FINAL Environmental Impact Report
SCH No. 2013101021

Alliance California Gateway South Building 3

San Bernardino, California

Lead Agency
City of San Bernardino
300 North "D" Street
San Bernardino, CA 92418

Date: February 6, 2014

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Lead Agency
City of San Bernardino
300 North "D" Street
San Bernardino, CA 92418

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Lead Agency Discretionary Permits
Tentative Parcel Map No. 19847 (SUB13-07)
Development Permit/Site Plan (DP-P13-09)

Date: February 6, 2014

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B2: Mobile Source Health Risk Assessment
C: Habitat Assessment
D: Cultural Resources Assessment
E: Greenhouse Gas Analysis
F1: Phase I Environmental Assessment
F2: Phase II Environmental Assessment
G1: Preliminary Hydrology Calculations
G2: Water Quality Management Plan
H: Noise Report
I1: Traffic Impact Analysis
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I3: Freeway Mainline Segment Traffic Impact Memorandum
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ACRONYMS AND ABBREVIATIONS

Acronym	Definition
§	Section
AB	Assembly Bill
AB 2185	Assembly Bill 2185
AB 1327	California Solid Waste Reuse and Recycling Act
AB 939	California Solid Waste Integrated Management Act
ACMs	Asbestos Containing Materials
A.D.	Anno Domini
ADT	Average Daily Traffic
a.m.	Ante Meridiem (between the hours of midnight and noon)
AMSL	Above Mean Sea Level
APN	Assessor Parcel Number
APS	Alternative Planning Strategy
AQMP	Air Quality Management Plan
ASTs	Above ground storage tanks
B.C.	Before Christ
BMPs	Best Management Practices
BNSF	Burlington Northern Santa Fe
C_2F_6	Hexafluoroethane
C_2H_6	Ethane
CA	California
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalEEMod®	California Emissions Estimator Model®
CalEPA	California Environmental Protection Agency
CALGreen Code	California Green Building Standards Code
Cal Pub Res. Code §42911	California Solid Waste Reuse and Recycling Act of 1991
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CAT	Climate Action Team
CBSC	California Building Standards Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CETAP	Community & Environmental Transportation Acceptability Process
CFCs	Chlorofluorocarbons

Acronym	Definition
CF_4	Tetraflouromethane
CF_3CH_2F	HFC-134a
CFS	Cubic Feet per Second
CFR	Code of Federal Regulations
CH_4	Methane
CH_3CHF_2	HFC-152a
CHF_3	HFC-23
CIWMB	California Integrated Waste Management Board
CIWMP	Countywide Integrated Waste Management Plan
CLOMR	Conditional Letter of Map Revision
CLUP	Comprehensive Land Use Plan
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
COG	Council of Governments
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CPUC	California Public Utilities Commission
CWA	Clean Water Act
dB	Decibel
dBA	A-weighted Decibels
DIF	Development Impact Fee
DP	Development Permit
DP-P13-09	Development Permit/Site Plan
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
E+A+P	Existing plus Ambient Growth plus Project Conditions
E+A+P+C	Existing plus Ambient Growth plus Project Conditions plus Cumulative Conditions
E+P	Existing plus Project Conditions
EDR	EDR Sanborn®
EIR	Environmental Impact Report
EMWD	Eastern Municipal Water District
et seq.	*et sequentia*, meaning "and the following"
EPA	Environmental Protection Agency
EPS	Emission Performance Standard
ESA	Environmental Site Assessment
F	Fahrenheit
FAR	Floor Area Ratio
FEIR	Final Environmental Impact Report

Acronym	Definition
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FIRM	Flood Insurance Rate Map
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
GCC	Global Climate Change
GHGs	Greenhouse Gases
GWP	Global Warming Potential
H_2O	Water Vapor
HCP	Habitat Conservation Plan
HFCs	Hydrofluorocarbons
HCP	Highway Capacity Manual
HMBEP	Hazardous Materials Business Emergency Plan
HVAC	heating, ventilation, and air conditioning
I-10	Interstate 10
I-215	Interstate 215
IA	Implementing Agreement
ID	Identification
IE	Industrial Extractive (zone)
IH	Industrial High (zone)
IL	Industrial Light (land use designation)
IPCC	Intergovernmental Panel on Climate Change
IRWMP	Integrated Regional Water Management Plan
ITE	Institute of Transportation Engineers
IVDA	Inland Valley Development Agency
JPA	Joint Powers Authority
JPR	Joint Project Review
kg	kilogram
LBP	Lead based paint
LBVI	least Bell's vireo
LCA	Life-cycle analysis
Leq	equivalent energy level
LOMR	Letter of Map Revision
LOS	Level of Service
LSTs	Localized Significance Thresholds
MATES III	Multiple Air Toxics Exposure Study in the South Coast Air Basin
MBTA	Migratory Bird Treaty Act
MC	Municipal Code
MEISC	maximally exposed individual school child

Acronym	Definition
MEIR	maximally exposed individual receptor
MEIW	maximally exposed individual worker
mg	milligrams
MGD	million gallons per day
$MMTCO_2e$	million metric tons of carbon dioxide equivalent
MMTs	million metric tons
MPO	Metropolitan Planning Organization
MSHCP	Multiple Species Habitat Conservation Plan
MT	metric ton
MUTCD	Manual on Uniform Traffic Control Devices
NAHC	Native American Heritage Commission
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
No.	number
N_2	Nitrogen
NO	Nitric Oxide
NOP	Notice of Preparation
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
N_2O	Nitrous Oxide
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
O_2	Oxygen
O_3	Ozone
OIP	Office Industrial Park land use designation
OPR	Office of Planning and Research
Ord.	Ordinance
Pb	Lead
PCBs	Polychlorinated biphenyls
PCC	Portland cement concrete
PCEs	Passenger Car Equivalents
PeMS	Caltrans' Performance System Website
PFCs	Perfluorocarbons
PHF	Peak Hour Factor
p.m.	Post Meridiem (between the hours of noon and midnight)
$PM_{2.5}$	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
ppt	parts per trillion
RIX	Rapid Infiltration Extraction

Acronym	Definition
ROG	Reactive Organic Gas
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RV	Recreational Vehicle
RWQCB	Regional Water Quality Control Board
s.f.	square feet
SANBAG	San Bernardino Associated Governments
SAWPA	Santa Ana Watershed Project Authority
SB	Southbound -or- Senate Bill
SB 1368	Senate Bill 1386
SBFD	San Bernardino Fire Department
SBIA	San Bernardino International Airport and Trade Center
SBKR	San Bernardino kangaroo rat
SBMWD	San Bernardino Municipal Water Department
SBTAM	San Bernardino Transportation Analysis Model
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCH	State Clearinghouse
SCS	Sustainable Communities Strategy
SF_6	Sulfur Hexafluoride
SMARA	Surface Mining and Reclamation Act
SO_2	Sulfur Dioxide
SO_4	Sulfates
SO_X	Sulfur Oxides
SR-79	State Route 79
SUB13-07	Tentative Parcel Map No. 19487
SWFF	Southwestern willow flycatcher
SWPPP	Stormwater Pollution Prevention Plan
TBD	To be determined
TIA	Traffic Impact Analysis
TUMF	Transportation Uniform Mitigation Fee
UNFCCC	United Nations Framework Convention on Climate Change
URBEMIS	URBan EMISsions
U.S.	United States
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USTs	Underground storage tanks
UWMP	Urban Water Management Plan
VMT	vehicle miles traveled
VOCs	Volatile Organic Compounds

Acronym	Definition
WQMP	Water Quality Management Plan
WRP	Water Reclamation Plant
WSA	Water Supply Assessment

F.0 FINAL ENVIRONMENTAL IMPACT REPORT

F.1 INTRODUCTION TO THE FINAL ENVIRONMENTAL IMPACT REPORT (FEIR)

This Final Environmental Impact Report (FEIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) as amended (Public Resources Code Section 21000 et seq.) and CEQA Guidelines (Title 14, California Code of Regulations, Section 15000 et seq.).

According to CEQA Guidelines Section 15132, the Final EIR shall consist of:

a. The draft EIR or a revision of the draft;
b. Comments and recommendations received on the draft EIR either verbatim or in summary;
c. A list of persons, organizations, and public agencies commenting on the draft EIR;
d. The responses of the Lead Agency to significant environmental points raised in the review and consultation process; and
e. Any other information added by the Lead Agency.

In accordance with the above listed requirements, this FEIR for Tentative Parcel Map No. 19487, Development Permit/Site Plan No. DP-P13-09, and associated discretionary and administrative actions, consists of the following:

1. Comment letters and responses to public comment; and
2. The circulated Alliance California Gateway South Building 3 EIR and Technical Appendices, SCH No. 2013101021 with additions shown as <u>underline</u> text and deletions shown as ~~stricken~~ text in Subsection F.2.3, below.

This FEIR document has been prepared in accordance with CEQA and the CEQA Guidelines and represents the independent judgment of the Lead Agency (City of San Bernardino).

F.2 RESPONSES TO COMMENTS

Section 15088 of the CEQA Guidelines requires the Lead Agency (City of San Bernardino) to evaluate comments on environmental issues received from public agencies and interested parties who reviewed the Draft EIR and to provide written responses to any substantive comments received. This Section F.0, "Final Environmental Impact Report," provides all comments received on the Draft, the City's response to each comment, and a summary of revisions made to the Draft EIR as part of the FEIR in response to the various comment letters.

A total of six (6) comment letters were received, including letters that were received during the public comment period (which closed on January 23, 2014). A copy of each comment letter and a response to each substantive environmental point raised in those letters is included in Subsection F.4. No comments submitted to the City of San Bernardino on the Draft EIR have produced substantial new information requiring recirculation or additional environmental review under State CEQA Guidelines Section 15088.5.

On the following pages, each comment letter is assigned a letter reference and each substantive comment is numbered. Responses to the numbered comments follow the letters. A list of agencies, organizations, and persons that submitted comments on the Draft EIR during the public review period is presented in Table F-1, *List of Persons, Organizations, and Public Agencies that Commented on the Draft EIR*.

Table F-1 List of Persons, Organizations, and Public Agencies that Commented on the Draft EIR

Comment Letter Reference	Commenting Person, Organization, or Public Agency	Date of Comment
A.	Federal Emergency Management Agency	December 9, 2013
B.	Native American Heritage Commission	December 10, 2013
C.	Citizens Advocating Rational Development	Not Dated (Received January 23, 2014)
D.	San Bernardino County Department of Public Works	January 15, 2014
E.	California Department of Fish and Wildlife	January 17, 2014
F.	State Clearinghouse	January 22, 2014

F.2.1 CEQA REQUIREMENTS REGARDING COMMENTS AND RESPONSES

CEQA Guidelines Section 15204(a) outlines parameters for submitting comments, and notes that the focus of review and comment of Draft EIRs should be:

> *…on the sufficiency of the document in identifying and analyzing possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate the significant environmental effects. At the same time, reviewers should be aware that the adequacy of an EIR is determined in terms of what is reasonably feasible…CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or suggested by commenters. When responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR.*

CEQA Guidelines Section 15204(c) further advises that, "Reviewers should explain the basis for their comments, and should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments. Pursuant to Section 15064, an effect shall not be considered significant in the absence of substantial evidence." Section 15204(d) also notes that, "Each responsible agency and trustee agency shall focus its comments on environmental information germane to that agency's statutory responsibility." Section 15204(e) states that, "This section shall not be used to restrict the ability of reviewers to comment on the

general adequacy of a document or of the lead agency to reject comments not focused as recommended by [CEQA Guidelines Section 15204].”

In accordance with CEQA Guidelines Section 15088(b), copies of the written responses will be provided to commenting public agencies at least ten (10) days prior to certifying the FEIR. The responses will be provided with electronic copies of this FEIR, as permitted by CEQA, and will conform to the legal standards established for response to comments on Draft EIRs.

F.2.2 REVISIONS TO THE PROPOSED PROJECT IN RESPONSE TO PUBLIC COMMENTS

Since the time that the Draft EIR was circulated for public review, one (1) substantive change was made to the proposed Project as a result of the City’s review process, related to the proposed Conceptual Landscape Plan (Draft EIR Figure 3-9). The updated Conceptual Landscape Plan does not alter any environmental impact significance conclusions disclosed in the Draft EIR. The revised Conceptual Landscape Plan includes additional landscape elements (nine (9) London Plane trees with shrubbery and groundcover) along the site’s western frontage with Waterman Avenue. The additional landscape improvements would be located on Parcel 1, which is owned by the City of Riverside. No sensitive receptors are located near this location that could be temporarily impacted during installation of the landscaping and none of the Project’s construction- or operational-related effects disclosed in the Draft EIR would measurably change.

F.2.3 CORRECTIONS AND ADDITIONS TO THE DRAFT EIR IN RESPONSE TO PUBLIC COMMENTS

Substantive changes made to the text, tables and/or exhibits of the Draft EIR in response to public comment on the Draft EIR are itemized in Table F-2, *Errata Table of Corrections and Additions*. Refer to the referenced sections and page numbers for additional detail. Additions are shown in Table F-2 as underline text and deletions shown as ~~stricken~~ text. No corrections or additions made to the Draft EIR are considered substantial new information requiring recirculation or additional environmental review under State CEQA Guidelines Section 15088.5.

Table F-2 Errata Table of Corrections and Additions

Page(s)	Section	Corrections and Additions
1-3	Subsection 1.4	The California Department of Fish and Wildlife identified themselves as a Trustee and Responsible Agency for the proposed Project. The following statements are added to Final EIR Subsection 1.4, *Responsible and Trustee Agencies*: The California Department of Fish and Wildlife is a Trustee Agency for fish and wildlife resources. CDFW has approval authority pursuant to the California Fish and Game Code, if any CDFW approvals are warranted. There are no other agencies that are identified as Responsible or Trustee Agencies for the proposed Project.
3-18	Table 3-1	The County of San Bernardino Department of Public Works commented that an encroachment permit would be needed if the Project encroaches into County Flood Control District right-of-way. Table 3-1, *Matrix of Project Approvals/Permits*, has been expanded to add: Other Agencies – Subsequent Approvals and Permits:

Page(s)	Section	Corrections and Additions
		County of San Bernardino / Encroachment permit.
4.3-8	Subsection 4.3.3	Clarification added to specify Project site's location relative to Santa Ana River: The Project would develop a 49.58-acre portion of the site, the southeast corner of which abuts ~~abutting~~ the Santa Ana River.
4.3-8	Subsection 4.3.3	Clarification added to more fully describe existing conditions along the Project site's southeastern border: Additionally, the southeast boundary of the Project site which is adjacent to the northern bank of the Santa Ana River, is separated from the River by a 100 foot wide manufactured bank reinforced with concrete rubble to prevent erosion under existing conditions.
4.3-8	Subsection 4.3.3	Expanded to acknowledge least Bell's vireo habitat and dependence of impact potential based on speculative presence: Additionally, minimal habitat is present for the least Bell's vireo. Indirect impacts to these species could result if the species are present and construction or operation of the Project would indirectly disturb sensitive species or their habitats
4.3-9	Subsection 4.3.3	Discussion of habitat expanded following a January 2014 field visit conducted by RBF in response to California Department of Fish and Wildlife comment: Adjacent to the Project site, however, the Project's biologist, RBF, confirmed that the primary constituent elements needed by SBKR are not present on the Project site and there is no passage onto the site that would allow SBKR to enter the Project site (RBF, January 2014). Thus, no indirect impacts to SBKR or its Critical Habitat has the potential to occur as a result of the development of the Project site.
4.3-9	Subsection 4.3.3	Revised discussion of indirect impacts to focus on least Bell's vireo habitat: Indirect impacts to the ~~Southwestern willow flycatcher and SBKR~~ least Bell's vireo that has the potential to occupy off-site, low-quality habitat in the Santa Ana River corridor could result from indirect noise (stress on the species) and light (exposing them to predators at night) associated with the Project's operation and construction.
4.3-9	Subsection 4.3.3	Expanded discussion of potential indirect impacts to least Bell's vireo related to noise: ~~Southwestern willow flycatcher~~ Least Bell's vireo can be adversely impacted by noise during its nesting season (March 1 through August 31) when noise levels exceed 65 dBA. Because the species is not known to occupy the river segment adjacent to the Project site and because the off-site disturbed riparian habitat is very low quality and provides limited nesting opportunities for the species, the potential for the species to be present and indirectly impacted is low. ~~and f~~Further, because noise levels in the segment of the Santa Ana River corridor adjacent to the Project would remain sufficiently below 65 dBA with the Project in operation, indirect noise impacts to sensitive species during Project operation would be less than significant.
4.3-9	Subsection 4.3.3	Revision of species potentially subjected to indirect noise impacts related to construction: …construction activity has the potential to exceed 65 dBA in the Santa Ana River corridor and have indirect, adverse effects on the ~~Southwestern willow flycatcher~~ least Bell's vireo, if the species is present. ~~However, as noted above, the species is not known to occupy the river segment adjacent to the Project site due to lack of~~

Page(s)	Section	Corrections and Additions
		~~well-developed forest habitat.~~
4.3-9	Subsection 4.3.3	Revision of special-status species for accuracy: …special-status wildlife species (~~SBKR and Southwestern willow flycatcher~~ least Bell's vireo)
4.3-10	Subsection 4.3.3	Expanded to clarify existing conditions relative to the Santa Ana River's proximity to the Project site: The southeast boundary of the Project site, which is adjacent to the northern bank of the Santa Ana River, is physically separated from the River by a 100 foot wide manufactured bank reinforced with concrete rubble to prevent erosion under existing conditions.
4.3-12	Subsection 4.3.4	Addition of acknowledgment of least Bell's vireo habitat under discussion of cumulative impacts: Adjacent to the Project site, the Santa Ana River contains critical habitat for three species, the Santa Ana sucker, SBKR, and Southwestern willow flycatcher and habitat for the least Bell's vireo.
4.3-12	Subsection 4.3.4	Specification of species related to potential cumulative noise impacts: …could adversely the ~~species~~ least Bell's vireo during its nesting seasons
4.3-13, 4.3-15, S-11	Subsection 4.3.5, Subsection 4.3.7, Table S-1	Revised for accuracy of relevant special-status species: Additionally, if the ~~Southwestern willow flycatcher~~ least Bell's vireo is present in the off-site adjacent….
4.3-15, S-12	Subsection 4.3-6, Table S-1	Mitigation Measure 4.3.3 revised to reflect accurate special-status species and expanded to specify process of species identification and monitoring in consultation with CDFW and UFWS: ~~MM 4.3-3: Applications for grading and building permits for activities that will occur within 300 feet of the Santa Ana River shall be accompanied by a letter from a qualified biologist confirming if the Southwestern willow flycatcher occupies habitat within 300 feet of proposed grading and construction activities. If the species is present, construction activities that generate noise levels greater than 65 dBA shall not occur within 300 feet of the Santa Ana River during the Southwestern willow flycatcher nesting season (March 1 through August 31).~~ MM 4.3-3: If construction activities begin or are scheduled to occur within 300 feet of riparian habitat located off-site and along the southeast boundary of the Project site during the least Bell's vireo (LBVI) nesting season (March 1 through August 31), a qualified biologist shall conduct a clearance survey of the habitat to ensure LBVI are not occupying this area. If LBVI is determined to be occupying this area, the qualified biologist shall confirm if the species is nesting. If LBVI is found to be nesting, the biologist shall develop a monitoring program in consultation with CDFW and USFWS to ensure that nesting activities are not interrupted. If nesting LBVI are present, the monitoring program shall be in place and implemented as a condition of the Project's grading and building permits.

Page(s)	Section	Corrections and Additions
7-4	Subsection 7.3	Reference added: RBF, 2014. *Response to California Department of Fish and Wildlife's Comments for the Draft Environmental Impact Report (DEIR) for the Alliance California Gateway Building No. 3 Project.* January 29, 2014.

F.2.4 RESPONSES TO COMMENTS

Provided in this section are the comment letters received in response to the Draft EIR, along with a response to all comments on environmental issues. Comment letters and specific comments are given letters and numbers for reference purposes.

