternative would result in the same potential hydrology /water quality impacts as the proposed Project and would be subject to the same regulations as the proposed Project, including requirements to comply with a Water Quality Management Plan (WQMP) and its best management practices (BMPs), the San Bernardino County's Municipal Storm Water Management Program and the National Pollutant Discharge Elimination System (NPDES) Permit.

In conclusion, the proposed Project would result in less-than-significant hydrology and water quality impacts. This alternative would result in slightly fewer hydrology and water quality impacts due to a smaller development footprint; thus, the Project's hydrology and water quality impacts would be slightly reduced.

I. Land Use / Planning

The City of San Bernardino General Plan designates the majority of the Project site for "Open Space-Public/Commercial Recreation (PCR)," and a small area in the northwest portion of the Project site is designated "Industrial-Industrial Light (IL)." Under both the proposed Project and this alternative, a General Plan Amendment would be required to change the site's PCR land use designation to IL. As such, neither the Project or this alternative would be consistent with the site's existing General Plan land use designation or the associated zoning. Similar to the proposed Project, because this alternative would not be consistent with the existing General Plan, which is relied upon by the SCAQMD for

growth projections used to set air quality attainment goals documented in the Air Quality Management Plan (AQMP), and this alternative would result in unavoidable air quality impacts, this alternative is also considered to be inconsistent with the SCAQMD's 2016 AQMP. The same conclusion is drawn for the proposed Project.

In conclusion, both the proposed Project and this alternative would result in significant and unavoidable land use / planning impacts; thus, the Project's land use / planning impacts would not be reduced or avoided.

J. Noise

Off-site Project-related traffic noise impacts would be significant and unavoidable for all analyzed traffic scenarios (Existing; Existing plus Ambient 2018; Existing plus Ambient Plus Cumulative 2018; and Horizon Year 2040) for the one roadway segment identified as Washington Avenue, south of Orange Show Road (ID #1). Under existing conditions, the properties adjacent to this roadway segment are non-conforming residential uses located on properties designated by the San Bernardino General Plan as "Industrial-Industrial Light (IL)." Mitigation measures considered by the City of San Bernardino to address this impact were dismissed because they would be ineffective or infeasible.

As with the proposed Project, noise associated with the Smaller Building Alternative would occur during near-term construction activities and under long-term operation. Because this alternative would construct an approximately 44% smaller building on the site, the construction schedule for this alternative would be slightly shorter than the proposed Project and thus result in a slightly shorter duration of noise from construction activities.

Similar to the proposed Project, under long-term operations, noise would be generated from vehicles traveling to and from the Project site and on-site vehicle idling, maneuvering, and parking. Because the Smaller Building Alternative would generate approximately 44% fewer vehicles per day than the proposed Project, the off-site Project-related noise impacts would be reduced as compared to the proposed Project. Also, because this alternative would generate less traffic than the proposed Project, this alternative also would result in less traffic utilizing the northern access to the Project site which is closest to the non-conforming noise-sensitive land uses and the roadway segment identified as Washington Avenue, south of Orange Show Road (ID #1) that would be significantly impacted by noise. Regardless, traffic along the off-site access road would not be reduced to the extent needed to avoid the significant impact.

In conclusion, the proposed Project would result in a significant and unavoidable noise impact after mitigation associated with vehicle noise on the proposed off-site access road. This alternative would reduce but not avoid this impact.

K. Traffic / Circulation

Because of the reduced size of the building, the Smaller Building with Alternative would generate approximately 44% less traffic than the proposed Project, therefore, impacts associated with transportation / traffic would be reduced as compared to the proposed Project. Selection of the Smaller Building Alternative would reduce but not avoid the proposed Project's cumulatively considerable traffic impact at two intersections in the Horizon Year (2040) – the E Street / Auto Center Drive / Orange Show Road intersection (a CMP roadway) and the Waterman Avenue / I-10 Westbound On-Ramp intersection – under Horizon Year (2040) traffic conditions, which are calculated to operate an unacceptable LOS with or without the addition of Project traffic.