F.3 NO RECIRCULATION OF THE DRAFT ENVIRONMENTAL IMPACT REPORT REQUIRED

CEQA Guidelines Section 15088.5 describes the conditions under which a Draft EIR that was circulated for public review is required to be re-circulated for additional public review and comment. CEQA Guidelines Section 15088.5 states that new information added to a Draft EIR is not significant unless the Draft EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. "Significant new information" requiring recirculation includes, for example, a disclosure showing that:

a. A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.

b. A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.

c. A feasible project alternative or mitigation measure considerably different from the others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it.

d. The Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

As summarized in Section F.2.2, *Revisions to the Proposed Project in Response to Public Comments*, and based on the comment letters and responses thereto presented in Section F.2.4, *Responses to Comments* , there were no public comments or changes to the text or analysis contained in the Draft EIR that resulted in the identification of any new significant environmental effect or a substantial increase in the severity of an environmental effects that were disclosed in the Draft EIR. Based on comments received on the Draft EIR, minor revisions to the Project's mitigation requirements were incorporated (as described above in Table F-2, *Errata Table of Corrections and Additions*), and all suggested mitigation measures that would clearly lessen the significant environmental impacts of the Project were incorporated into the Final EIR. Additionally, the Draft EIR was fundamentally and basically adequate, and all conclusions within the Draft EIR were supported by evidence provided

within the Draft EIR or the administrative record for the proposed Project. Furthermore, public comment letters on the Draft EIR did not identify any alternatives to the proposed Project considerably different from those analyzed in the Draft EIR that would substantially lessen the significant environmental impacts of the proposed Project while still attaining the Project's basic objectives.

Based on the foregoing, additional recirculation of the Draft EIR is not warranted according to the guidance set forth in Section 15088.5 of the State CEQA Guidelines.

F.4 RESPONSES TO COMMENT

Refer to the following pages.

COMMENT LETTERS

RECEIVED
DEC 16 2013
CITY OF SAN BERNARDINO
DEVELOPMENT SERVICES
DEPARTMENT

U.S. Department of Homeland Security
FEMA Region IX
1111 Broadway, Suite 1200
Oakland, CA. 94607-4052

FEMA

December 9, 2013

Tony Stewart, AICP, Acting Director
City of San Bernardino, Community Development Department
300 North "D" Street, 3rd Floor
San Bernardino, California 92418

Dear Mr. Stewart:

This is in response to your request for comments regarding the Notice of Availability of a Draft Environmental Impact Report – The Alliance California Gateway South Building 3 Project.

Please review the current effective countywide Flood Insurance Rate Maps (FIRMs) for the County of San Bernardino (Community Number 060270), and City of San Bernardino (Community Number 060281), Maps revised August 28, 2008. Please note that the City of San Bernardino, San Bernardino County, California is a participant in the National Flood Insurance Program (NFIP). The minimum, basic NFIP floodplain management building requirements are described in Vol. 44 Code of Federal Regulations (44 CFR), Sections 59 through 65. A-1

A summary of these NFIP floodplain management building requirements are as follows:

- All buildings constructed within a riverine floodplain, (i.e., Flood Zones A, AO, AH, AE, and A1 through A30 as delineated on the FIRM), must be elevated so that the lowest floor is at or above the Base Flood Elevation level in accordance with the effective Flood Insurance Rate Map. A-2
- If the area of construction is located within a Regulatory Floodway as delineated on the FIRM, any ***development*** must not increase base flood elevation levels. **The term *development* means any man-made change to improved or unimproved real estate, including but not limited to buildings, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of equipment or materials.** A hydrologic and hydraulic analysis must be performed *prior* to the start of development, and must demonstrate that the development would not cause any rise in base flood levels. No rise is permitted within regulatory floodways. A-3

www.fema.gov

RESPONSES

A-1 The City of San Bernardino reviewed the countywide Flood Insurance Rate Maps (FIRMs) applicable to the Project site during preparation of the Draft EIR. The City acknowledges that it is a participant in the National Flood Insurance Program (NFIP) and that flood hazards within the County and City of San Bernardino are delineated on FIRMs. The reach of the Santa Ana River adjacent to the Project site's southeastern boundary corresponds to River Mile 28.380 to River Mile 29.430 in the hydraulic calculations for the FIRM.

A-2 As disclosed in the Draft EIR (DEIR), approximately one-third of the Project site is mapped by the Effective (FIRM) as being located within the 100-year floodplain (i.e., Flood Zone AE) of the Santa Ana River. The remaining portions of the Project site are mapped outside of the 100-year floodplain (i.e., Flood Zone X-Shaded). This information is disclosed in DEIR Subsection 4.7, Hydrology & Water Quality (refer to DEIR Page 4.7-4). As further disclosed in the DEIR Subsection 4.7, the Project is designed such that the building pad of the proposed warehouse structure would be elevated above the Base Flood Elevation (refer to DEIR Page 4.7-15). The Project Applicant is required to secure a Conditional Letter of Map Revision (CLOMR) and a Letter of Map Revision (LOMR) from the Federal Emergency Management Agency (FEMA) to remove the affected areas of the subject property from the mapped 100-year floodplain (refer to DEIR Page 4.7-15).

A-3 Refer to Response A-2. The Project Applicant prepared a LOMR Report for the Project, which is currently undergoing FEMA review. The LOMR Report contains the analysis required by FEMA to demonstrate that the development would not cause a rise in flood levels within the regulatory floodway of the Santa Ana River. DEIR Subsection 4.7 includes an analysis of the Project's potential to impede or redirect flood flows and concludes that implementation of the Project would not result in increased flood hazards to off-site properties (refer to DEIR Page 4.7-15).

COMMENT LETTERS

Tony Stewart, AICP, Acting Director
Page 2
December 9, 2013

- All buildings constructed within a coastal high hazard area, (any of the "V" Flood Zones as delineated on the FIRM), must be elevated on pilings and columns, so that the lowest horizontal structural member, (excluding the pilings and columns), is elevated to or above the base flood elevation level. In addition, the posts and pilings foundation and the structure attached thereto, is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. A-4

- Upon completion of any development that changes existing Special Flood Hazard Areas, the NFIP directs all participating communities to submit the appropriate hydrologic and hydraulic data to FEMA for a FIRM revision. In accordance with 44 CFR, Section 65.3, as soon as practicable, but not later than six months after such data becomes available, a community shall notify FEMA of the changes by submitting technical data for a flood map revision. To obtain copies of FEMA's Flood Map Revision Application Packages, please refer to the FEMA website at http://www.fema.gov/business/nfip/forms.shtm. A-5

Please Note:

Many NFIP participating communities have adopted floodplain management building requirements which are more restrictive than the minimum federal standards described in 44 CFR. Please contact the local community's floodplain manager for more information on local floodplain management building requirements. The San Bernardino floodplain manager can be reached by calling Robert Eisenbeisz, City Engineer, at (909) 384-5203. The San Bernardino County floodplain manager can be reached by calling Mary Lou Mermilliod, Certified Floodplain Administrator, Water Resources Division, at (909) 387-8213. A-6

If you have any questions or concerns, please do not hesitate to call Frank Mansell of the Mitigation staff at (510) 627-7191. A-7

Sincerely,

Gregor Blackburn, CFM, Branch Chief
Floodplain Management and Insurance Branch

cc:
Robert Eisenbeisz, City Engineer, City of San Bernardino
Mary Lou Mermilliod, Certified Floodplain Administrator, Water Resources Division, San Bernardino County
Garret Tam Sing/Salomon Miranda, State of California, Department of Water Resources, Southern District
Frank Mansell, NFIP Planner, DHS/FEMA Region IX
Alessandro Amaglio, Environmental Officer, DHS/FEMA Region IX

www.fema.gov

RESPONSES

A-4 Comment noted. The Project site is not located within a coastal high hazard area (i.e., Flood Zone V).

A-5 Refer to Responses A-2 and A-3.

A-6 The contact information for the City of San Bernardino floodplain manager, Mr. Robert Eisenbeisz, and the County of San Bernardino floodplain manager, Ms. Mary Lou Mermilliod, is noted and these individuals have been contacted. Refer to Comment Letter D.

A-7 The contact information for Mr. Frank Mansell is noted.

COMMENT LETTERS

Ms. Renee Morguecho, PlannerSTATE OF CALIFORNIA
Edmund G. Brown, Jr.Governor

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691
(916) 373-3715
Fax (916) 373-5471
Web Site www.nahc.ca.gov
De_nahc@pacbell.net
e-mail: ds_nahc@pacbell.net

RECEIVED
DEC 16 2013
CITY OF SAN BERNARDINO
DEVELOPMENT SERVICES
DEPARTMENT

December 10,, 2013

Mr. Tony Stewart, Planner
City of San Bernardino
300 North "D" Street, 3rd Floor
San Bernardino, CA 92515

RE: SCH#2013121021; CEQA Notice of Completion; draft Environmental Impact Report (DEIR) for the **"Alliance California Gateway South Building 3 Project;"** located in the City of San Bernardino; San Bernardino County, California

Dear Mr. Stewart:

The Native American Heritage Commission (NAHC) has reviewed the above-referenced environmental document.

The California Environmental Quality Act (CEQA) states that any project which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA guidelines 15064.5(b). To adequately comply with this provision and mitigate project-related impacts on archaeological resources, the Commission recommends the following actions be required: B-1

Contact the appropriate Information Center for a record search to determine :If a part or all of the area of project effect (APE) has been previously surveyed for cultural places(s), The NAHC recommends that known traditional cultural resources recorded on or adjacent to the APE be listed in the draft Environmental Impact Report (DEIR). B-2

If an additional archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey. We suggest that this be coordinated with the NAHC, if possible. The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure pursuant to California Government Code Section 6254.10. B-3

RESPONSES

B-1 The Project's potential effect to archaeological resources is evaluated in Draft EIR (DEIR) Subsection 4.4, Cultural Resources. As disclosed in the DEIR, the Project site does not contain any known archaeological resources (refer to DEIR Pages 4.4-5 and 4.4-6). The Project does have the potential, however unlikely, to unearth and adversely impact archaeological resources during ground-disturbing construction activities (refer to DEIR Page 4.4-6). The DEIR recommends mitigation measures to ensure that any significant archaeological resource that may be uncovered during Project-related construction activities are properly treated (refer to Mitigation Measures MM 4.4-1 and MM 4.4-2 on DEIR Pages 4.4-8 and 4.4-9). Potential impacts to archaeological resources would be less than significant with application of the mitigation measures.

B-2 A site-specific Cultural Resource Assessment report was prepared for the Project site by BCR Consulting, LLC. As part of the Cultural Resource Assessment, BCR Consulting conducted a record search through the San Bernardino Archaeological Information Center. Results of the San Bernardino Archaeological Information Center record search are disclosed on DEIR Page 4.4-4 and in Technical Appendix D.

B-3 A Cultural Resource Assessment report was prepared for the Project site by BCR Consulting, LLC. The Cultural Resource Assessment report is included as Technical Appendix D to the DEIR. The Cultural Resource Assessment documents the findings of a site-specific field survey, record search (through the San Bernardino Archaeological Information Center), and Native American consultation. As disclosed in the Cultural Resource Assessment report and summarized in DEIR Subsection 4.4, no archaeological resources were observed on the Project site and the likelihood of uncovering an archaeological resource on the Project site during construction activities is low.

COMMENT LETTERS

A list of appropriate Native American Contacts for consultation concerning the project site has been provided and is attached to this letter to determine if the proposed active might impinge on any cultural resources. Lack of surface evidence of archeological resources does not preclude their subsurface existence.

California Government Code Section 65040.12(e) defines "environmental justice" to provide "fair treatment of People...with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations and policies" and Executive Order B-10-11 requires consultation with Native American tribes their elected officials and other representatives of tribal governments to provide meaningful input into the development of legislation, regulations, rules, and policies on matters that may affect tribal communities.

B-4

Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, pursuant to California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities. Also, California Public Resources Code Section 21083.2 require documentation and analysis of archaeological items that meet the standard in Section 15064.5 (a)(b)(f).

Lead agencies should consider first, avoidance for sacred and/or historical sites, pursuant to CEQA Guidelines 15370(a). Then if the project goes ahead then, lead agencies include in their mitigation plan provisions for the analysis and disposition of recovered artifacts, pursuant to California Public Resources Code Section 21083.2 in consultation with culturally affiliated Native Americans.

B-5

Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

Sincerely,

Dave Singleton
Program Analyst

CC: State Clearinghouse

Attachment: Native American Contacts list

RESPONSES

B-4 BCR Consulting, LLC contacted the Native American Heritage Commission (NAHC) on August 3, 2013, for a list of Native American contacts that may be potentially interested in the Project. The NAHC responded to BCR Consulting, LLC on August 6, 2013, and identified 10 potentially interested tribes. BCR Consulting, LLC contacted each of the potentially interested tribes by letter on August 9, 2013. All correspondence related to Native American consultation, is included within Appendix A to the Cultural Resource Assessment Report (Technical Appendix D to the DEIR).

B-5 Refer to Response B-1. The DEIR recommends mitigation to ensure that in the unlikely event that significant archaeological resources are unearthed during the construction process, the resources are appropriately treated. In addition, the Project is required to comply with State Law (i.e., California Health and Safety Code §7050.5 and California Public Resources Code §5097.98) to ensure that human remains, if encountered, are appropriately treated. Refer to DEIR Subsection 4.7.

COMMENT LETTERS

RESPONSES

Native American Contacts
San Bernardino County California
December 10, 2013

Pechanga Band of Mission Indians
Paul Macarro, Cultural Resources Manager
P.O. Box 1477 Luiseno
Temecula , CA 92593
(951) 770-8100
pmacarro@pechanga-nsn.gov
(951) 506-9491 Fax

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
sgoad@gabrielino-tongva.com
951-845-0443

Ramona Band of Cahuilla Mission Indians
Joseph Hamilton, Chairman
P.O. Box 391670 Cahuilla
Anza , CA 92539
admin@ramonatribe.com
(951) 763-4105
(951) 763-4325 Fax

Morongo Band of Mission Indians
William Madrigal, Jr.,Cultural Resources Manager
12700 Pumarra Road Cahuilla
Banning , CA 92220 Serrano
(951) 201-1866 - cell
wmadrigal@morongo-nsn.gov
(951) 572-6004 Fax

San Manuel Band of Mission Indians
Carla Rodriguez, Chairwoman
26569 Community Center Drive Serrano
Highland , CA 92346
(909) 864-8933
(909) 864-3724 - FAX
(909) 864-3370 Fax

San Manuel Band of Mission Indians
Daniel McCarthy, M.S.., Director-CRM Dept.
26569 Community Center. Drive Serrano
Highland , CA 92346
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dmccarthy@sanmanuel-nsn.gov
(909) 862-5152 Fax

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
PO Box 693 Gabrielino Tongva
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 286-1632
(626) 286-1758 - Home
(626) 286-1262 -FAX

Serrano Nation of Mission Indians
Goldie Walker, Chairwoman
P.O. Box 343 Serrano
Patton , CA 92369

(909) 528-9027 or
(909) 528-9032

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

his list s only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#20131010221; CEQA Notice of Completion; draft Environmental Impact report (DEIR) for the Alliance California Gateway South Building 3 Project; located in San Bernardino County, California.

COMMENT LETTERS

RESPONSES

Native American Contacts
San Bernardino County California
December 10, 2013

Ernest H. Siva
Morongo Band of Mission Indians Tribal Elder
9570 Mias Canyon Road Serrano
Banning , CA 92220 Cahuilla
siva@dishmail.net
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SOBOBA BAND OF LUISENO INDIANS
Joseph Ontiveros, Cultural Resource Department
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(951) 663-5279
(951) 654-5544, ext 4137

Gabrielino /Tongva Nation
Sam Dunlap, Cultural Resorces Director
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909-262-9351

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

his list s only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2013101021; CEQA Notice of Completion; draft Environmental Impact report (DEIR) for the Alliance California Gateway South Building 3 Project; located in San Bernardino County, California.

Comment Letters | Responses

Tony Stewart
City of San Bernardino
909 384 5357
300 North D Street, 3rd Floor
San Bernardino, CA 92418

Re: **Alliance California Gateway South Building 3**

Dear Mr. Stewart,

The undersigned represents Citizens Advocating Rational Development ("CARD"), a non-profit corporation dedicated to issues in development and growth.

This letter contains comments on the Draft Environmental Impact Report on the Alliance California Gateway South Building 3, in accordance with CEQA and the Notice of Completion and Availability. Please ensure that these comments are made a part of the public record.

C-1

C-1 The City of San Bernardino will include the comment letter from the Citizens Advocating Rational Development (CARD) and responses thereto in the Final EIR (FEIR) for the Alliance California Gateway South Building 3 project. The FEIR is part of the public record.

ENERGY

The DEIR does not discuss any requirements that the Project adopt energy saving techniques and fixtures, nor is there any discussion of potential solar energy facilities which could be located on the roofs of the Project. Under current building standards and codes which all jurisdictions have been advised to adopt, discussions of these energy uses are critical; the construction and operation of an industrial warehouse with 1,199,360 sf of floor space and 215 loading bays on a 49.65-acre portion of a 62.85-acre property, will devour copious quantities of electrical energy, as well as other forms of energy.

C-2

C-2 Large warehouses are not electric energy-intensive operations. The Draft EIR (DEIR) discloses the Project's estimated energy usage to be approximately 2,060,500 thousand British Thermal Units (kBTU) and 3,622,070 kilowatt-hours (kWh) per year, respectively (DEIR Page 3-17). The DEIR also discloses that the proposed Project would be required to comply with the applicable California Green Building Standards Code and California Building Energy Efficiency Standards (DEIR Pages 4.5-8 and 4.5-9). The Project does not propose, nor is it required to provide, solar panels; therefore, solar energy features

Comment Letters

Responses

are not disclosed in the DEIR. Both the California Green Building Standards Code and California Building Energy Efficiency Standards include detailed requirements for reducing energy usage, including mandating the use of energy saving fixtures. The California Building Energy Standards in effect as of the writing of this FEIR became effective on January 1, 2010, but will be replaced on July 1, 2014 by the 2013 California Green Building Standards Code. Based on readily available information from the California Energy Commission's website (www.energy.ca.gov), the 2013 California Building Energy Standards are 30 percent more efficient than the previous State standards for non-residential construction.

Comment Letters

WATER SUPPLY

The EIR (or DEIR – the terms are used interchangeably herein) does not adequately address the issue of water supply, which in California, is a historical environmental problem of major proportions.

What the DEIR fails to do is:

1. Document wholesale water supplies; C-3.1
2. Document Project demand; C-3.2
3. Determine reasonably foreseeable development scenarios, both near-term and long-term; C-3.3
4. Determine the water demands necessary to serve both near-term and long-term development and project build-out. C-3.4
5. Identify likely near-term and long-term water supply sources and, if necessary, alternative sources; C-3.5
7. Identify the likely yields of future water from the identified sources; C-3.7
8. Determine cumulative demands on the water supply system; C-3.8
9. Compare both near-term and long-term demand to near-term and long-term supply options, to determine water supply sufficiency; C-3.9
10. Identify the environmental impacts of developing future sources of water; and C-3.10
11. Identify mitigation measures for any significant environmental impacts of developing future water supplies. C-3.11
12. Discuss the effect of global warming on water supplies. C-3.12

There is virtually no information in the DEIR which permits the reader to draw reasonable conclusions regarding the impact of the Project on water supply, either existing or in the future.

For the foregoing reasons, this EIR is fatally flawed. C-4

AIR QUALITY/GREENHOUSE EMISSIONS/CLIMATE CHANGE

Responses

C-3.1 The Project site is within the service area of the San Bernardino Municipal Water Department (SBMWD) for water service and supply. A comprehensive technical document, the 2010 San Bernardino Valley Regional Urban Water Management Plan (Amended Draft) (hereafter "2010 UWMP"), was prepared for the SBMWD as well as seven (7) other water agencies within the San Bernardino Valley to support their long-term resource planning and ensure that adequate water supplies are available to meet existing and future water demands. The 2010 UWMP is a publically available document that can be obtained from the SBMWD's website or from the City of San Bernardino as noted on DEIR Page 7-2. Wholesale water supplies available to the San Bernardino Valley region and the SBMWD specifically are disclosed in the 2010 UWMP (refer to Chapters 2.0 and 10.0 of the 2010 UWMP). The 2010 UWMP was incorporated into the DEIR by reference, as allowed by CEQA Guidelines §15150 (DEIR Page 4.11-1). Therefore, the information contained within the 2010 UWMP, including information regarding wholesale water supplies, is considered to be part of the text of the DEIR (CEQA Guidelines §15150(a)).

C-3.2 Contrary to the statement made by the commenter, the DEIR discloses the Project's estimated water demand in Section 3.0, Project Description, and Subsection 4.11, Utilities and Service Systems (refer to Pages 3-16 and 4.11-7). As disclosed in the DEIR, the Project is estimated to result in a demand of approximately 113 acre-feet of potable water per year for indoor use and 145 acre-feet of water per year for outdoor irrigation (total demand of 258 acre-feet of water per year). Warehouse distribution operations do not demand excessive amounts of water.

Comment Letters

Responses

C-3.3 The 2010 UWMP relies on an integrated regional growth forecast prepared by the Southern California Association of Governments (SCAG) to project reasonably foreseeable development scenarios for the Years 2015, 2020, 2025, 2030, and 2035. In addition to SCAG's regional growth forecast, the 2010 UWMP assumed the development of reasonably foreseeable development projects within the SBMWD service area (refer to Table 10-15 of the 2010 UWMP). As previously described in Response C-3.1, the 2010 UWMP is incorporated by reference into the DEIR and the information contained within the 2010 UWMP, including information regarding near- and long-term development scenarios, is considered to be part of the text of the DEIR pursuant to CEQA Guidelines §15150(a).

C-3.4 The 2010 UWMP projects the demand for water on a regional scale and within the SBMWD water service area under the Year 2015, 2020, 2025, 2030, and 2035 development scenarios (refer to Tables 4-1 through 4-3 and Tables 10-37 through 10-39 of the 2010 UWMP). The water demand projections account for demand under normal years, single-dry years, and multiple dry years. As previously described in Response C-3.1, the 2010 UWMP is incorporated by reference into the DEIR and the information contained within the 2010 UWMP, including future year water demand projections, is considered to be part of the text of the DEIR pursuant to CEQA Guidelines §15150(a).

C-3.5 The 2010 UWMP identifies the water sources for the San Bernardino Valley region and the SBMWD (refer to Chapter 2.0 and Pages 10-31 through 10-37 of the 2010 UWMP). Additionally, the 2010 UWMP identifies the yields of each of the identified water sources, including yields under normal year, single-dry year, and multiple dry year scenarios. Pursuant to the 2010 UWMP, adequate water supplies are available to the San Bernardino Valley region and the SBMWD until at least the Year 2035 under all climactic conditions (refer to Tables 4-1 through 4-3 and Tables 10-37 through 10-39 of the 2010 UWMP). No alternative water supply sources are needed to serve the San Bernardino Valley region or the SBMWD service area. As previously described in Response C-3.1, the 2010 UWMP

Comment Letters

Responses

is incorporated by reference into the DEIR and the information contained within the 2010 UWMP, including information regarding water sources and the yield of those sources, is considered to be part of the text of the DEIR pursuant to CEQA Guidelines §15150(a).

C-3.7 Refer to Response C-3.5, above.

C-3.8 Refer Responses C-3.3 and C-3.4, above. The 2010 UWMP discloses the cumulative water demands associated with of expected regional growth and reasonably foreseeable development projects.

C-3.9 Refer to Response C-3.5, above. Furthermore, the SBMWD prepared a Water Supply Assessment (WSA) for the proposed Project pursuant to California Senate Bill (SB) 610 and SB 221, in which SBMWD evaluated the water demands of the Project against its existing and anticipated future water supplies and demands. The WSA is included as Technical Appendix J to the DEIR, and the findings of the WSA are disclosed on DEIR Page 4.11-7. As disclosed in the WSA, SBMWD has sufficient water supplies to serve the Project and implementation of the Project would not alter the findings of the 2010 UWMP, which concluded that adequate water supplies are available to meet the demands of the SBMWD service area until at least the Year 2035.

C-3.10 Refer to Response C-3.5, above. Water supplies available to the San Bernardino Valley region and the SBMWD are considered adequate to meet projected demand until at least the Year 2035, including during normal year, single-dry year, and multiple-dry year scenarios. Based on information available at this time, no additional future sources of water are needed. Therefore, no environmental impacts would occur associated with the development of additional future sources of water.

C-3.11 Refer to Response C-3.10.

Comment Letters

Responses

C-3.12 The 2010 UWMP discusses the potential effects of Global Climate Change on California's water supplies (refer to Pages 1-29 through 1-31 and Chapters 2.0 and 3.0 of the 2010 UWMP). As previously described in Response C-3.1, the 2010 UWMP is incorporated by reference into the DEIR and the information contained within the 2010 UWMP, including information related to the effect of Global Climate Change on water supplies, is considered to be part of the text of the DEIR pursuant to CEQA Guidelines §15150(a).

C-4 For the reasons noted above under Responses C-3.1 through C-3.12, the DEIR provides sufficient information regarding the impact of the Project on existing and future water supply.

Comment Letters

The EIR lacks sufficient data to either establish the extent of the problem which local emissions contribute to deteriorating air quality, greenhouse emissions or the closely related problem of global warming and climate change, despite the fact that these issues are at the forefront of scientific review due to the catastrophic effects they will have on human life, agriculture, industry, sea level risings, and the many other serious consequences of global warming. C-5

This portion of the EIR fails for the following reasons:

1. The DEIR does not provide any support or evidence that the Guidelines utilized in the analysis are in fact supported by substantial evidence. References to the work of others is inadequate unless the document explains in sufficient detail the manner and methodology utilized by others. C-6

2. Climate change is known to affect rainfall and snow pack, which in turn can have substantial effects on river flows and ground water recharge. The impact thereof on the project's projected source of water is not discussed in an acceptable manner. Instead of giving greenhouse emissions and global warming issues the short shrift that it does, the EIR needs to include a comprehensive discussion of possible impacts of the emissions from this project. C-7

3. Climate change is known to affect the frequency and or severity of air quality problems, which is not discussed adequately. C-8

4. The cumulative effect of this project taken with other projects in the same geographical area on water supply, air quality and climate change is virtually missing from the document and the EIR is totally deficient in this regard. C-9

For the foregoing reasons, the EIR is fatally flawed. C-10

ALTERNATIVE ANALYSIS

The alternative analysis fails in that the entire alternatives-to-the-project section provides no discussion of the effects of the project, or the absence of the project, on surrounding land uses, and the likely increase in development that will accompany the completion of the project, nor does it discuss the deleterious effects of failing to update the project upon those same surrounding properties and the land uses which may or have occurred thereon. C-11

Thank you for the opportunity to address these factors as they pertain to the referenced DEIR. C-12

Responses

C-5 For the reasons noted below under Responses C-6 through C-9, the DEIR provides an adequate discussion as required by CEQA of the Project's potential to generate air pollutants that may cause or contribute to adverse air quality conditions and/or Global Climate Change.

C-6 As explained in the DEIR, California Assembly Bill (AB) 32, the California Climate Solutions Act of 2006, requires that statewide greenhouse gas (GHG) emissions be reduced to 1990 levels by the year 2020. Because AB 32 is the primary plan, policy, or regulation adopted in the State of California to reduce GHG emissions, the City appropriately applied compliance with AB 32 as the EIR's significance threshold. As further explained in the DEIR, no numerical thresholds for determining significance of GHG emissions have been adopted by the City of San Bernardino, the California Air Resources Board (CARB), or the South Coast Air Quality Management District (SCAQMD).

C-7 The potential effect of GHG emissions associated with the Project's water source is addressed in Response C-3.12. Further, the DEIR discloses the potential effects of Global Climate Change in California (refer to DEIR Pages 4.5-5 through 4.5-7). An individual development project does not have the potential to generate sufficient GHG emissions to directly result in significant Global Climate Change-related effects. However, the additive effects of a development project plus cumulative sources of GHGs around the world has the potential to result in significant Global Climate Change-related effects. The CEQA Guidelines also emphasize that the effects of GHG emissions are not directly related to an individual development project (refer to CEQA Guidelines §15130(f)). As disclosed in the DEIR, the Project would comply with the GHG emissions reduction mandates of AB 32 (DEIR Page 4.5-21). Accordingly, the GHG emissions resulting from the Project would be less than cumulatively considerable and would not result in a significant contribution to Global Climate Change.

Comment Letters

Responses

C-8 The DEIR discloses the potential for GHG emissions to increase the frequency and severity of adverse air quality conditions (see DEIR Pages 4.5-2 through 4.5-4 and 4.5-6).

C-9 The Commenter is directed to DEIR Subsection 4.2, Air Quality (refer to Pages 4.2-14 through 4.2-19 and 4.2-24), and Subsection 4.11, Utilities and Service Systems (refer to Page 4.11-10), for a discussion of the Project's potential cumulative effects to air quality and water supply. As previously discussed in Response C-7, the CEQA Guidelines consider potential impacts to Global Climate Change to be a cumulative effect of a project; therefore, the Commenter is directed to DEIR Subsection 4.5, Greenhouse Gas Emissions, in its entirety for a discussion of the Project's potential cumulative effects to Global Climate Change. The cumulative impact analyses presented in each of the above-mentioned DEIR subsections are based on technical reports appended to the DEIR, which were prepared by technical experts in conformance with industry best practices. As disclosed in the DEIR, the Project's cumulative effects to Global Climate Change and water supply are determined to be less than significant. However, the Project would result in a significant cumulative contribution to adverse local and regional air quality conditions due to criteria pollutant emissions and localized pollutant emissions. Feasible mitigation measures are included in DEIR Subsection 4.2 to minimize the Project's cumulative contribution to adverse air quality effects; however, the Project's cumulative contribution of near- and long-term criteria pollutant emissions is determined to be a significant and unavoidable effect of the Project. Based on the foregoing, the City respectfully disagrees with the Commenter's claim that the DEIR is deficient in regard to the cumulative impact analysis for water supply, air quality and Global Climate Change.

C-10 For the reasons noted under Responses C-6 through C-9. The City disagrees with the Commenter's allegation that the DEIR is fatally flawed. The DEIR fully complies with CEQA (Public Resources Code §21000, et. seq.).

Comment Letters

Responses

C-11 DEIR Sections 4.0, Environmental Analysis, and 5.0, Other CEQA Considerations, fully evaluate the proposed Project's effects to the environment, including nearby properties. Under existing conditions, the Project site is a former lumber yard that is routinely maintained for weed abatement. Absence of the Project is evaluated as required by CEQA by DEIR Subsection 6.3.1, No Project Alternative. The DEIR includes a discussion of the Project's potential to induce growth in the surrounding area, as required by CEQA Guidelines §15126.2(d), and concludes that the Project's direct and indirect growth-inducing effects would be less than significant (refer to DEIR Pages 5-2 & 5-3). Lastly, the Project seeks to develop a large warehouse building on a property zoned for such a use and located in a developing area that is planned as an industrial hub in the City. The Project is consistent with the City's long-term vision for the area. Refer to DEIR Pages 5-6 and 5-7 for a discussion of the Project's land use/planning compatibility.

C-12 Comment acknowledged; no response is necessary.

Comment Letters

Responses

Very truly yours,

CITIZENS ADVOCATING RATIONAL DEVELOPMENT

NICK R. Green

President

COMMENT LETTERS | RESPONSES

DEPARTMENT OF PUBLIC WORKS
FLOOD CONTROL • LAND DEVELOPMENT & CONSTRUCTION • OPERATIONS
SOLID WASTE MANAGEMENT • SURVEYOR • TRANSPORTATION

COUNTY OF SAN BERNARDINO

825 East Third Street • San Bernardino, CA 92415-0835 • (909) 387-8104
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GERRY NEWCOMBE
Director of Public Works

January 15, 2014

RECEIVED
JAN 21 2014
CITY OF SAN BERNARDINO
DEVELOPMENT SERVICES
DEPARTMENT

File: 10(ENV)-4.01

Tony Stewart, Acting Director
Community Development Department
300 N. D Street, 3rd Floor
San Bernardino, CA. 92418

RE: CEQA – NOTICE OF AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE ALLIANCE CALIFORNIA GATEWAY SOUTH BUILDING 3 PROJECT FOR THE CITY OF SAN BERNARDINO

Mr. Stewart:

Thank you for giving the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project. **We received this request on December 5, 2013,** and pursuant to our review, the following comments are provided:

Flood Control Planning Division (David Lovell, PWE III, 909-387-7964):

1. As part of this development, the proponent should recognize that a portion of this property may lie in the 100-yr floodplain. They should research the current FEMA FIRM mapping for specific data and apply it to this project. Efforts should be taken to protect this property from the 100-yr storm and be aware that their protection plan would need to beware of impacts on neighboring properties. There are no developed floodplain master plans in this area.

D-1 D-1 Refer to Responses A-1 through A-3.

Water Resources Division (Mary Lou Mermilliod, PWE III, 909-387-8222):

1. Prior to any encroachment on Flood Control District right-of-way, a permit shall be obtained from the District's Permit/Operations Support Division, Permit Section. Other off-site or on-site improvements may be required which cannot be determined at this time.

D-2 D-2 Comment noted. The potential need for an encroachment permit has been added to Final EIR Table 3-1, Matrix of Project Approvals/ Permits.

2. We recommend that the most current FEMA regulations, for construction within established floodplains and the Regulatory Floodway, be enforced by the City of San Bernardino. In particular, we emphasize the regulation that states that the proposed encroachment "...will not result in any increase in flood levels within the community during the occurrence of the base flood discharge (44CFR 60.3(d)(3)."

D-3 D-3 Refer to Responses A-1 through A-3.

GREGORY C. DEVEREAUX
Chief Executive Officer

Board of Supervisors
ROBERT A. LOVINGOOD ..... First District
JANICE RUTHERFORD ..... Second District
JOSIE GONZALES ..... Fifth District
JAMES RAMOS ..... Third District
GARY C. OVITT ..... Fourth District

COMMENT LETTERS

T. Stewart – City of San Bernardino Community Development
CEQA Comments – DEIR for Alliance California Gateway South Bldg. 3
January 15, 2014
Page 2 of 2

Environmental Management Division (Erma Hurse, Senior Planner, 909-387-1864):

1. In meeting state mandated source reduction, recycling, and composting requirements, we recommend that the environmental analysis state specific types of solid waste being generated during the operation of the project and what programs are in place to help reduce, recycle and/or divert waste from being landfilled. D-4

Should you have any questions, please contact the individuals who provided the specific comment, as listed above.

Sincerely,

ANNESLEY IGNATIUS, P.E.
Deputy Director – Environmental & Construction

ARI:PE:nh/CEQA Comments_DEIR_San Bernardino_Alliance California Gateway South

RESPONSES

D-4 Refer to DEIR Subsection 4.11, Utilities & Service Systems, and specifically the discussion under Threshold 7 (DEIR Pages 4.11-9, 10). As noted in DEIR Section 3.0, Project Description, a tenant for the proposed building has not yet been identified; therefore, the types of solid wastes that would be generated cannot be specifically determined at this time. The Project is required to comply with California Assembly Bill 341 (AB 341) of 2012, which is designed to help meet California's recycling goal of 75% by the year 2020. This law requires California commercial enterprises and public entities that generate four or more cubic yards per week of waste, and multi-family housing complexes with five or more units, to adopt recycling practices. Three (3) trash compactors are proposed by the Project for comingled waste. Typical recyclable waste profiles for a building of this type include paper, cardboard, and plastics.

COMMENT LETTERS

RESPONSES

State of California - Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
3602 Inland Empire Blvd., Suite C-220
Ontario, CA 91764
(909) 484-0459
www.wildlife.ca.gov

EDMUND G. BROWN, Jr., Governor
CHARLTON H. BONHAM, Director

RECEIVED
JAN 23 2014
CITY OF SAN BERNARDINO
DEVELOPMENT SERVICES
DEPARTMENT

January 17, 2014

Mr. Tony Stewart
City of San Bernardino
300 North "D" Street
San Bernardino, CA 92418

Subject: Draft Environmental Impact Report for the
Alliance California Gateway Building Number 3 Project
State Clearinghouse No. 2013101021

Dear Mr. Stewart:

The Department of Fish and Wildlife (Department) appreciates the opportunity to comment on the Draft Environmental Impact Report (DEIR) for the Alliance California Gateway Building Number 3 Project (Project) [State Clearinghouse No. 2013101021]. The Department is responding to the DEIR as a Trustee Agency for fish and wildlife resources (California Fish and Game Code Sections 711.7 and 1802, and the California Environmental Quality Act [CEQA] Guidelines Section 15386), and as a Responsible Agency regarding any discretionary actions (CEQA Guidelines Section 15381), such as the issuance of a Lake or Streambed Alteration Agreement (California Fish and Game Code Sections 1600 *et seq.*) and/or a California Endangered Species Act (CESA) Permit for Incidental Take of Endangered, Threatened, and/or Candidate species (California Fish and Game Code Sections 2080 and 2080.1). E-1

E-1 Comments noted. Section 1.4 of the Final EIR has been expanded to list the California Department of Fish and Wildlife (CDFW) as a Trustee and Responsible Agency.

Project Description

The Project is located within the City of San Bernardino. The DEIR proposes to construct a 1,199,360 square foot industrial warehouse on a 49.65 acre portion of a 62.85 acre parcel. The site is bounded on the north by Orange Show Rd., on the south by the Santa Ana River and on the west by development and Waterman Road. E-2

E-2 The Project description summarized in this comment is accurate.

Biological Resources and Impacts

The CEQA document does not include measures to minimize and avoid sensitive biological resources, and mitigation measures to offset the loss of native flora, fauna and State waters. Potential effects from the Project include: noise, lighting, invasive E-3

E-3 The majority of the Project site was used as a commercial lumber storage yard and supports limited weedy/non-native plant species. There are no jurisdictional features, State or Federal, on the site. As discussed in EIR Subsection 4.3, Biological Resources, development

Conserving California's Wildlife Since 1870

Comment Letters

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of a 49.58-acre portion of the site as proposed by the Project would not result in the direct loss of native flora, fauna or State waters. The southeast boundary of the Project site is adjacent to the northern bank of the Santa Ana River and is separated from the river by a 100 foot wide manufactured bank reinforced with concrete rubble to prevent erosion. Photo 1 below shows the relationship of the Project site to the riparian habitat along the southeast boundary. Photo 2 is a close-up of the riparian habitat adjacent to the southeast boundary. Photos 3 shows the retaining fence and concrete rubble used to manufacture a buffer between the Santa Ana River and the Project site.

Photograph 1- Looking west along the southeast boundary of the project site adjacent to the Santa Ana River. The project site ends at the fence line. The riparian trees in the background are primarily cottonwood.

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Photograph 2- Looking northeast along the eastern boundary of the project site between the project boundary (left) and the northern bank of the Santa Ana River (right). Understory consist of concrete rubble and debris armoring the slope from erosion.

Photograph 3- Retaining fence along bank of the Santa Ana River holding concrete rubble on the bank.

Comment Letters

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EIR Subsection 4.3 discloses that this reach of the Santa Ana River, adjacent to the Project site, is designated as Critical Habitat for three federally listed species: San Bernardino kangaroo rat (SBKR), southwestern willow flycatcher (SWWF) and Santa Ana sucker (SASU) (DEIR p. 4.3-8). Additionally, the riparian habitat within the Santa Ana River is known to support least Bell's vireo (LBVI), a federally and state listed species (DEIR p. 4.3-4). However, the area between the Project site's southeast boundary and the northern bank of the Santa Ana River, an approximate 100 foot wide buffer zone, was created by the deposition of concrete rubble behind a retaining wall. No soils or shrubs occur within this artificially created zone.