In conclusion, the proposed Project would result in significant and unavoidable traffic / circulation impacts after mitigation. This alternative would reduce traffic / circulation impacts, but not avoid the Project's significant and unavoidable impacts.

L. Utilities / Service Systems

The Smaller Building Alternative would construct and operate a building that would be approximately 44% smaller than the building proposed by the Project. Because the size of the building would be reduced under this alternative, water demand, wastewater generation, electricity, natural gas, and solid waste generation would be reduced as compared to the proposed Project. Regardless, the same types of utility connections to existing water, sewer and storm drainage systems would be required for this alternative as would be required for the proposed Project. Therefore, the Smaller Building Alternative would result in the same impacts associated with the provision of utilities / service systems as compared to the proposed Project.

In conclusion, the proposed Project would result in less-than-significant utilities and service system impacts. Compared to the proposed Project, this alternative would result in the same impacts; thus, the Project's impacts would not be reduced or avoided.

M. Conclusion

The Smaller Building Alternative would result in similar impacts to the environmental factors of aesthetics, biological resources, cultural resources, geology /soils, hazards and hazardous materials, land use / planning, hydrology /water quality and utilities /service systems as compared to the proposed Project. This alternative would result in reduced impacts to the environmental factors of air quality, greenhouse gas emissions, noise, and traffic / circulation; however, constructing a smaller building on the Project site would not reduce the demand for warehouse building space in the City of San Bernardino and surrounding area, so the building space not accommodated for on the Project site could be constructed on another property, thereby displacing the air quality and greenhouse gas emissions rather than reducing them, which would have no environmental benefit to the SCAB or the global climate. The Smaller Building Alternative would meet all of the Project's objectives, although several would be met to a lesser degree due to the provision of less building space on the Project site.

Table 6-1 Alternatives to the Proposed Project – Comparison of Environmental Impacts

Environmental Factor	Proposed Project Significance of Impacts after Mitigation	Level of Impact Compared to the Proposed Project			
		No Project Alternative	Eastern Access Only Alternative	Smaller Building with Truck Trailer Parking Alternative	Smaller Building Alternative – Environmentally Superior Alternative
Aesthetics	Less than Significant Impacts	Avoided	Slightly Reduced	Similar	Similar
Air Quality	Significant and Unavoidable Impacts after Mitigation	Avoided	Similar	Reduced	Reduced
Biological Resources	Less than Significant Impacts	Reduced	Slightly Reduced	Similar	Reduced
Cultural Resources	Less than Significant Impacts	Avoided	Slightly Reduced	Similar	Reduced
Geology /Soils	Less than Significant Impacts	Similar	Slightly Reduced	Similar	Reduced
Greenhouse Gas Emissions	Significant and Unavoidable Impacts after Mitigation	Avoided	Similar	Reduced	Reduced
Hazards and Hazardous Materials	Less than Significant Impacts	Similar	Increased	Similar	Reduced
Hydrology / Water Quality	Less than Significant Impacts	Similar	Slightly Reduced	Similar	Reduced
Land Use / Planning	Significant and Unavoidable Impacts after Mitigation	Avoided	Similar	Similar	Similar
Noise	Significant and Unavoidable Impacts after Mitigation	Avoided	Reduced	Reduced	Reduced

Transportation / Circulation	Significant and Unavoidable Impacts after Mitigation	Avoided	Increased	Reduced	Reduced
Utilities / Service Systems	Less than Significant Impacts	Similar	Similar	Similar	Similar
Objective A: To remove the existing San Bernardino Public Golf Club and expeditiously redevelop the property.		Objective would not be met.	Objective would be met.	Objective would be met.	Objective would be partially met.
Objective B: To redevelop the San Bernardino Public Golf Club property with an employment-generating use that is compatible with existing and planned industrial warehousing development found in the surrounding area.		Objective would not be met.	Objective would be met.	Objective would be met.	Objective would be partially met.
Objective C: To develop a logistics warehouse use that capitalizes on the transportation and locational strengths of San Bernardino.		Objective would not be met.	Objective would be met.	Objective would be met, but to a lesser degree than the Project.	Objective would be met, but to a lesser degree than the Project.
Objective D: To develop a logistics warehouse use that meets industry standards for modern, operational design criteria and can accommodate a wide variety of users.		Objective would not be met.	Objective would be met.	Objective would be met.	Objective would be met.
Objective E: To attract new employment-generating business to San Bernardino, thereby reducing the needs of the local workforce to commute outside of the area for employment.		Objective would not be met.	Objective would be met.	Objective would be met, but to a lesser degree than the Project.	Objective would be met, but to a lesser degree than the Project.
Objective F: To develop a logistics warehouse use that offers truck loading docks and truck trailer parking in close proximity to the regional transportation system in order to facilitate the efficient movement of goods as part of the southern California goods movement network		Objective would not be met.	Objective would be met.	Objective would be met.	Objective would be met.
Objective G: To develop a high cube logistics warehouse use that is economically competitive with similar industrial warehouse buildings in the County of San Bernardino H.		Objective would not be met.	Objective would be met.	Objective would be met.	Objective would be met.
Objective H: To increase the amount of available industrial warehouse space in the City of San Bernardino to attract new businesses and jobs to the City.		Objective would not be met.	Objective would be met.	Objective would be met, but to a lesser degree than the Project.	Objective would be met, but to a lesser degree than the Project.

7.0 REFERENCES

7.1 PERSONS INVOLVED IN PREPARATION OF THIS EIR

7.1.1 CITY OF SAN BERNARDINO

Travis Martin, Associate Planner
Oliver Mujica, Planning Division Manager

7.1.2 T&B PLANNING, INC.

Tracy Zinn, AICP, Principal
Degree: B.S. Regional Planning and Geography
Certifications: American Institute of Certified Planners (AICP)

Connie Anderson, Project Planner / Environmental Analyst
Degree: B.S. Land Use

Eric Horowitz, Senior GIS/Graphics Manager
Degrees: B.A. Urban and Regional Planning; M.S. Geographic Information Systems
Certifications; Geographic Information Systems Professional (GISP)

David Ornelas, Senior Project Manager
Degree: B.A. Urban Studies and Planning

Lauren Fujimori, Staff Planner / CEQA Analyst
Degree: B.S. Environmental Systems

Steven Lusk, GIS/Graphics Specialist
Degree: B.A. Geography; M.S. Geography

7.2 DOCUMENTS APPENDED TO THIS EIR

The following reports, studies, and supporting documentation were used in preparing the Alliance California Gateway South Building 4 EIR and are bound separately as Technical Appendices. A copy of the Technical Appendices is available for review at the City of San Bernardino, Community Development Department, 600 North Arrowhead Ave, 3rd Floor, San Bernardino, CA 92401.

Appendix A: Initial Study, Notice or Preparation, and Written Comments on the NOP

Appendix B1: Urban Crossroads, Inc. 2017a. *Gateway South Building 4 Air Quality Impact Analysis, City of San Bernardino*. April 17, 2017.

Appendix B2: Urban Crossroads, Inc. 2017b. *Gateway South Building 4 Mobile Source Diesel Health Risk Assessment*. April 17, 2017.

Appendix B3: Urban Crossroads, Inc. 2017h. *Gateway South Building 4 Site Access Alternatives Health Risk Assessment Memorandum*, June 5, 2017.

Appendix C1: Michael Baker International. 2017. *Gateway South Building 4 Project City of San Bernardino, San Bernardino County, California, Habitat and Jurisdictional Assessment.* June 2017.

Appendix D1: Applied EarthWorks. 2017a. *Cultural Resource Assessment of the Proposed Alliance California Gateway South Building 4 Project, City of San Bernardino, San Bernardino County, California.* May 2017.