As confirmed by the Project's biologist, RBF, the primary constituent elements needed by SBKR are not present on the Project site and there is no passage onto the site that would allow SBKR to enter the Project site. RBF biologists conducted a follow-up field visit on January 27, 2014, and confirmed that the concrete rubble buffer has eliminated a potential passage route onto the Project site from the river corridor. Thus, no impacts to SBKR or its Critical Habitat has the potential to occur as a result of the development of the Project site.

Similarly, and as reported by RBF after their January 27, 2014, field visit, the buffer zone located between the river and the Project's proposed development area is outside the riverbed for the Santa Ana River, an intermittent stream along this stretch of the river, and does not support surface waters and, therefore, would not provide suitable habitat for SASU. The primary constituent elements needed by sucker are not present; therefore, there are is no potential for the proposed Project to result in indirect impacts to the species or its critical habitat.

Although numerous riparian trees have been able to root themselves within the concrete rubble, primarily consisting of cottonwood with a limited number of black willows scattered along the southeast

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Responses

boundary of the project site, SWWF requires a robust southern willow scrub plant community with a well-developed multi-layered canopy. This habitat feature, needed by SWWF, is not present, as reported by RBF. SWWF has not been identified in this reach of the river during previous focused surveys conducted by San Bernardino County Flood Control District and is not expected to be present. The primary constituent elements needed by SWWF are not present; therefore, the Project has no potential to result in indirect impacts to the species or its Critical Habitat. Subsection 4.3.3 of the Final EIR has been revised accordingly.

Although LBVI has been found in the general vicinity during breeding season (March thru July), the strip of riparian habitat along the southeast boundary of the Project site, as discussed above, is dominated by concrete rubble understory with cottonwood trees and sparse black willow. This disturbed riparian habitat is very low quality and provides limited nesting opportunities for LBVI. The potential for indirect impacts to LBVI has been added to Subsection 4.3.3 of the Final EIR under the discussion of Threshold 1. Indirect impact to LBVI, if present, could result from impairment of foraging opportunities from construction noise and post construction lighting. However, LBVI would be expected to infrequently forage within the riparian area along the southeast boundary, since this riparian habitat is outside of the breeding habitat for the species. Additionally, the riparian habitat occurs on a manufactured bank, stabilized by concrete rubble, which provides low quality riparian habitat dominated by cottonwood trees with no soils or underlying vegetative component. Indirect impacts to LBVI foraging would thus be considered less than significant.

Mitigation Measure MM 4.3-3 recommended in the Final EIR has been revised as follows to ensure that potential impacts to LBVI, if present, would be reduced to below a level of significance. As noted above, the primary constituent elements needed by SWWF are not present; therefore, the Project has no potential to result in indirect impacts to SWWF and mitigation is not warranted.

Comment Letters

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~~MM 4.3-3: Applications for grading and building permits for activities that will occur within 300 feet of the Santa Ana River shall be accompanied by a letter from a qualified biologist confirming if the Southwestern willow flycatcher occupies habitat within 300 feet of proposed grading and construction activities. If the species is present, construction activities that generate noise levels greater than 65 dBA shall not occur within 300 feet of the Santa Ana River during the Southwestern willow flycatcher nesting season (March 1 through August 31).~~

MM 4.3-3: If construction activities begin or are scheduled to occur within 300 feet of riparian habitat located off-site and along the southeast boundary of the Project site during the least Bell's vireo (LBVI) nesting season (March 1 through August 31), a qualified biologist shall conduct a clearance survey of the habitat to ensure LBVI are not occupying this area. If LBVI is determined to be occupying this area, the qualified biologist shall confirm if the species is nesting. If LBVI is found to be nesting, the biologist shall develop a monitoring program in consultation with CDFW and USFWS to ensure that nesting activities are not interrupted. If nesting LBVI are present, the monitoring program shall be in place and implemented as a condition of the Project's grading and building permits.

Best Management Practices (BMPs) are proposed as part of the Project and/or are ensured by adherence to regulatory requirements, as described in the EIR, to ensure that potential indirect impacts from operational noise, lighting, invasive plants, trash and hydrology/water quality issues are managed onsite and would have a less than significant direct, indirect, and cumulatively considerable effect on the Santa Ana River corridor. Operational noise at the southeast Project boundary would be less than 65 dBA as disclosed in EIR Subsection 4.9, exterior lighting levels are regulated by the City's Development Code Section 19.20.030, plants proposed on the Project's landscape plan for the southeast Project boundary

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are non-invasive, adequate trash collection areas are proposed to be provided and a perimeter fence would serve as a barrier for any littered or wind-blown trash, and the Project's storm drain system would direct water into the Inland Valley Development Agency (IVDA) Master Drainage Plan system and not directly to the Santa Ana River.

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non-native plants and windblown trash. These issues should be addressed in the Final Environmental Impact Report (FEIR). E-3

If state or federal endangered or threatened species have the potential to occur on the Project, site species specific surveys should be conducted using methods approved by the Department or assume the presence of the species throughout the project site. The CEQA document should include recent survey data (CEQA Guidelines Section 15125(a)). The CEQA document should also address species of special concern and federal critical habitat. To assist with review, an accompanying map showing the areas of impact should be included in the subsequent CEQA document. Additional maps detailing the location of endangered, threatened, or special of special concern should also be included in the subsequent CEQA document. E-4

Lake and Streambed Alteration Program

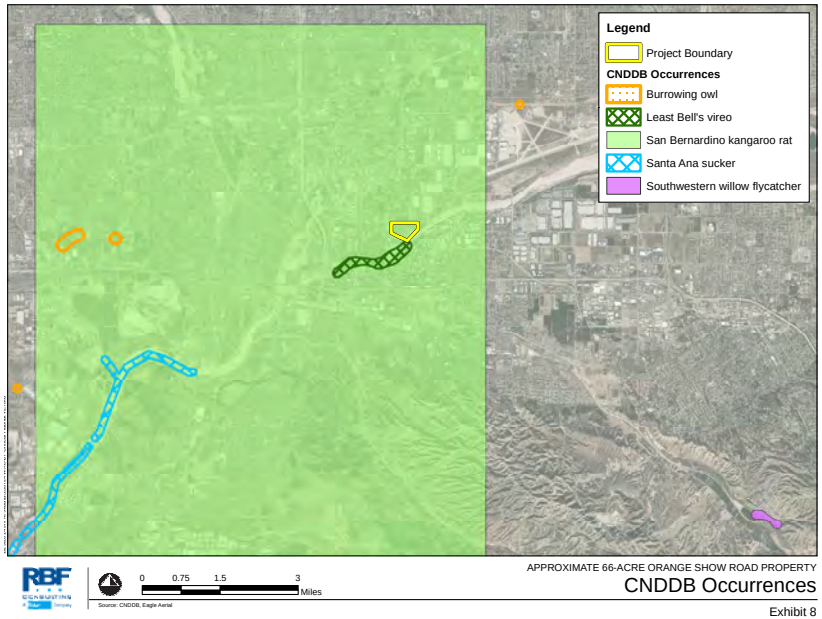
A Notification of Lake or Streambed Alteration is required by the Department, should the site impact jurisdictional areas as per Sections 1600 *et seq* of the California Fish and Game Code. The Department is responsible for assessing and evaluating impacts to jurisdictional areas; typically accomplished through reviewing jurisdictional delineation (JD) reports, supporting information, and conducting site visits. Following review of a JD, the Department may request changes to the JD. The Department may also recommend that additional project avoidance and/or minimization measures be incorporated, or request additional mitigation for project-related impacts to jurisdictional areas.

The Department recommends submitting a notification early in the project planning process, since modification of the proposed project may be required to avoid or reduce impacts to fish and wildlife resources. To obtain a Lake or Streambed Alteration notification package, please go to http://www.dfg.ca.gov/habcon/1600/forms.html. E-5

A Jurisdictional Delineation (JD) was not included with the DEIR, and the DEIR does not provide a drainage plan and an analysis of indirect impacts, such as lighting, noise, invasive non-native plants, and windblown trash. The Department recommends that the entirety of the project site, including a drainage plan and impact analysis of potential impacts to the Santa Ana River and riparian resources, be assessed for the potential presence of Department jurisdictional areas. If Department jurisdictional areas are present, a JD needs to be prepared.

The Department opposes the elimination of ephemeral, intermittent, and perennial streams, channels, lakes, and their associated habitats. The Department recommends avoiding stream and riparian habitat to the greatest extent possible. The CEQA document should include measures to avoid or minimize project impacts. Where adverse impacts cannot be avoided or minimized, the CEQA document should describe compensatory mitigation, for example, the creation and/or restoration of in-kind habitat either on- or off-site. Additional mitigation requirements through the Department's Lake

E-4 Refer to Response E-3. As noted above, the majority of the Project site was used as a commercial lumber storage yard and supports limited weedy/non-native plant species. There are no jurisdictional features, State or Federal, on the site. Development of the Project site as proposed would not result in the direct loss of native flora, fauna or State waters. Development of the property does not have the potential to support federally and State listed species and, therefore, site specific surveys of the Project site are not required. The map below shows the known locations of SBKR, SWWF, LBVI, and SASU in relationship to the Project site.



APPROXIMATE 66-ACRE ORANGE SHOW ROAD PROPERTY
CNDDB Occurrences
Exhibit 8

COMMENT LETTERS

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Alliance California Gateway South Building 3 Project
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and Streambed Alteration Agreement process may be required, depending on the quality of habitat impacted, proposed compensatory mitigation, project design, and other factors.

The following information will be required for the processing of a Notification of Lake or Streambed Alteration and the Department recommends incorporating this information into the CEQA document to avoid subsequent documentation and project delays:

1) Delineation of lakes, streams, and associated habitat that will be temporarily and/or permanently impacted by the proposed project (include an estimate of impact to each habitat type);
2) Discussion of avoidance and minimization measures to reduce project impacts; and,
3) Discussion of potential mitigation measures required to reduce the project impacts to a level of insignificance. Please refer to section 15370 of the CEQA Guidelines for the definition of mitigation.

In the absence of an impact analysis and specific mitigation measures in the CEQA document, the Department believes that it cannot fulfill its obligations as a Trustee and Responsible Agency for fish and wildlife resources. Permit negotiations conducted after and outside of the CEQA process are not CEQA-compliant because they deprive the public and agencies of their right to know what project impacts are and how they are being mitigated (CEQA Guidelines Section 15002).

E-5

Department Recommendations

The Department has the following concerns about the Project, and requests that these concerns be addressed in the CEQA document:

E-6

1. The CEQA document should quantify impacts to habitats and species as per the informational requirements of CEQA. An accompanying map showing the areas of impact should also be included.

E-7

2. Surveys for Burrowing Owl should follow the Department's 2012 Staff Report on Burrowing Owl Mitigation, available for download here: http://www.dfg.ca.gov/wildlife/nongame/docs/BUOWStaffReport.pdf

E-8

3. The analysis in the CEQA document should satisfy the requirements of the Department's Lake and Streambed Alteration Program and CESA (if deemed necessary).

E-9

4. The Department recommends that a CESA ITP be obtained if the Project has the potential to result in "take" (California Fish and Game Code Section 86 defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") of State-listed CESA species, either through construction or over the life of the Project. CESA ITPs are issued to conserve, protect, enhance, and

E-10

RESPONSES

E-5 There are no State or federal jurisdictional features on the Project site; therefore, impacts to State waters from development of the Project site would not occur. A review of the Project's drainage plan shows that all storm waters and wastewater discharges from the Project site, during construction and following development, are planned to be contained on-site and/or delivered to storm drain facilities that discharge into the IDVA Master Drainage Plan system. There would be no direct or indirect impacts to federal or State waters. Thus, a jurisdictional delineation is not warranted.

E-6 Refer to Responses E-7 through E-13.

E-7 The majority of the Project site is developed/disturbed, was used as a commercial lumber storage yard, and supports limited weedy/non-native plant species. All native habitats have been removed from the Project site. Some ruderal vegetation occurs within the southwest corner of the site, but is only composed of ground cover populated with weedy species. The remainder of the Project site is a barren, maintained parcel without vegetation. The entirety of the Project site does not offer suitable habitat for any of the sensitive species known to occur in the general vicinity. EIR Figure 4.3-1 and Exhibit 6 of the Habitat Assessment, Technical Appendix C, is a vegetation map of the Project site. Exhibit 7 of Technical Appendix C shows the location of USFWS designated Critical Habitat in the vicinity of the Project site.

Comment Letters	Responses
	The exhibit associated with Response E-4, above, locates California Natural Diversity Database (CNDDB) sightings of sensitive species within the immediate area.
	Development of the Project site as proposed would not result in the loss of native habitats and there would be no impact to sensitive species. Based on the habitat assessment, State and federal species are not expected to occur on the Project site and implementation of the proposed Project would not directly impact any State or federal species. Further, an analysis of indirect impacts (refer to Response E-3 and EIR Subsection 4.3.3) concludes that there would be no indirect impacts to SBKR, SWWF, and SASU. Indirect impacts could occur to foraging LBVI using the riparian habitat along the site's southeast boundary. Revised Mitigation Measure MM 4.3-3 includes avoidance and minimization measures to ensure that any potential impact to LBVI is less than significant.
E-8	Biologists from RBF used the CDFW's report to conduct an assessment of suitability of the site to support burrowing owls. RBF biologists determined that the site is unsuitable for burrowing owls, that there was no sign or indication of use of the Project site by burrowing owl. Thus, focused surveys are not required. However, clearance surveys for burrowing owl are included in Mitigation Measure MM 4.3-1 as an avoidance and minimization measure to ensure that no or less than significant impacts occur to this species.
E-9	Based on RBF's habitat assessment and analysis of potential biological impacts, neither a Streambed Alteration Permit nor a CESA Incidental Take Permit (ITP) would be required.
E-10	Based on the results of the Habitat Assessment conducted by RBF and as analyzed in the DEIR, Subsection 4.3, as well as discussed in Response E-3, less than significant impacts would occur to State listed species during the construction phase or over the life of the Project and a CESA ITP is not required.

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Alliance California Gateway South Building 3 Project
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restore State-listed CESA species and their habitats. The Department encourages early consultation, as significant modification to the proposed project and mitigation measures may be required in order to obtain a CESA ITP. Revisions to the California Fish and Game Code, effective January 1998, require that the Department issue a separate CEQA document for the issuance of a CESA ITP unless the Project CEQA document addresses all Project impacts to listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of a CESA permit. E-10

5. The CEQA document should provide a thorough analysis of direct, indirect, and cumulative impacts and identify specific measures to offset such impacts. E-11

6. The Department recommends that riparian trees be planted on the southeastern project boundary. E-12

In summary, the Department requests that the subsequent CEQA document adequately address potential impacts and mitigation measures. If you should have any questions pertaining to these comments, please contact Robin Maloney-Rames at (909) 980-3818. E-13

Sincerely,

Jeff Brandt
Senior Environmental Scientist

cc: State Clearinghouse, Sacramento

RESPONSES

E-11 The Draft EIR, combined with these Response to Comments, and revisions to the Draft EIR made as a result of Responses to Comment, ensures that the Final EIR provides a thorough analysis of direct, indirect and cumulative impacts to biological resources. The recommended Mitigation Measures identify specific measures to reduce all identified impacts to below levels of significance.

E-12 Recommendation acknowledged. The City of San Bernardino will work with the Project Applicant to evaluate the potential use of riparian trees as a landscaping amenity along the southeast Project boundary.

E-13 The Final EIR addresses all potential impacts to biological resources and mitigatgion measures are presented for all potentially significant impacts to reduce impacts to below levels of signficance. The contact information for Robin Maloney-Rames is noted.

COMMENT LETTERS

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

January 22, 2014

RECEIVED
JAN 27 2014
CITY OF SAN BERNARDINO
DEVELOPMENT SERVICES
DEPARTMENT

Tony Stewart
City of San Bernardino
300 North D Street, 3rd Floor
San Bernardino, CA 92418

Subject: Alliance California Gateway South Building 3
SCH#: 2013101021

Dear Tony Stewart:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on January 21, 2014, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

RESPONSES

F-1 F-1 The City of San Bernardino acknowledges this letter and attached data record indicating that the close of public review for the Draft EIR was January 21, 2014. The City will note the assigned State Clearinghouse Number on all future correspondence with the Governor's Office of Planning and Research.

COMMENT LETTERS

RESPONSES

Document Details Report
State Clearinghouse Data Base

SCH# 2013101021
Project Title Alliance California Gateway South Building 3
Lead Agency San Bernardino, City of

Type **EIR** Draft EIR

Description The proposed Project involves the construction and operation of one industrial warehouse with 1,199,360 sf of floor space, 215 loading bays on a 49.65-acre portion of a 62.85-acre property in an industrial area of the City of San Bernardino. The remaining 13.20 acres of the Project site are owned by the City of Riverside and would not be developed or disturbed as part of the Project. The site is currently vacant, although portions of the site have been previously developed and the entirety of the site has been subjected to substantial grading activity.

Lead Agency Contact

Name Tony Stewart
Agency City of San Bernardino
Phone 909 384 5357 ***Fax***
email
Address 300 North D Street, 3rd Floor
City San Bernardino ***State*** CA ***Zip*** 92418

Project Location

County San Bernardino
City San Bernardino
Region
Lat / Long 34° 4' 45" N / 117° 16' 23" W
Cross Streets East Orange Show Road and South Waterman Avenue
Parcel No.
Township 1S ***Range*** 4W ***Section*** 23/14 ***Base*** SBB&M

Proximity to:

Highways I-215 and 10
Airports San Bernardino Int'l
Railways AT&SF
Waterways Santa Ana River
Schools Norton Space Academy
Land Use Industrial Light

Project Issues Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Minerals; Noise; Sewer Capacity; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Cumulative Effects; Other Issues

Reviewing Agencies Resources Agency; Department of Fish and Wildlife, Region 6; Department of Parks and Recreation; Department of Water Resources; Caltrans, Division of Aeronautics; Office of Emergency Services, California; Caltrans, District 8; Air Resources Board; Regional Water Quality Control Board, Region 8; Department of Toxic Substances Control; Native American Heritage Commission; Public Utilities Commission

Date Received 12/06/2013 ***Start of Review*** 12/06/2013 ***End of Review*** 01/21/2014

F-1

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. 2013101021, has been 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 3 Project (herein, the "Project"). This EIR does not recommend either approval or denial of the proposed Project; rather, it 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 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 Project 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 Project is being approved despite its unavoidable impacts.

This *Executive Summary* has been prepared in accordance with CEQA Guidelines § 15123. This EIR includes a description of the proposed Project and evaluates the physical environmental impacts that could result from planning, constructing, and operating the Project. The scope of this EIR has been determined to cover 11 subject areas through the completion of an Initial Study prepared by the City of San Bernardino 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 11 environmental subject areas that could be reasonably and significantly affected by the Project are analyzed herein, including:

1. Aesthetics
2. Air Quality
3. Biological Resources
4. Cultural Resources
5. Greenhouse Gas Emissions
6. Hazards and Hazardous Materials
7. Hydrology and Water Quality
8. Mineral Resources
9. Noise
10. Transportation/Circulation
11. Utilities and Service Systems

Refer to Section 4.0, *Environmental Analysis*, for a full account and analysis of the subject matters listed above. As mentioned, the scope of this EIR includes these 11 subject areas 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. Subject areas 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 Subsection 5.4, *Effects Found Not to Be Significant as Part of the Initial*

Study Process. For each of the 11 subject areas analyzed 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 (October 2013); 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 would reduce or avoid any significant adverse environmental impacts that the Project may cause. A summary of the Project's significant environmental impacts and the mitigation measures imposed by the City of San Bernardino to lessen or avoid those impacts is included in this *Executive Summary* as Table S-1, *Mitigation Monitoring and Reporting Program*.

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

S.2 PROJECT OVERVIEW

S.2.1 LOCATION AND REGIONAL SETTING

The Project site consists of 62.85 acres in the south-central portion of the City of San Bernardino, San Bernardino County, California (see Figure 3-1, *Regional Map*). From a regional perspective, the Project site is located to the north of the City of Loma Linda, to the east of the City of Colton, and to the west of the cities of Redlands and Highland. Interstate 215 (I-215) is located approximately 1.1 miles to the west of the site and Interstate 10 (I-10) is located approximately 1.0-mile to the south of the site. Refer to Subsection 2.1 for more information about the Project's regional setting.

At the local scale, the Project site is located immediately south of Orange Show Road, approximately 450 feet east of Waterman Avenue, and approximately 0.6 mile west of Tippecanoe Road, as illustrated on Figure 3-2, *Vicinity Map*, and Figure 3-3, *USGS Topographic Map*. Refer to Subsection 2.2 for more information about the Project's local setting.

S.2.2 PROJECT OBJECTIVES

The primary objective of the proposed Project is to construct and operate one (1) new, large industrial warehouse building in the City of San Bernardino in conformance with the land use and zoning designations applied to its property by the City of San Bernardino General Plan and Development Code. The following is a list of specific objectives sought by the proposed Project:

A. To make efficient use of a vacant or underutilized property of over 50 acres that has access to available infrastructure for the development of an employment-generating use in the City of San Bernardino.

B. To develop a large industrial warehouse building on a property in conformance with the land use and zoning designations applied to that property by the City of San Bernardino General Plan and Development Code.

C. To develop a large industrial warehouse building that will attract quality tenants and be economically competitive with other similar buildings in the local area and region.

D. To develop large industrial warehouse building having loading bays to accommodate goods-movement economic activity within close proximity to regional transportation routes.

E. To develop a large industrial warehouse building that is financially feasible to construct and operate.

F. To make efficient use of vacant or underutilized property by developing the site to achieve a minimum floor area ratio (FAR) of 0.55.

G. 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.2.3 PROJECT DESCRIPTION SUMMARY

The Project consists of a proposal to redevelop a portion of a 62.85-acre property with one (1) industrial warehouse building. The principal discretionary actions required of the City of San Bernardino to implement the proposed Project include the approval of Tentative Parcel Map No. 19847 (SUB13-07) and a Development Permit/Site Plan (DP-P13-09), and certification of this EIR. Additional discretionary and administrative actions that would be necessary to implement the proposed Project are listed in Table 3-1, *Matrix of Project Approvals/Permits*, in EIR Section 3.0.

A brief description of the proposed discretionary approvals associated with the Project is provided in the following subsections.

A. Tentative Parcel Map No. 19847 (SUB13-07)

Tentative Parcel Map No. 19847 proposes to subdivide the 62.85-acre Project site into two (2) parcels. Parcel 1 is owned by the City of Riverside and comprises an irregularly-shaped 13.20-acre portion of the Project site. No development or physical disturbance is proposed by the Project on Parcel 1. Parcel 2 includes the remaining 49.58-acre portion of the property, which would be configured to accommodate the construction and operation of one (1) 1,199,360-square foot industrial warehouse building and installation of utility infrastructure, water quality/infiltration basins and other site improvements.

B. Development Permit No. DP-P13-09

Development Permit No. DP-P13-09 provides a detailed site plan for the 49.58-acre portion of the property proposed for redevelopment, and includes a land use plan, architectural plans, and landscape design for the proposed redevelopment of Parcel 2.

S.3 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 this Project, the Initial Study indicated that this EIR should focus on the 11 environmental subject areas 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 October 8, 2013.

Written comments on the scope of the EIR were received during those 30 days, and were considered by the City during the preparation of this EIR. In addition, and pursuant to CEQA Guidelines § 15082(c)(1), an advertised public meeting (called a scoping session) was held on October 30, 2013, at the San Bernardino City Hall. After considering public comments on the NOP and during the scoping session, there were no comments received that warranted an expansion of the scope of the EIR beyond the 11 environmental issue areas listed in Subsection S.1.

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, advertisements will be posted in the local newspaper, 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, responses to written comments on the environmental effects of the proposed Project will be prepared and published. The Final EIR will then be considered for certification by the City of San Bernardino Development/Environmental Review Committee and Planning Commission during public hearing. The Development/ Environmental Review Committee and Planning Commission will review and consider the Final EIR prior to deciding to approve, approve with revision, or reject 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 to reduce or avoid significant impacts on the physical environment. The MMRP, which is included as Table S-1 in this EIR, will ensure CEQA compliance during Project construction and operation.

S.4 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

CEQA Guidelines § 15123(b)(2) requires that areas of controversy known to the Lead Agency (City of San Bernardino) be identified in the Executive Summary. 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.

Regarding issues to be resolved, this EIR addresses the environmental issues that are known by the City and that are identified in the Initial Study prepared for the Project (refer to *Technical Appendix A*). Written comment letters received by the City on this EIR's NOP are included in *Technical Appendix A*. Environmental topics raised in written comments to the NOP are primarily related to the issue areas of cultural resources, air quality, hydrology/water quality, land use/planning, and transportation/circulation. Refer to Table 1-1, *Summary of NOP Comments*, in Section 1.0 of this EIR.

S.5 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 Section 6.0, *Alternatives to the Proposed Project*. Also described in Section 6.0 is a list of alternatives that were considered but rejected from further analysis. The alternatives considered by this EIR include those listed below.

S.5.1 ALTERNATIVE 1 – NO PROJECT ALTERNATIVE

The No Project Alternative assumes that no development would occur on the Project site. This alternative was selected by the Lead Agency to compare the environmental effects of the Project against leaving the property in its existing state. The proposed Project implements the City of San Bernardino General Plan; therefore, if the Project were not approved, it is reasonable to expect that the property would remain as a mostly vacant site with remnants of a former lumber mill for the foreseeable future.

S.5.2 ALTERNATIVE 2 – SMALL BUILDINGS ALTERNATIVE

The Small Buildings Alternative considers development of the site with five (5) smaller light industrial warehouse buildings ranging in size from 150,000 square feet to 195,000 square feet. Buildings of this size were selected for consideration because they would likely attract light industrial, small assembly, light manufacturing, mini storage, and and/or small-scale warehousing that desire building sizes in this range. Under this alternative, a maximum of 975,000 square feet of building area would be constructed on the property, resulting in an overall reduction of approximately 224,360 square feet of building area (or approximately 19%) as compared to the Project. The Small Buildings Alternative was selected for consideration by the Lead Agency to compare the environmental effects of the proposed Project (one large building that is likely to attract one tenant) against the environmental effects of constructing multiple, smaller buildings that are likely to attract different tenants.

S.5.3 ALTERNATIVE 3 – WAREHOUSE BUILDING/TRUCK TRAILER YARD ALTERNATIVE

The Warehouse Building/Truck Trailer Yard Alternative considers development of the Project site with one 599,680 square-foot light industrial warehouse building and using the remainder of the Project's development area as a truck trailer parking lot with approximately 525 spaces. This alternative would reduce the building area on-site by approximately 599,680 square feet (or 50%) as compared to the proposed Project. The Warehouse Building/Truck Trailer Yard Alternative was selected by the Lead Agency to evaluate the comparative environmental benefits of developing the Project site in conformance with the property's Industrial designation under the City of San Bernardino General Plan while reducing the overall structural building intensity.

S.6 SUMMARY OF IMPACTS, PROJECT REQUIREMENTS, MITIGATION MEASURES, AND CONCLUSIONS

S.6.1 EFFECTS FOUND NOT TO BE SIGNIFICANT

The scope of detailed analysis in this EIR includes 11 subject areas identified 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 and during the October 30, 2013, scoping session. The Initial Study, NOP, and

public comments received in response to the NOP, are attached to this EIR as *Technical Appendix A*. Subject areas for which the Initial Study concluded that impacts would be clearly less than significant and that do not warrant further analysis in this EIR include: Agriculture & Forestry Resources, Geology and Soils, Land Use/Planning, Population/Housing, Public Services, and Recreation. The EIR addresses these topics that do not warrant a detailed analysis in EIR Subsection 5.4, *Effects Found Not to be Significant as Part of the Initial Study Process*.

S.6.2 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 avoid adverse environmental impacts or to reduce their level of significance.

Table S-1 Mitigation, Monitoring, and Reporting Program

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
4.1 Aesthetics					
Summary of Impacts					
Threshold 1: 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; therefore, impacts to scenic vistas would be less than significant.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold 2: The Project has no potential to damage scenic resources within a scenic highway corridor. The Project site is not located within the viewshed of a scenic highway and the Project site does not contain any scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings.	Mitigation is not required.	N/A	N/A	N/A	No Impact
Threshold 3: The Project would not substantially degrade the existing visual character or quality of the site or its surrounding areas during Project construction or operation. Although the proposed Project would result in a change to the existing visual character of the site (i.e., from a former lumber mill property to a light industrial warehouse building), 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 view.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold 4: The Project would not create substantial light or glare. Compliance with City of San Bernardino requirements for artificial lighting would ensure less-than-significant impacts associated with light and glare affecting day or nighttime views in the area.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
4.2 Air Quality					
Summary of Impacts					
Threshold 1: The proposed Project would not conflict with or obstruct implementation of the SCAQMD AQMP.	Mitigation is not required.	N/A	N/A	N/A	No Impact
Thresholds 2 and 3: Emissions during Project construction would violate the SCAQMD regional threshold for NO_X. In addition, long-term operation of the Project is projected to exceed SCAQMD regional thresholds for VOC and NO_X emissions. Near- and long-term emissions of NO_X also would contribute to an existing air quality violation in the SCAB (i.e., non-attainment status for NO_X and ozone). As such, Project-related emissions would violate SCAQMD air quality standards and contribute to the non-attainment status of a criteria pollutant (i.e., NO_X and ozone), which is significant on a direct and cumulative basis.	**MM 4.2-3** Prior to grading permit and building permit issuance, the City shall verify that the following notes are specified on all grading and building plans. Project contractors shall be required to comply with these notes and permit periodic inspection of the construction site by City of San Bernardino staff to confirm compliance. a) During grading, no more than five (5.0) acres (surface area) of land or topsoil shall be actively disturbed on any given day. b) During construction activity, diesel engines shall not idle in excess of five (5) minutes. c) During construction activity, the operating time of all pieces of off-road diesel-powered equipment shall not exceed a combined total of 147 operating hours per day. d) During construction activity, all off-road diesel construction equipment greater than or equal to 100 horsepower shall be CARB Tier 3 Certified or better. e) Construction parking shall be located and configured to minimize traffic interference on public streets.	Project Applicant/Developer, Project Construction Manager	City of San Bernardino Community Development Department, Building & Safety Division	Prior to issuance of grading and building permits.	Significant Unavoidable Direct and Cumulative Impact
	MM 4.2-4 Prior to building permit issuance, the City shall verify that the following note is specified on all building plans. Project contractors shall be required to comply with these notes and maintain written records of such compliance that can be inspected by the City of San Bernardino upon request. a) All surface coatings shall consist of Zero-Volatile Organic Compound paints (no more than 125 gram/liter of VOC) and/or be applied with High Pressure Low Volume (HPLV) applications consistent with SCAQMD Rule 1113. Alternatively, building materials may be used that do not require	Project Applicant/Developer, Project Construction Manager	City of San Bernardino Community Development Department, Building & Safety Division	Prior to issuance of building permits.	

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	painting or are delivered to the construction site pre-painted.				
	MM 4.2-5 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; and 3) telephone numbers of the building facilities manager and the CARB to report violations. Prior to occupancy permit issuance, the City shall conduct a site inspection to ensure that the signs are in place.	Project Applicant/Developer	City of San Bernardino Community Development Department, Building & Safety Division	Prior to issuance of occupancy permits.	
	MM 4.2-6 Prior to the issuance of building permits, the City shall verify that the parking lot striping and security gating plan allows for adequate truck stacking at gates to prevent queuing of trucks outside the property.	Project Applicant/Developer	City of San Bernardino Community Development Department, Building & Safety Division	Prior to the issuance of building permits.	
	MM 4.2-7 The Project's property owner shall provide tenants with readily available documentation from the City of San Bernardino to inform them about benefits of implementing a voluntary carpool or rideshare program for employees.	Project Applicant/Developer	City of San Bernardino Community Development Department, Planning Division	On-going during long-term operation.	
	MM 4.2-8 Prior to the issuance of a building permit, documentation shall be provided to the City of San Bernardino confirming that the building design exceeds the California Title 24 Energy Efficiency Standards (2008) by a minimum of 20 percent.	Project Applicant/Developer	City of San Bernardino Community Development Department, Planning Division and Building & Safety Division	Prior to issuance of building permits.	
	MM 4.2-9 Prior to the issuance of permit that would allow the installation of landscaping, the City of San Bernardino shall review and approve landscaping plans for the site which show a plant palette emphasizing drought-tolerant plants and use of water-efficient irrigation techniques.	Project Applicant/Developer	City of San Bernardino Community Development Department, Planning Division and Building & Safety Division	Prior to issuance of permit that would allow installation of landscaping.	
	MM 4.2-10 In the event that the building design is modified to accommodate refrigeration, all loading docks shall be equipped with an electrical hookup to power refrigerated tractor trailers.	Project Applicant/Developer	City of San Bernardino Community Development Department, Building & Safety Division	Prior to issuance of building permits.	

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
Threshold 4: The Project would expose nearby sensitive receptors to substantial concentrations of localized particulate matter (PM_{10} and $PM_{2.5}$) during construction. This impact is significant on a direct and cumulative basis. Long-term operation of the Project would not expose nearby sensitive receptors to substantial pollutant concentrations of any criteria pollutant or diesel particulate matter. As such, a less than significant impact would occur during long-term operation of the Project.	**MM 4.2-1** Prior to grading permit issuance, the City shall verify that the following notes are specified on the grading plan to ensure implementation of SCAQMD Rule 403. It should be noted that the following list is non-exclusive, and identifies only key provisions of the SCAQMD Rule 403 requirements; regardless the Project shall be required to comply with all applicable provisions of SCAQMD Rule 403, whether listed below or not. Specifically, Project contractors shall be required to comply with the following notes and all other applicable SCAQMD Rule 403 requirements, and shall maintain written records of such compliance that can be inspected by the City of San Bernardino upon request. a) All clearing, grading, earth-moving, and excavation activities shall cease when winds exceed 25 miles per hour. b) All unpaved roads and disturbed areas shall be watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day. c) The contractor shall ensure that traffic speeds on unpaved roads and areas where soil is exposed are reduced to 15 miles per hour or less. d) Public streets shall be swept at the end of each workday using a street sweeper meeting SCAQMD Rule 1186.1 if visible soil is carried onto paved public roads. e) The cargo area of all vehicles hauling soil, sand, or other loose earth materials shall be covered.	Project Applicant/Developer, Project Construction Manager	City of San Bernardino Community Development Department, Building & Safety Division	Prior to issuance of grading permits.	Less-than-Significant Impact with Mitigation Incorporated
	MM 4.2-2 Prior to the start of grading, the construction contractor shall post legible, durable, weather-proof signs at the property's frontage with Orange Show Road stating the name and phone number of an authorized individual to be contacted to resolve dust complaints. These signs shall remain posted on the property until grading is complete. All legitimate dust complaints shall be resolved in 24 hours.	Project Construction Manager	City of San Bernardino Community Development Department, Planning Division and Building & Safety Division	Prior to the start of ground disturbing activities and on-going during construction.	

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
Threshold 5: Although near-term construction activities could produce odors associated with construction equipment exhaust, the application of asphalt, and the application of architectural coatings, standard construction requirements would minimize odor impacts to less than significant levels. Odors associated with long-term operation of the proposed Project would not significantly impact nearby sensitive receptors.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
4.3 Biological Resources					
Summary of Impacts					
Threshold 1: The proposed Project has the potential to directly and cumulatively impact burrowing owls, if the species migrates onto the property prior to the commencement of ground-disturbing construction activities. The potential adverse effect to burrowing owl is a significant direct and cumulative impact. Additionally, if the ~~Southwestern willow flycatcher~~ least Bell's vireo is present in the off-site adjacent Santa Ana River corridor during construction activities that occur during its nesting season (March 1 through August 31), the species could be indirectly exposed to construction noise levels exceeding 65 dBA, which is a potentially significant direct and cumulative impact..	**MM 4.3-1** No sooner than 30 days prior to and no later than 14 days prior to grading activities, a qualified biologist shall conduct a survey of the Project's proposed impact footprint and make a determination regarding the presence or absence of the burrowing owl. A second survey shall be conducted within 24 hours prior to ground disturbing activities. The determination shall be documented in a report and shall be submitted, reviewed, and accepted by the City of San Bernardino Community Development Department prior to the issuance of a grading permit and subject to the following provisions: a) In the event that the pre-construction survey identifies no burrowing owls in the impact area, a grading permit may be issued without restriction. b) In the event that the pre-construction survey indicates the Project's proposed impact footprint is occupied by burrowing owl, then prior to the issuance of a grading permit and prior to the commencement of ground-disturbing activities on the property, a qualified biologist shall passively or actively relocate any burrowing owls. Passive relocation, including the required use of one-way doors to exclude owls from the site and the collapsing of burrows, will occur if the biologist determines that the proximity and availability of alternate habitat is suitable for successful passive relocation. Passive relocation shall follow CDFW relocation protocol and shall only occur between September 15 and February 1. If proximate	Project Biologist	City of San Bernardino Community Development Department, Planning Division and Building & Safety Division	Prior to issuance of a grading permit and within 14-30 days and 24 hours prior to grading.	Less-than-Significant Impact with Mitigation Incorporated

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	alternate habitat is not present as determined by the biologist, active relocation shall follow CDFW relocation protocol. The biologist shall confirm in writing that the species has fledged the site or been relocated prior to the issuance of a grading permit. ~~**MM 4.3-3** Applications for grading and building permits for activities that will occur within 300 feet of the Santa Ana River shall be accompanied by a letter from a qualified biologist confirming if the Southwestern willow flycatcher occupies habitat within 300 feet of proposed grading and construction activities. If the species is present, construction activities that generate noise levels greater than 65 dBA shall not occur within 300 feet of the Santa Ana River during the Southwestern willow flycatcher nesting season (March 1 through August 31).~~ **MM 4.3-3:** If construction activities begin or are scheduled to occur within 300 feet of riparian habitat located off-site and along the southeast boundary of the Project site during the least Bell's vireo (LBVI) nesting season (March 1 through August 31), a qualified biologist shall conduct a clearance survey of the habitat to ensure LBVI are not occupying this area. If LBVI is determined to be occupying this area, the qualified biologist shall confirm if the species is nesting. If LBVI is found to be nesting, the biologist shall develop a monitoring program in consultation with CDFW and USFWS to ensure that nesting activities are not interrupted. If nesting LBVI are present, the monitoring program shall be in place and implemented as a condition of the Project's grading and building permits.	Project Biologist	City of San Bernardino Community Development Department, Planning Division and Building & Safety Division	Prior to the issuance of grading and building permits.	
Threshold 2: The Project site and its off-site improvement area do not contain riparian and/or other sensitive natural habitats; therefore, the Project would have no impact on riparian or other sensitive habitats as defined by the CDFW or USFWS.	Mitigation is not required	N/A	N/A	N/A	No Impact
Threshold 3: No federally protected wetlands are located on the Project site or in its off-site	Mitigation is not required.	N/A	N/A	N/A	No Impact

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
improvement area; therefore, no impact to wetlands would occur.					
Threshold 4: There is no potential for the Project to interfere with the movement of fish or impede the use of a native wildlife nursery site. However, the Project has the potential to directly and cumulatively impact nesting, migratory birds protected by the MBTA and California Fish and Game Code, if construction activities were to occur during the nesting season.	**MM 4.3-2** As a condition of approval for all grading permits, vegetation clearing and ground disturbance shall be prohibited during the migratory bird nesting season (February 1 through September 15), unless a migratory bird nesting survey is completed in accordance with the following requirements: a) A migratory nesting bird survey of the Project's impact footprint shall be conducted by a qualified biologist within three (3) days prior to initiating vegetation clearing or ground disturbance. b) A copy of the migratory nesting bird survey results report shall be provided to the City of San Bernardino Community Development Department. If the survey identifies the presence of active nests, then the qualified biologist shall provide the Community Development Department with a copy of maps showing the location of all nests and an appropriate buffer zone around each nest sufficient to protect the nest from direct and indirect impact. The size and location of all buffer zones, if required, shall be subject to review and approval by the Community Development Department and shall be no less than a 300-foot radius around the nest for non-raptors and a 500-foot radius around the nest for raptors. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved buffer zone shall be marked in the field with construction fencing, within which no vegetation clearing or ground disturbance shall commence until the qualified biologist verifies that the nests are no longer occupied and the juvenile birds can survive independently from the nests.	Project Biologist	City of San Bernardino Community Development Department, Planning Division and Building & Safety Division	Prior to the issuance of grading permits	Less-than-Significant Impact with Mitigation Incorporated
Threshold 5: The Project would not conflict with any local policies or ordinances protecting biological resources.	Mitigation is not required.	N/A	N/A	N/A	No Impact
Threshold 6: The Project is not located within the boundaries of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local,	Mitigation is not required.	N/A	N/A	N/A	No Impact

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
regional, or state habitat conservation plan.					
4.4 Cultural Resources					
Summary of Impacts					
Threshold 1: No historic sites are present on the Project site; therefore, no historic sites could be altered or destroyed by construction or operation of the proposed Project.	Mitigation is not required.	N/A	N/A	N/A	No Impact
Threshold 2: The Project would not impact any known or recorded archaeological resources. There is potential, however, for unearthing archaeological resources that meet the definition of a significant resource given in California Code of Regulations during Project construction.	**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 grading and trenching operations are trained to recognize archaeological resources should such resources be unearthed during ground-disturbing construction activities. If a suspected archaeological resource is identified on the property, the construction supervisor shall be required by his contract to immediately halt and redirect grading operations in a 100-foot radius around the find and seek identification and evaluation of the suspected resource 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 significant, Mitigation Measure MM 4.4-2 shall apply.	Project Applicant/ Developer or Project Construction Manager	City of San Bernardino Community Development Department, Building & Safety Department	Prior to the issuance of grading permits and concurrent with grading and trenching activities.	Less-than-Significant Impact with Mitigation Incorporated
	MM 4.4-2 If a significant archaeological resource(s) is discovered on the property, ground disturbing activities shall be suspended 100 feet around 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 resource(s). A treatment plan shall be prepared and implemented by the archaeologist to protect the identified archaeological resource(s) from damage and destruction. A final report containing the significance and treatment findings	Project Construction Manager, Project Archaeologist	City of San Bernardino Community Development Department, Planning Division and Building & Safety Division	Concurrent with grading and trenching activities.	