Appendix D2: Applied EarthWorks. 2017b. *Paleontological Resource Assessment for the Gateway South Building 4 Project, City of San Bernardino, San Bernardino County, California*. May 30, 2015.

Appendix E1: Southern California Geotechnical (SoCalGeo). 2016a. *Geotechnical Feasibility Study Proposed Commercial/Industrial Building.* November 8, 2016.

Appendix E2: Southern California Geotechnical (SoCalGeo). 2016b. *Results of Infiltration Testing*. November 8, 2016.

Appendix F: Urban Crossroads, Inc. 2017c. *Gateway South Building 4 Greenhouse Gas Analysis, City of San Bernardino.* April 17, 2017.

Appendix G1: Terracon Consultants, Inc. 2016. *Phase I Environmental Site Assessment Gateway South Building 4, 1494 South Waterman Avenue San Bernardino, San Bernardino County, CA.* December 29, 2016.

Appendix H1: Thienes Engineering. 2017a. *Preliminary Hydrology Calculations for Gateway South Building 4 Waterman Avenue, San Bernardino, California.* March 2017.

Appendix H2: Thienes Engineering. 2017b. *Water Quality Management Plan for Gateway South Building 4 Waterman Avenue, San Bernardino, CA 92408.* March 23, 2017.

Appendix I1: Urban Crossroads 2017d. *Gateway South Building 4 Noise Impact Analysis, City of San Bernardino.* June 1, 2017

Appendix J1: Urban Crossroads. 2017e. *Gateway South Building 4 Traffic Impact Analysis, City of San Bernardino*. April 6, 2017.

Appendix J2 Urban Crossroads, Inc. 2017f *Gateway South Building 4 Site Access Alternatives Assessment Memorandum*. June 2, 2017.

Appendix K: City of San Bernardino Municipal Water Department (SBMWD), 2017. *Water Supply Assessment Hillwood Gateway South Building 4 Project.* May 24, 2017.

Appendix L: Urban Crossroads, Inc. 2017g. *Gateway South Building 4 Energy Analysis, City of San Bernardino*. April 17, 2017.

Appendix M: Written Correspondence.

7.3 DOCUMENTS INCORPORATED BY REFERENCE

The following reports, studies, and supporting documentation were used in the preparation of this EIR and are incorporated by reference within this EIR. A copy of the following reports, studies, and supporting documentation is a matter of public record and is generally available to the public at the location listed.

Cited As:	***Citation:***
(City of San Bernardino, 2005a)	City of San Bernardino. 2005a. City of San Bernardino General Plan. November 1, 2005. Accessed in 2017 (multiple dates). Available online at: https://www.ci.san-bernardino.ca.us/pdf/DevSvcs/General%20Plan%20Document.pdf
(City of San Bernardino, 2005b)	City of San Bernardino. 2005b. Draft San Bernardino General Plan Update and Associated Specific Plans Environmental Impact Report, SCH#2004111132, July 25, 2005. Accessed in 2017 (multiple dates). Available online at: http://www.sbcity.org/cityhall/community_development/planning/planning_documents.asp
(City of San Bernardino, 2007)	City of San Bernardino. 2005c. Draft San Bernardino General Plan Update and Associated Specific Plans EIR Volume 2 Appendix A. Accessed on May 26, 2016. Available online at: http://www.sbcity.org/civicax/filebank/blobdload.aspx?blobid=3708
(City of San Bernardino, 2013)	City of San Bernardino. 2013. City of San Bernardino Development Code. Revised January 2013. Accessed in 2017 (multiple dates). Available online at: http://www.sbcity.org/cityhall/community_development/development_code.asp
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(City of San Bernardino, 2017c)	City of San Bernardino. 2017c. San Bernardino Municipal Code. Rev. January 2017. Accessed in 2017 (multiple dates). Available online at: https://www.ci.san-bernardino.ca.us/civicax/filebank/blobdload.aspx?blobid=19233

7.4 DOCUMENTS AND WEBSITES CONSULTED IN PREPARATION OF THIS EIR

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