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	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 3: The Project site and off-site improvement area are located in an area that may be underlain by Pleistocene-age soils. These soils have a high paleontological sensitivity greater than 10 feet below the ground surface. The Project has the potential to significantly impact paleontological resources on a direct and cumulative basis if fossils that may be buried beneath the surface of the Project site or off-site impact area are unearthed during construction.	**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 grading and trenching operations in older alluvium deposits dating to the Pleistocene age at depths of greater than 10 feet are trained to recognize paleontological resources (fossils) should such resources be unearthed during ground-disturbing construction activities. If a suspected paleontological resource is identified on the property, the construction supervisor shall be required by his contract to immediately halt and redirect grading operations in a 100-foot radius around the find and seek identification and evaluation of the suspected resource by a qualified paleontologist meeting the definition of a qualified vertebrate paleontologist given 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 resources shall be determined by the paleontologist. If the resource is significant, Mitigation Measure MM 4.4-4 shall apply.	Project Applicant/ Developer or Project Construction Manager	City of San Bernardino Community Development Department, Building & Safety Department	Prior to the issuance of grading permits and concurrent with grading and trenching activities.	Less-than-Significant Impact with Mitigation Incorporated
	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 given 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	Project Construction Manager, Project Paleontologist	City of San Bernardino Community Development Department, Planning Division and Building & Safety Division	Concurrent with grading and trenching activities.	

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	accurately record the original location of recovered fossils, and contains evidence that the resources were curated by an established museum repository.				
Threshold 4: No human remains have been discovered at the Project site and no human remains are known to be buried beneath the surface of the site. If human remains are uncovered during ground disturbing construction activities and are determined to be of Native American decent, , the Project would be required to comply with the applicable provisions of California Health and Safety Code §7050.5 and California Public Resources Code §5097 et. seq. Mandatory compliance with State law would ensure that human remains, if encountered, are appropriately treated and would preclude the potential for significant impacts to human remains.	Mitigation is not required	N/A	N/A	N/A	Less than Significant Impact
4.5 Greenhouse Gas Emissions					
Summary of Impacts					
Thresholds 1 and 2: The proposed Project would have a less than significant direct impact on global climate change and the Project's contribution of greenhouse gas emissions would be less than cumulatively considerable. The Project complies with all applicable CARB Scoping Plan and 2006 CAT Report GHG reduction measures. There are no other applicable plans, policies, or regulations that have been adopted for the purpose of reducing the Project's emissions of greenhouse gases.	Mitigation is not required	N/A	N/A	N/A	Less than Significant Impact.
4.6 Hazards and Hazardous Materials					
Summary of Impacts					
Thresholds 1 and 2: During Project operation and with mandatory compliance to federal, state and local regulations, the proposed Project would not create a significant hazard to the public or the environment due to routine transport, use, disposal, or upset of hazardous materials. Under existing	**MM 4.6-1** Prior to the initiation of ground-disturbing construction activities, stained soil located in the southern portion of the Project site shall be remediated and properly disposed of in accordance with federal, state, and City of San Bernardino requirements.	Project Applicant/ Developer	City of San Bernardino Community Development Department, Planning Division	Prior to issuance of grading, clearing, or demolition permits.	Less-than-Significant Impact with Mitigation Incorporated.

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
conditions, the site contains an area of oil-stained soil that exceeds applicable RWQCB screening thresholds, which is considered a potentially significant impact.					
Threshold 3: The Project site is not located within one-quarter mile of any existing or planned school. Accordingly, the Project would not expose any nearby school to potential impacts related to hazardous materials.	Mitigation is not required.	N/A	N/A	N/A	No Impact
Threshold 4: The Project site is not listed on any list of hazardous materials compiled pursuant to Government Code Section 65962.5.	Mitigation is not required.	N/A	N/A	N/A	No Impact
Threshold 5: The Project site is not located within any airport land use compatibility plan. Although the Project site is located approximately 0.75 mile to the southwest of the San Bernardino International Airport, operation of the Project site with "Industrial Light" uses was determined by the City of San Bernardino General Plan to not pose a substantial safety hazard to future on-site workers or airport operations. Impacts would be less than significant.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold 6: The Project site is not located in the vicinity of a private airstrip, but is located within approximately 0.50 mile of a private heliport. No component of the Project would interfere with flight operations at the nearby helipad. Impacts would be less than significant.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold 7: The Project would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. No emergency facilities exist on the Project site, and the site does not serve as an emergency evacuation route.	Mitigation is not required.	N/A	N/A	N/A	No Impact
Threshold 8: The Project would not expose people or structures to a significant wildfire risk. The Project site is not located in close proximity to wildlands or areas with high fire hazards. As such, a less than significant	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
impact due to wildland fire hazards would occur.					
4.7 Hydrology and Water Quality					
Summary of Impacts					
Threshold 1: The proposed Project would not violate any water quality standards or waste discharge requirements on a direct or cumulative basis. The Project is required to prepare a SWPPP to address construction-related water quality issues, and would be required to comply with a site-specific WQMP and its associated BMPs.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold 2: The Project proposes no potable water wells, would not adversely affect potable water wells, and would not substantially impact the availability of potable groundwater in the Project area.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold 3: The proposed Project would generally maintain the existing drainage pattern of the site and would not result in substantial erosion or siltation on- or off-site.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold 4: There would be no significant increases in flood hazard with implementation of the Project. The proposed Project would not result in a substantial increase in the rate of surface runoff in a manner which would result in increased flood hazards on- or off-site.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold 5: The proposed Project would not create or contribute runoff which would exceed the capacity of existing or planned stormwater drainage systems, nor would the Project provide substantial additional sources of polluted runoff.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold 6: There are no other components of the proposed Project with a potential to substantially degrade water quality.	Mitigation is not required.	N/A	N/A	N/A	No Impact
Threshold 7: The proposed Project does not involve the construction of residential housing and therefore would not place housing in a flood area.	Mitigation is not required.	N/A	N/A	N/A	No Impact

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
Threshold 8: The Project would construct a light industrial warehouse building within the 100-year floodplain of the Santa Ana River, as designated by FEMA.	**MM 4.7-1** Prior to the issuance of an occupancy permit, the Project Proponent shall provide evidence to the City of San Bernardino that an application for a Final Letter of Map Revision (LOMR) has been submitted to FEMA to permanently remove the development area from the FEMA 100-year floodplain, and shall demonstrate to the satisfaction of the City of San Bernardino that the finished floor height of the warehouse building structure is above the 100-year floodplain elevation as mapped by FEMA.	Project Applicant/Developer	City of San Bernardino Community Development Department, Planning Division and Building & Safety Division	Prior to the issuance of occupancy permits.	Less-than-Significant Impact with Mitigation Incorporated
Threshold 9: The Project site is located within an area subject to inundation in the event of the failure of the Seven Oaks Dam. However, the Seven Oaks Dam is designed to withstand a catastrophic seismic event and failure of the Dam is determined to be highly unlikely.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold 10: The Project site is not subject to hazards associated with seiches, tsunamis, or mudflow.	Mitigation is not required.	N/A	N/A	N/A	No Impact
4.8 Mineral Resources					
Summary of Impacts					
Threshold 1: The Project would not result in the loss of availability of a known mineral resource that would be of value to the region or state because the City of San Bernardino General Plan and Development Code preclude mining activities on the property.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold 2: The Project would not result in the loss of locally important mineral resources recovery site delineated on a local general plan, specific plan, or other land use plan.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
4.9 Noise					
Summary of Impacts					
Thresholds 1, 3, and 4: Near-term construction related noise and long-term stationary noise produced by the Project would elevate noise levels in the vicinity of the site, but would be less than significant because the Project would comply with the	**MM 4.9-1** Prior to grading or building permit issuance, the City shall review grading and building plans to ensure that the following notes are included. Project contractors shall be required to comply with these notes and maintain written records of such compliance that can be inspected by	Project Applicant/ Developer, Project Construction Manager	City of San Bernardino Community Development Department, Building & Safety Division	Prior to the issuance of grading and building permits.	Significant Unavoidable Direct and Cumulative Impact

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
City's Noise Control Ordinance. Project-related traffic using the segment of Orange Show Road east of Waterman Avenue would exacerbate unacceptable noise levels exposed to existing non-conforming residential homes adjacent to Orange Show Road. The Project's contribution of transportation-related noise is considered significant on direct and cumulative basis.	the City of San Bernardino upon request. a) Construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. b) Equipment staging areas shall be placed near the western boundary of the property at least 100 feet south of Orange Show Road, or as close thereto as feasible. c) The construction contractor shall place all stationary construction equipment so that emitted noise is directed towards the center of the property, away from Orange Show Road, the eastern property boundary, and the Santa Ana River. d) All haul truck deliveries shall occur during the same hours specified for construction equipment (only between the hours of 7:00 a.m. and 8:00 p.m.).				
Threshold 2: The Project would not expose persons to or generate excessive ground-borne vibration or ground-borne noise levels.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
Thresholds 5 and 6: The Project would not expose people to excessive noise levels associated with the operation of a public airport or private airstrip.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
4.10 Transportation/Circulation					
Summary of Impacts					
Threshold 1: The proposed Project would result in a temporary, significant direct impact to traffic circulation on Orange Show Road for a period of approximately three (3) weeks when two lanes would be closed to install a subsurface drainage line. In addition, the proposed Project would contribute cumulatively considerable traffic to a projected LOS deficiency at the Waterman Avenue/I-215 On-Ramp intersection during Year 2015 and Year 2035 traffic conditions.	**MM 4.10-1** Prior to the issuance of improvement permits for utility infrastructure to be installed beneath Orange Show Road that would result in closure or disruption of vehicular travel lanes, the Project Proponent shall prepare and the City of San Bernardino shall approve a traffic control plan. The traffic control plan shall require the following: a) Construction activities that would impede the flow of traffic along Orange Show Road or through the Orange Show Road/Waterman Avenue intersection and that are feasible to suspend during peak travel periods, shall occur outside of the typical morning and evening peak commute hours (i.e., 7:00 am-9:00 pm and 4:00 pm-6:00 pm).	Project Applicant/ Developer	City of San Bernardino Community Development Department, Building & Safety Division, City of San Bernardino Public Works Department, Engineering Division	Prior to the issuance of improvement permits for utility infrastructure to be installed beneath Orange Show Road.	Significant Unavoidable Direct and Cumulative Impact

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	b) A minimum one (1) travel lane shall be maintained in both the westbound and eastbound directions of Orange Show Road throughout the duration of construction activities. c) The Project Proponent shall work in conjunction with City of San Bernardino engineering staff to temporarily modify traffic signal timing at the Orange Show Road/Waterman Avenue intersection and/or employ other temporary traffic controls to facilitate traffic flow through the intersection during temporary construction activities within the Orange Show public right-of-way **MM 4.10-2** In the event the City of San Bernardino and/or the California Department of Transportation (Caltrans) establish a fair-share funding program(s) for the construction of a traffic signal at the Waterman Avenue/I-215 On-Ramp intersection (or immediately adjacent roadway segments that contribute to the improvement of the intersection's level of service), then prior to the issuance of a building permit, the Project Proponent shall contribute a fair-share payment to the City/Caltrans-established funding program(s) to address the Project's cumulative impacts. The Project's fair-share contribution for construction of a traffic signal at the Waterman Avenue/I-215 On-Ramp intersection is 4.9%.	Project Applicant/ Developer	City of San Bernardino Community Development Department, Planning Division and City of San Bernardino Public Works Department, Engineering Division	Prior to the issuance of building permits.	
Threshold 2: The proposed Project's contribution of traffic to freeway mainline segments within the CMP Roadway System (i.e., I-215 and I-10) that operate at deficient levels of service would be less than significant.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold 3: There is no potential for the Project to change air traffic levels or create substantial air traffic safety risks.	Mitigation is not required.	N/A	N/A	N/A	No Impact
Threshold 4: No significant transportation safety hazards would be introduced as a result of the proposed Project's design.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold 5: Adequate emergency access would be provided to the Project site.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold 6: The proposed Project is consistent with adopted policies and	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
programs regarding public transit, bicycle, and pedestrian facilities. The Project is designed to reduce all potential transportation mode conflicts.					
4.11 Utilities and Service Systems					
Summary of Impacts					
Threshold 1: The Project would not exceed wastewater treatment requirements of the Santa Ana RWQCB. Wastewater collection services would be provided by the City of San Bernardino, and wastewater treatment services would be provided by SBMWD. The SBMWD is required to operate all of its treatment facilities in accordance with applicable waste treatment and discharge standards and requirements set forth by the RWQCB. The proposed Project would not install or use septic systems or alternative wastewater treatment systems.	Mitigation is not required.	N/A	N/A	N/A	No Impact
Threshold 2: Water would be conveyed to the site through SBMWD's existing water line network. Wastewater would be conveyed from the site through SBMWD's existing wastewater collection network and treated at existing SBMWD treatment facilities. With the exception of water and sewer conveyance lines that would be installed during the Project's construction, the Project would not require the construction of any new water or wastewater systems that have the potential to cause significant environmental effects. No new or expanded capacities or entitlements would be required.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold 3: Stormwater would be collected on the Project site by an on-site drainage system installed during the Project's construction. With the exception of stormwater conveyance facilities, detention basins, and outlets that would be installed during the Project's construction, the Project would not require the construction of any new stormwater drainage facilities that have the potential to cause significant	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact

THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
environmental effects.					
Threshold 4: Sufficient water supplies are available to service the Project. SBMWD would service the Project based on planned and existing water supplies as documented in its Urban Water Management Plan and a water supply assessment prepared for the Project.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold 5: SBMWD would provide wastewater treatment services to the Project site via the Margaret Chandler WRP and the RIX Tertiary Treatment Facility. Both of these facilities have adequate capacity to service the Project and no new or expanded facilities would be needed.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold 6: There is adequate capacity available at the El Sobrante, Badlands, and Lamb Canyon landfills to accept the Project's solid wastes. Landfill capacity would not be exceeded as a result of the proposed Project.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact
Threshold 7: The Project would comply with all applicable federal, state, and local statutes and regulations related to solid waste disposal, reduction, and recycling.	Mitigation is not required.	N/A	N/A	N/A	Less-than-Significant Impact

1.0 INTRODUCTION

1.1 PURPOSES OF CEQA AND THIS EIR

As stated by CEQA Guidelines §15002, the basic purposes of CEQA are to:

- Inform governmental decision makers and the public about the potential, significant environmental effects of proposed [government actions (including the discretionary approval of development projects)];
- Identify the ways that environmental damage can be avoided or significantly reduced;
- 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; and

If a project will be approved involving significant environmental effects,

- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose.

This Environmental Impact Report (EIR) is an informational document prepared by the City of San Bernardino to evaluate the physical environmental effects that could result from constructing and operating the Alliance California Gateway South Building 3 project (hereafter, the "Project"). The Project proposes governmental approval of a Tentative Parcel Map (SUB13-07), a Development Permit/Site Plan (DP-P13-09) and other related discretionary and administrative actions that are required to construct and operate the Project described in this EIR.

The Project is proposed to be developed on a 49.65-acre portion of a 62.85-acre property located south of and adjacent to Orange Show Road and approximately 450 feet east of Waterman Avenue in the City of San Bernardino, San Bernardino County, California. The City of San Bernardino's General Plan Foundation Component designates the property for development with "Industrial" land uses, and the City of San Bernardino has applied zoning designations of "Industrial Light" (IL) on a majority of the Project site and "Office Industrial Park" (OIP) on the western portion of the Project site adjacent to Waterman Avenue. The proposed Project is consistent with the property's land use designation as applied by the Land Use Element of the City of San Bernardino General Plan, as well as the property's zoning designations. CEQA Guidelines §15183(a) mandates that projects that are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified, shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site. In this case, the subject property was evaluated as part of an EIR certified in 2005 for the City of San Bernardino General Plan (State Clearinghouse Number 2004111132). Therefore, as mandated by CEQA Guidelines §15183(a), this EIR focuses on project-specific effects that are peculiar to the proposed Alliance California Gateway South Building 3 project and the Project site.

As a first step in the CEQA compliance process, an Initial Study was prepared by the City of San Bernardino 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. As stated in 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 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 possible 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 3 as proposed and all of the activities associated with its implementation including planning, construction, and ongoing operation. In summary, the Project proposes the construction and operation of one (1) industrial warehouse building with 1,199,360 square feet (s.f.) of building space, as well as surface parking areas and drive aisles, loading docks, utility infrastructure, landscaping, water quality/detention basins, and other site improvements.

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

- **Tentative Parcel Map No. 19847 (SUB13-07)** proposes to subdivide the 62.85-acre Project site into two (2) parcels. Parcel 1 is owned by the City of Riverside and comprises an irregularly-shaped 13.20-acre portion of the Project site. No development or physical disturbance is proposed by the Project on Parcel 1. Parcel 2 includes the remaining 49.58-acre portion of the property, which would be configured to accommodate the construction and operation of one (1) industrial warehouse building and installation of utility infrastructure, water quality/detention basins and other site improvements.

- **Development Permit/Site Plan (DP-P13-09)** provides a detailed site plan for the 49.58-acre portion of the property proposed for redevelopment, and includes a land use plan, architectural plans, and landscape design for the proposed redevelopment of Parcel 2.

Refer to Section 3.0, *Project Description*, for a detailed description of the proposed Project, including a list of the permits and actions that would be required of the City of San Bernardino and other agencies and authorities to construct and operate the Project.

1.3 LEGAL AUTHORITY

This EIR has been prepared in accordance with all criteria, standards, and procedures of CEQA (California Public Resource Code Section 21000 *et seq.*) and the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Section 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. "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 infeasible 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;
- Disapprove 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 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 Tentative Parcel Map No. 19847 (SUB13-07), Development Permit/Site Plan (DP-P13-09), and all other governmental discretionary and administrative actions related to the Project.

This EIR is an informational document intended for use by the City of San Bernardino decision makers, Trustee and Responsible agencies, and members of the general public in evaluating the physical environmental effects of the proposed Project. As mandated by CEQA Guidelines §15183(a), this EIR focuses on the specific environmental effects that are peculiar to the proposed Project and its property, because designation of the property for industrial development was previously and adequately evaluated in accordance with CEQA by a prior EIR (an EIR certified in 2005 for the City of San Bernardino's General Plan (State Clearinghouse Number 2004111132)). As such, the analysis of use of the property for industrial development does not need to be repeated.

1.4 RESPONSIBLE AND TRUSTEE AGENCIES

Section 21104 of the California Public Resource Code 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 Santa Ana Regional Water Quality Control Board (RWQCB) is identified as a Trustee Agency that is responsible for the protection of water resources and water quality. The California Department of Fish and Wildlife is a Trustee Agency for fish and wildlife resources. The Santa Ana RWQCB is responsible for issuance of a National Pollutant Discharge Elimination System (NPDES) Permit to ensure that during and after construction, on-site water flows do not result in siltation, other erosional actions, or degradation of surface or subsurface water quality. The Federal Emergency Management Agency (FEMA) has approval authority over issuance of a Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision (LOMR) related to the Santa Ana River floodplain boundary that crosses the property and that would be modified as part of the proposed Project. CDFW has approval authority pursuant to the California Fish and Game Code, if any CDFW approvals are warranted. There are no other agencies that are identified as Responsible or Trustee Agencies for the proposed Project.

1.5 EIR SCOPE, FORMAT, AND CONTENT

1.5.1 EIR SCOPE

As a first step in complying with the procedural requirements of CEQA, an Initial Study was prepared by the City of San Bernardino 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 (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 October 8, 2013, for a 30-day public review period. The objective of distributing the NOP for public review was to solicit responses to 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, a publicly noticed EIR Scoping Meeting was held at the San Bernardino City Hall on October 30, 2013, 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.

As a result of 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 issue areas:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Greenhouse Gas Emissions
- Hazards & Hazardous Materials
- Hydrology/Water Quality
- Mineral Resources
- Noise
- Transportation/Circulation
- Utilities/Service Systems

The Initial Study, NOP, public review distribution list, and written comments received by the City during the NOP public review period are provided in *Technical Appendix A* to 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 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 and at the EIR Scoping Meeting are addressed in this EIR.

Table 1-1 Summary of NOP Comments

COMMENTER	DATE	COMMENTS
Native American Heritage Commission	October 21, 2013	– Identify and avoid or reduce any substantial adverse changes in the significance of a cultural resource. – Consult with local Native American contacts.
South Coast Air Quality Management District	October 22, 2013	– Use SCAQMD's CEQA Air Quality Handbook (1993) to assist in preparing an air quality analysis. – Identify any potential adverse air quality impacts from all phases of the project, including construction and operation. – Analyze regional and localized air quality impacts. – Perform a mobile source health risk assessment. – Use CARB's Land Use Handbook and other stated resources as a reference guide to evaluate air quality impacts and identify mitigation measures.
Federal Emergency Management Agency	October 28, 2013	– Review and acknowledge effective Flood Insurance Rate Maps (FIRMs). – Perform a hydrologic and hydraulic analysis prior to the start of development. – Obtain information about local floodplain management building requirements.
San Bernardino County Department of Public Works	October 31, 2013	– Include protection measures for 100-year storm events. – Review and consider current Federal Emergency Management Agency regulations for floodplains and floodways.
State of California Public Utilities Commission	November 4, 2013	– Ensure safety of the adjacent railroad track. – Analyze potential traffic impacts at at-grade railroad crossings.
Southern California Association of Governments	November 14, 2013	– Provide an analysis of consistency with SCAG's 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy.

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.

1.5.2 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, Section 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
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 5.4
Organizations and Persons Consulted	§15129	Section 7.0 & Technical Appendices
Discussion of Cumulative Impacts	§15130	Section 4.0

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 for this EIR.
- **Section 2.0, Environmental Setting,** describes the 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 (October 8, 2013).

- **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 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, 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 alternatives to the proposed Project that could reduce or avoid the Project's adverse environmental effects. CEQA does not require an EIR to consider every conceivable alternative to the Project but rather to consider a reasonable range of alternatives that will foster informed decision making and public participation. A range of four (4) 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, 300 North "D" Street, 3rd Floor, San Bernardino, CA 92418, during the City's regular business hours or can be requested in electronic form by contacting the City. The individual technical studies, reports, and supporting documentation that comprise the Technical Appendices are as follows:

  A: Initial Study, Notice of Preparation, and Written Comments on the NOP
  B1: Air Quality Impact Analysis
  B2: Mobile Source Health Risk Assessment
  C: Habitat Assessment
  D: Cultural Resources Assessment
  E: Greenhouse Gas Analysis
  F1: Phase I Environmental Assessment
  F2: Phase II Environmental Assessment
  G1: Preliminary Hydrology Calculations
  G2: Water Quality Management Plan
  H: Noise Report
  I1: Traffic Impact Analysis
  I2: Short-Term Construction Related Traffic Impacts Memo
  J: Water Supply Assessment
  K: Written Correspondence
  L: Geotechnical Report

- **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 62.85-acre Project site is located in the City of San Bernardino, in southwestern San Bernardino County, California. Southwestern San Bernardino County abuts Riverside County to the south, Orange County to the southwest and Los Angeles County to the west. The site's location in a regional context is shown on Figure 3-1, *Regional Map*, in Section 3.0, *Project Description*.

San Bernardino County is located in an urbanizing area of southern California commonly referred to as the Inland Empire. The Inland Empire is an approximate 28,000 square mile region comprising San Bernardino County, Riverside County, and the eastern tip of Los Angeles County. The Southern California Association of Governments (SCAG) estimates that the majority of growth in the entire southern California region will take place in Riverside and San Bernardino Counties (SCAG 2012a 2). According to U.S Census data, the 2010 population of San Bernardino County was 2,035,210 (U.S. Census Bureau 2013). SCAG forecast models predict that the population of San Bernardino County will grow to approximately 2.75 million persons (an approximate 740,000 person increase) by the Year 2035 (SCAG, 2012b).

From a regional perspective, the City of San Bernardino and the Project site are located to the north of the City of Loma Linda, to the east of the City of Colton, and to the west of the cities of Redlands and Highland. Interstate 215 (I-215) is located approximately 1.1 miles to the west of the site and Interstate 10 (I-10) is located approximately 1.0 mile to the south of the site. Additionally, the San Bernardino International Airport is located approximately 0.75-mile to the northeast of the site.

2.2 LOCAL SETTING AND LOCATION

The Project site is located within the south-central portion of the City of San Bernardino. The property is pentagonal shaped and located immediately south of Orange Show Road, approximately 450 feet east of Waterman Avenue, and approximately 0.6 mile west of Tippecanoe Road. A portion of the site's southeastern boundary abuts the Santa Ana River, while the southwestern border of the site abuts the BNSF Railway railroad. Figure 3-2, *Vicinity Map,* in Section 3.0, *Project Description*, depicts the specific location of the Project site. The Project site includes Assessor Parcel Numbers (APNs) 0281-021-46, 0281-021-47, 0281-021-48, 0281-021-49, 0281-031-50, 0281-031-81, 0281-031-90, and 0281-031-91 and occupies portions of Sections 14 and 23, Township 1 South, Range 4 West of the San Bernardino Base and Meridian.

Land within the south-central portion of the City of San Bernardino in the vicinity of the San Bernardino International Airport, including the Project site, is located within an area planned by the City of San Bernardino General Plan for long-term industrial land uses. Property in this portion of the City was once rural in nature, but is transitioning into an important industrial and commercial center for the City. Over the past six (6) years, several large-scale industrial and warehouse buildings have been developed in the general vicinity of the Project site. Subsection 2.3, below, describes the conditions surrounding the Project site in more detail.

2.3 SURROUNDING LAND USES AND DEVELOPMENT

Figure 2-1, *Surrounding Land Uses and Development,* illustrates the existing land uses and land use designations in the vicinity of the Project site.

North: To the north of the Project site is Orange Show Road, north of which are commercial office buildings, scattered commercial properties (vehicle/materials storage), non-conforming residential structures, and vacant land. Farther north are additional non-conforming residential land uses, a park (Mill Center Park), a charter school (Norton Space and Aeronautics Academy), and three (3) large distribution warehouse buildings.

South: Immediately abutting the Project site to the southeast is the Santa Ana River. Farther southeast are industrial and office parks. The BNSF Railway railroad abuts the site to the southwest. An office park, industrial properties (building materials supplies), and the San Bernardino Public Golf Course are located farther southwest of the Project site. I-10 is located approximately 1.0 mile to the south.

East: Immediately abutting the Project site to the east is vacant land. Non-conforming residential structures, the Santa Ana River, distribution warehouse buildings, and a recreational vehicle (RV) parking/storage facility are located farther to the east of the Project site. The San Bernardino International Airport is located approximately 0.75-mile to the northeast.

West: A public utility building (operated by Verizon) and Waterman Avenue abut the Project site to the west. An apartment complex, scattered single-family residential structures and vacant land occupy land farther to the west of the Project site. I-215 is located approximately 1.1 miles to the west.

2.4 PLANNING CONTEXT

Provided in this subsection is a description of the Project site's land use designations, as applied by planning documents adopted by the City of San Bernardino. On a broader, regional level, the applicable regional planning document is the Southern California Association of Governments' "2012-2035 Regional Transportation Plan/Sustainable Communities Strategy," which is discussed in Subsection 5.4.3 of this EIR.

2.4.1 CITY OF SAN BERNARDINO GENERAL PLAN

The City of San Bernardino's prevailing planning document is its General Plan, dated November 1, 2005. As depicted on Figure 2-2, *Existing General Plan Land Use Designations*, the City's General Plan Foundation Component designates the Project site for "Industrial" land uses. The majority of the Project site is zoned "Industrial Light" (IL), except for the western portion of the Project site adjacent to Waterman Avenue that is zoned "Office Industrial Park" (OIP). The proposed Project would only develop the portion of the subject property with the Industrial Light zoning designation. The Industrial land use designation and Industrial Light zoning designation call for 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 services uses, with a maximum building intensity of 0.75 floor area ratio (FAR).

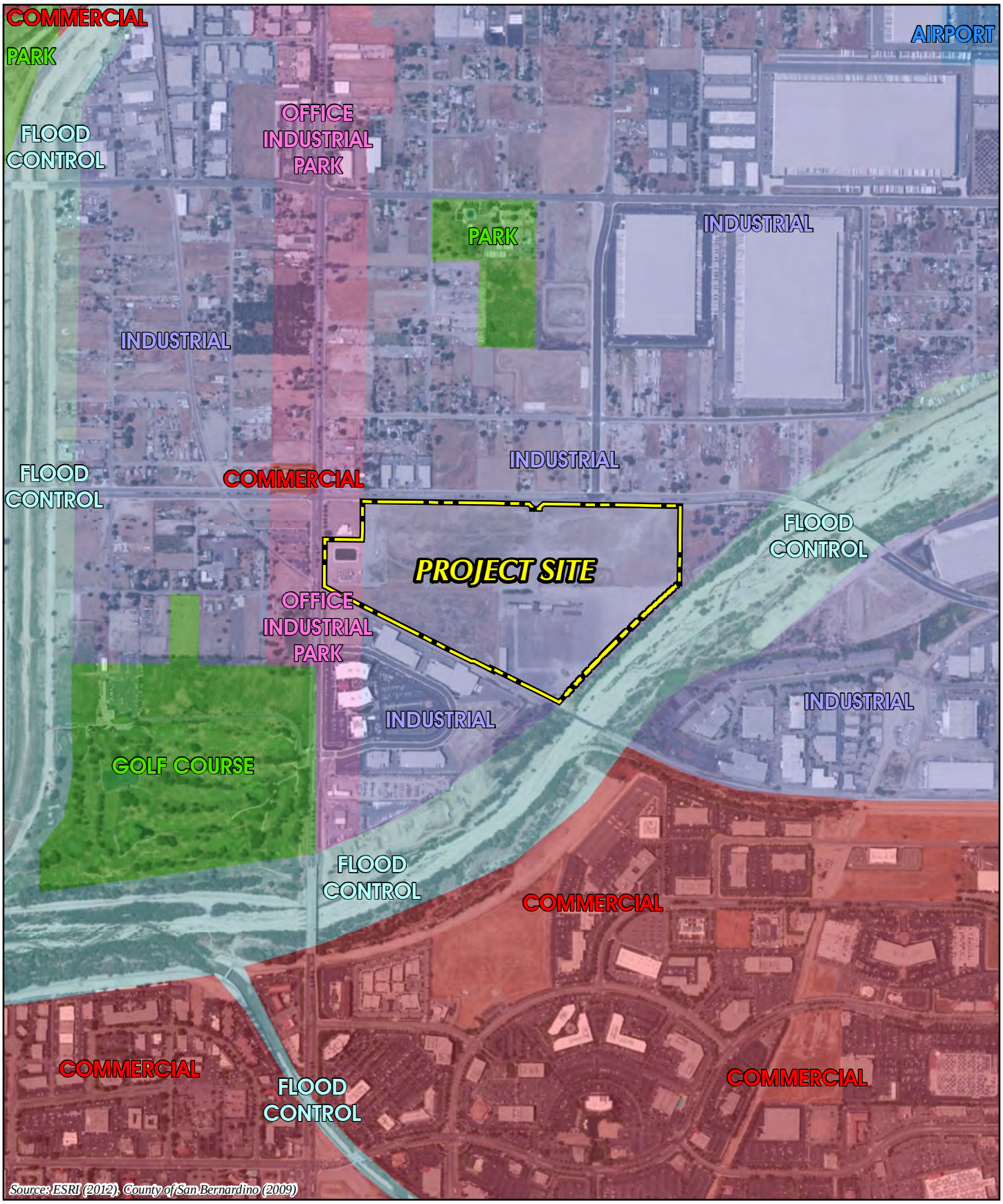
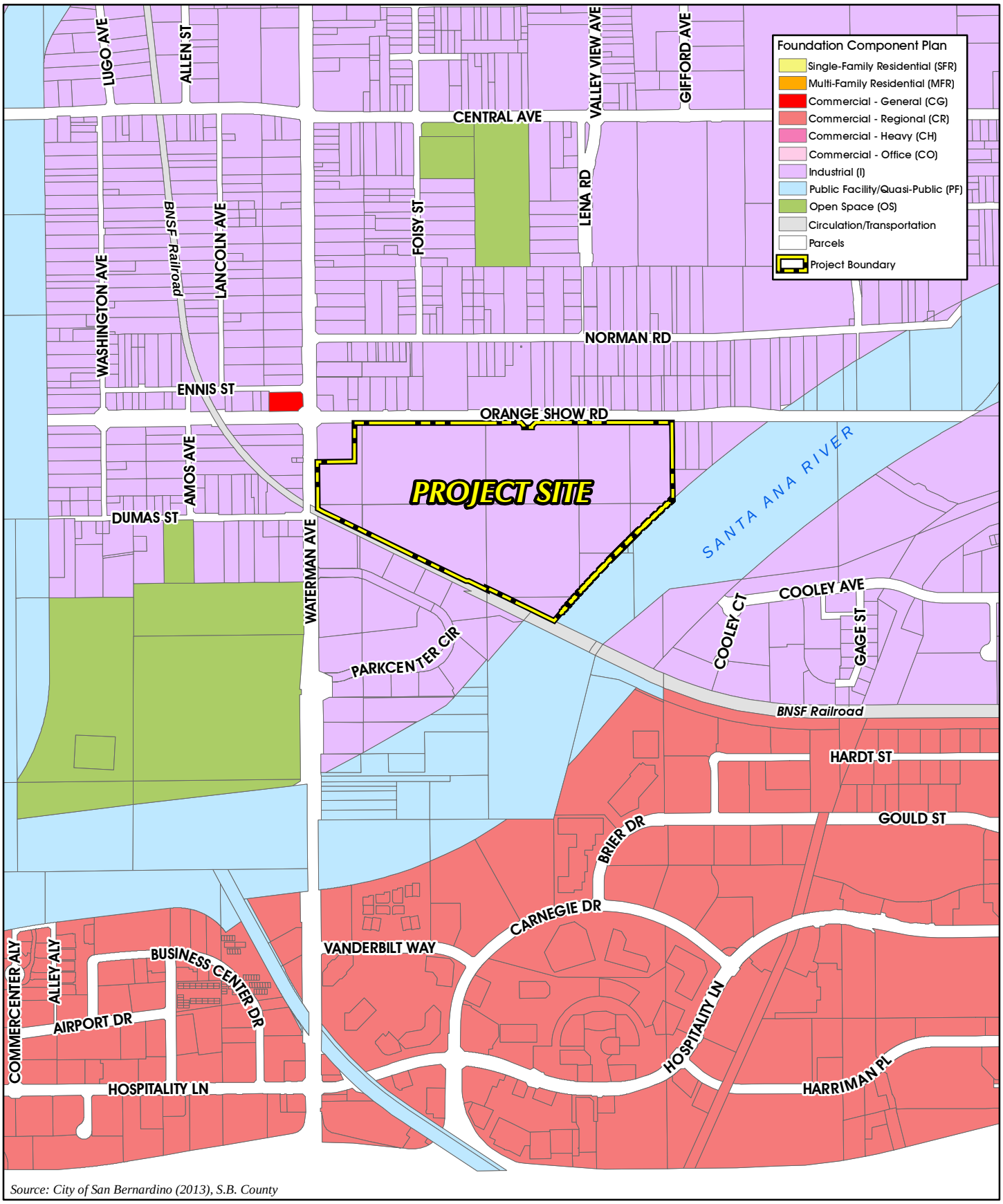


FIGURE 2-1
SURROUNDING LAND USES AND DEVELOPMENT MAP



Source: City of San Bernardino (2013), S.B. County

FIGURE 2-2
EXISTING GENERAL PLAN LAND USE DESIGNATIONS

2.4.2 ZONING

The Project site is zoned for "Industrial Light" (IL) and "Office Industrial Park" (OIP) uses, as shown on Figure 2-3, *Existing Zoning Designations*. The proposed Project would only develop the portion of the subject property with the Industrial Light zoning designation. The purpose of the Industrial Light designation is to "retain, enhance, and intensify existing and provide for the development of new lighter industrial uses along major vehicular, rail, and air transportation routes serving the City" (City of San Bernardino 2013 II.19.08-2).

2.5 EXISTING PHYSICAL SITE CONDITIONS

Pursuant to CEQA Guidelines §15125, the physical environmental condition for purposes of establishing the setting of an EIR is the environment as it existed at the time the EIR's NOP was released for public review. The NOP for this EIR was released for public review on October 8, 2013, and the following subsections provide a description of the Project site's physical environmental condition as of that approximate date. More information regarding the Project's site's environmental setting is provided in the various subsections of Section 4.0, *Environmental Analysis*.

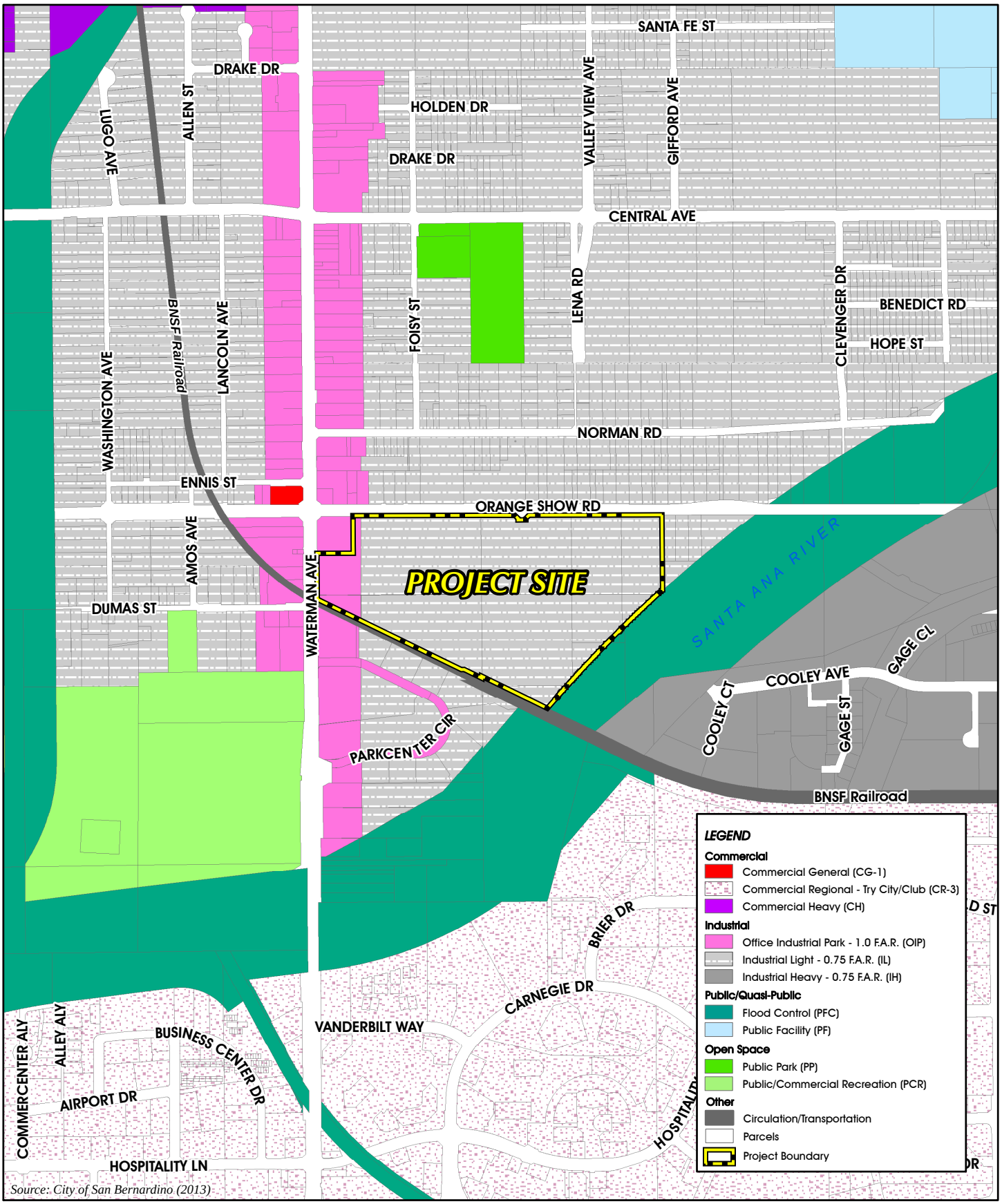
2.5.1 LAND USE

The area surrounding the Project site, as described previously in Subsection 2.3, is primarily characterized by industrial/commercial development with scattered non-conforming residential structures and vacant land. The Project site is not used for agricultural production and is not located in an agricultural area. There are no Williamson Act Contract lands or Agricultural Preserves located on the Project site or in the surrounding area.

The Project site is vacant and for the most part undeveloped. The remnants of an abandoned lumber mill, which operated on the Project site until approximately 2009, are located in the south-central portion of the Project site. Improvements on the Project site associated with the former lumber mill operation include several buildings, lumber storage area, machinery, and an unpaved road. The Project site includes five (5) active drinking water wells owned and operated by the City of Riverside, of which two (2) wells are located within the portion of the site that would be developed by the Project. The wells located within the Project development footprint are in the process of being relocated to the southern portion of the site under a separate action by the City of Riverside. The City of Riverside has issued of Notice of Exemption for relocation of the wells pursuant to §§15282(k) and 15302(c) of the CEQA Guidelines; relocation of the wells is not a part of the proposed Project evaluated in this EIR. The existing land use condition of the Project site is shown on Figure 2-4, *Aerial Photograph*.

2.5.2 TOPOGRAPHY

The Project site slopes gently from the east to west, with a high point of approximately 1,031 feet above mean sea level (AMSL) at the northeast property boundary (adjacent to Orange Show Road) and a low point of approximately 1,012 feet AMSL at the southwest corner of the property (adjacent to the BNSF Railway railroad. The topographic relief of the Project site is approximately 19 feet. There are no unique topographic or aesthetic features present on the property such as rock outcroppings. Figure 3-3, *USGS Topographic Map*, depicts the Project site's existing topographic conditions.



Source: City of San Bernardino (2013)

0 300 600 1,200 Feet

FIGURE 2-3
EXISTING ZONING DESIGNATIONS

0 150 300 600 Feet

FIGURE 2-4
AERIAL PHOTOGRAPH

Refer to Subsection 4.1, *Aesthetics*, for a more thorough discussion of the Project site's existing topographic and aesthetic setting.

2.5.3 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 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 report (*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.

Although air quality in the SCAB has improved over the past several decades, the SCAB is currently not in attainment of state and/or federal standards established for Ozone (O_3) one-hour and eight-hour, particulate matter (PM_{10} and $PM_{2.5}$), and Nitrogen Oxides (NO_X), and also is not in attainment for Lead (Pb) in Los Angeles County (CARB 2013). The SCAQMD conducts in-depth analyses of the toxic air contaminants and their resulting health risks for all of Southern California. This study, entitled, *Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES III)*, predicted an excess cancer risk of 1,043 in one million for the vicinity of the Project site (SCAQMD "MATES III Carcinogenic Risk Interactive Map").

Refer to Subsections 4.2, *Air Quality*, and 4.5, *Greenhouse Gas Emissions*, for a more thorough discussion of the Project's site existing air quality and climatic setting.

2.5.4 BIOLOGICAL RESOURCES

The entire Project site has been disturbed, either by the former lumber mill operation, installation of City of Riverside groundwater wells, or by on-going weed abatement activities. Thus, the Project site contains few biological resources. According to a habitat assessment prepared by RBF Consulting (refer to *Technical Appendix C*) the portion of the subject property that would be developed by the Project contains four (4) distinct habitat types. Disturbed Land and Developed Land are located throughout the site; an isolated strand of Ruderal Habitat is located along the site's southwestern border, and two isolated strands of Ornamental Vegetation associated with the former lumber mill are located in the south-central portion of the site (RBF Consulting 10). Native vegetation and native plant communities are not present on the Project site. Additionally, no special status plant or wildlife species were observed by RBF Consulting on the Project site during biological field surveys conducted in 2013 (RBF Consulting 14-16).

The Santa Ana River is located immediately to the southeast and contains sensitive biological and water resources. Refer to Subsection 4.3, *Biological Resources*, for a more thorough discussion of the Project's site existing biological setting.

2.5.5 CULTURAL RESOURCES

The Project site is not known to have unique historical significance to the region. Several remnant structures associated with the former lumber mill operations are present on-site. These structures are of modern construction and were built sometime between the mid-1970s and late 1980s (GHD 2013a 14-15). On-site structures possess no distinctive features and are not identified as being eligible for listing on the California Register of Historic Places (BCR Consulting 6). Refer to *Technical Appendix D* for more detail.

From an archaeology perspective, human habitation of southern California dates back to approximately 13,000 years ago. Over a series of cultural periods, the area transitioned from a hunting and gathering society, to settlements of small groups of people, to large occupations near natural water sources, to formations of distinct ethnographic groups. Research indicates that the Project site is within the traditional Tribal Use Area of the Soboba Band of Luiseño Indians. According to the City's General Plan, the property is not located in an area that is likely to reveal subsurface archeological resources (City of San Bernardino 2005b 5.4-9). Refer to *Technical Appendix D* for more detail.

The Project site is located within an area of the City that is underlain by young alluvial valley deposits dating to the Holocene Epoch as well as older alluvium deposits dating to the Pleistocene Epoch. Holocene-age soils have low potential to contain fossil deposits; however, Pleistocene-age soils throughout southern California have shown a high paleontologic sensitivity. There are no known paleontological resources located on or beneath the surface of the Project site. Refer to *Technical Appendix D* for more detail.

2.5.6 HYDROLOGY

The Project site is located in the Santa Ana River watershed, which drains a 2,650 square-mile area and is the principal surface flow water body within the region. The Santa Ana River abuts the Project site along the southeast boundary and drains the area in the vicinity of the Project site. Approximately one-third of the Project site is located within the 100-year floodplain (Zone AE) of the Santa Ana River, as mapped by the Federal Emergency Management Agency (FEMA) on the Flood Insurance Rate Map (FIRM, Panel 06071C8684H)(FEMA "Map Service Center"). The Santa Ana River starts in the San Bernardino Mountains, approximately 15 miles east of the Project site, and flows southwesterly for approximately 96 miles across San Bernardino, Riverside, Los Angeles, and Orange counties before spilling into the Pacific Ocean.

Under existing conditions, there are two primary drainage patterns on the Project site. Most stormwater flows are conveyed westerly across the Project site as sheet flow before discharging into Waterman Avenue. Stormwater flows that originate on-site in the southeastern portion of the subject property are conveyed southerly across the site as sheet flow before ultimately discharging into the Santa Ana River (Thienes Engineering 2013a).

Groundwater is encountered on-site at depths ranging between 38-40 feet beneath the ground surface. Research indicates the minimum historic groundwater depth beneath the site is approximately 10 feet (Southern California Geotechnical 8).

Refer to Subsection 4.7, *Hydrology and Water Quality*, for a more thorough discussion of the Project's site existing hydrologic setting.

2.5.7 GEOLOGY & SOILS

Based on geological investigations of the Project site conducted by Southern California Geotechnical, Inc. (refer to *Technical Appendix L* of this EIR) undocumented artificial fill materials are present in the eastern portion of the site consisting of buried debris (concrete tiles, concrete fragments, and slab fragments). Alluvium soils, consisting of very loose to loose fine sands, silty fine sands, and fine sandy silts, are present across the Project site from approximately three (3) to approximately 48 feet below the ground surface (Southern California Geotechnical 8).

The Project site is not located within an active Alquist-Priolo earthquake zone or a City-designated fault hazard zone, meaning that no active faults are mapped or known to exist on the Project site or in the immediate surrounding area (Southern California Geotechnical 11). Like all areas of Southern California, the property is subject to ground shaking during a seismic event.

2.5.8 NOISE

Primary sources of noise in the Project vicinity include vehicle noise and aircraft noise. To determine the existing acoustical setting, 24-hour noise measurements were taken in the Project study area by Urban Crossroads, Inc. at six (6) locations on October 20th and 21st, 2013. Measured hourly noise levels ranged from 50.6 to 73.8 decibels (dBA Leq), resulting in Community Noise Equivalent Levels (CNELs) ranging from 58.7 decibels (dBA CNEL) to 77.2 decibels (dBA CNEL) (refer to *Technical Appendix H*).

Refer to Subsection 4.9, *Noise*, for a more thorough discussion of the Project's site existing noise setting.

2.5.9 TRANSPORTATION

Interstate 215 (I-215) and Interstate 10 (I-10) are major vehicular travel routes in the region of the Project site. The Project site is located approximately 1.1 miles east of I-215 and approximately 1.0 mile north of I-10. The Project site is located immediately south of Orange Show Road, approximately 450 feet east of Waterman Avenue, and approximately 0.6 miles west of Tippecanoe Road. Existing traffic on nearby roadways consists of both passenger vehicles and trucks accessing the existing industrial/warehouse developments and other land uses in the area.

Regarding other forms of transportation, field observations indicated that there is nominal pedestrian and bicycle activity in the area. Omnitrans, a public transit agency serving the County of San Bernardino and the City of San Bernardino, operates bus services in the vicinity of the Project site along Waterman Avenue (Route 9) and "E" Street/Hospitality Lane (Route 2). Orange Show Road is planned by the City of San Bernardino General Plan as a bicycle route along the frontage of the Project site. Waterman Avenue also is planned as a bicycle route by the General Plan. A segment of

the BNSF railroad is located south of the Project site and crosses Orange Show Road and Waterman Avenue near the Project site. The San Bernardino International Airport is located approximately 0.75-mile to the northeast of the site.

Refer to Subsection 4.10, *Transportation/Circulation*, for a more thorough discussion of the Project's site existing transportation setting.

2.5.10 UTILITIES AND SERVICE SYSTEMS

The Project site is located in the service area of the City of San Bernardino Municipal Water Department (SBMWD) for domestic water and sewer service. Under existing conditions, no domestic water or sewer connections are provided to the Project site. Five (5) active water wells owned and operated by the City of Riverside are located on the Project site, two (2) of which are located within the portion of the site that would be developed by the Project. These wells are in the process of being relocated to the southern portion of the Project site under a separate action by the City of Riverside. Relocation of the wells is not a part of the Project evaluated in this EIR. One (1) septic system associated with the former lumber mill operation is present on-site. The Project site is located in the service territories of the following additional utility providers: Southern California Edison for electric; Southern California Gas Company for natural gas; and the City of San Bernardino Refuse & Recycling Division for solid waste collection and disposal, which is currently contracted to Burrtec Waste Industries. Because the site is vacant except for abandoned remnants of the former lumber mill and several City of Riverside wells, it does not generate any measurable demand for utility service under existing conditions.

Refer to Subsection 4.11, *Utilities and Service Systems*, for a more thorough discussion of the Project's site existing setting in relation to utilities and public services.

3.0 PROJECT DESCRIPTION

This section provides all of the information required 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 government 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.

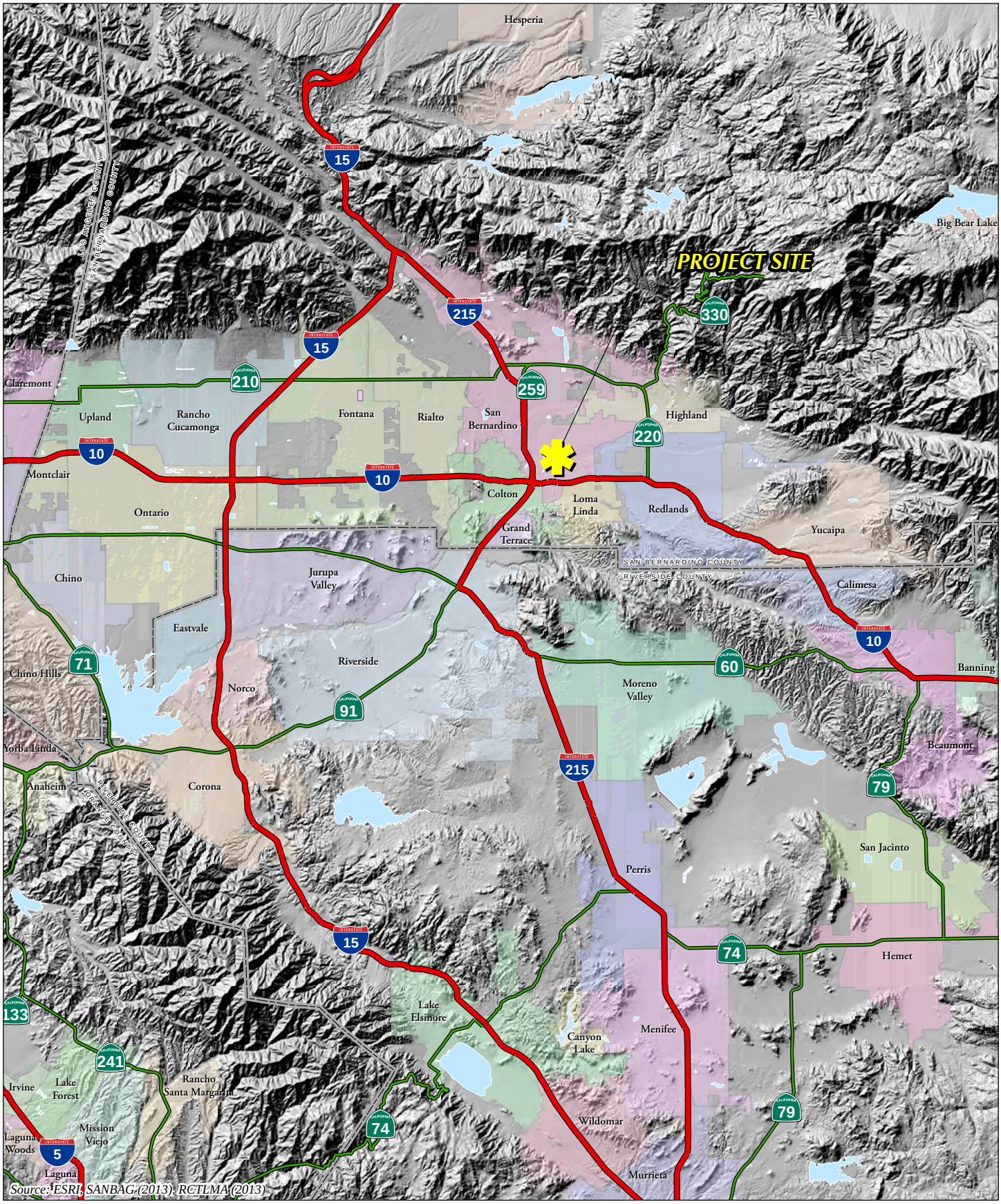
This EIR analyzes the physical environmental effects associated with all components of the Project, including planning, construction, and ongoing operation. Governmental approvals requested from the City of San Bernardino include a Tentative Parcel Map and a Development Permit. These application(s) as submitted to the City of San Bernardino by the Project Applicant are herein incorporated by reference pursuant to CEQA Guidelines §15150 and are available for review at the physical location indicated in Subsection 7.2, *Documents Incorporated by Reference*. All other discretionary and administrative approvals that would be required of the City of San Bernardino or other governmental agencies to implement the proposed Project are also within the scope of the Project analyzed in this EIR.

In summary, the Alliance California Gateway South Building 3 project proposes to redevelop an underutilized property through the construction and operation of one (1) industrial warehouse building. The building is proposed to contain 1,199,360 square feet (s.f.) of floor space with 215 loading bays, as well as surface parking areas and drive aisles, utility infrastructure, landscaping, underground stormwater retention/infiltration basins, and other site improvements. A complete description of the proposed Project is provided in the following subsections of this Section 3.0.

3.1 PROJECT LOCATION

The Project site consists of 62.85 acres in the south-central portion of the City of San Bernardino, San Bernardino County, California (see Figure 3-1, *Regional Map*). From a regional perspective, the Project site is located to the north of the City of Loma Linda, to the east of the City of Colton, and to the west of the cities of Redlands and Highland. Interstate 215 (I-215) is located approximately 1.1 miles to the west of the site and Interstate 10 (I-10) is located approximately 1.0 miles to the south of the site. Refer to Subsection 2.1 for more information about the Project's regional setting.

At the local scale, the Project site is located immediately south of Orange Show Road, approximately 450 feet east of Waterman Avenue, and approximately 0.6 mile west of Tippecanoe Road, as illustrated on Figure 3-2, *Vicinity Map,* and Figure 3-3, *USGS Topographic Map.* Refer to Subsection 2.2 for more information about the Project's local setting.



Source: ESRI; SANBAG (2013); RCTLMA (2013)

0 2 4 8 Miles

FIGURE 3-1
REGIONAL MAP

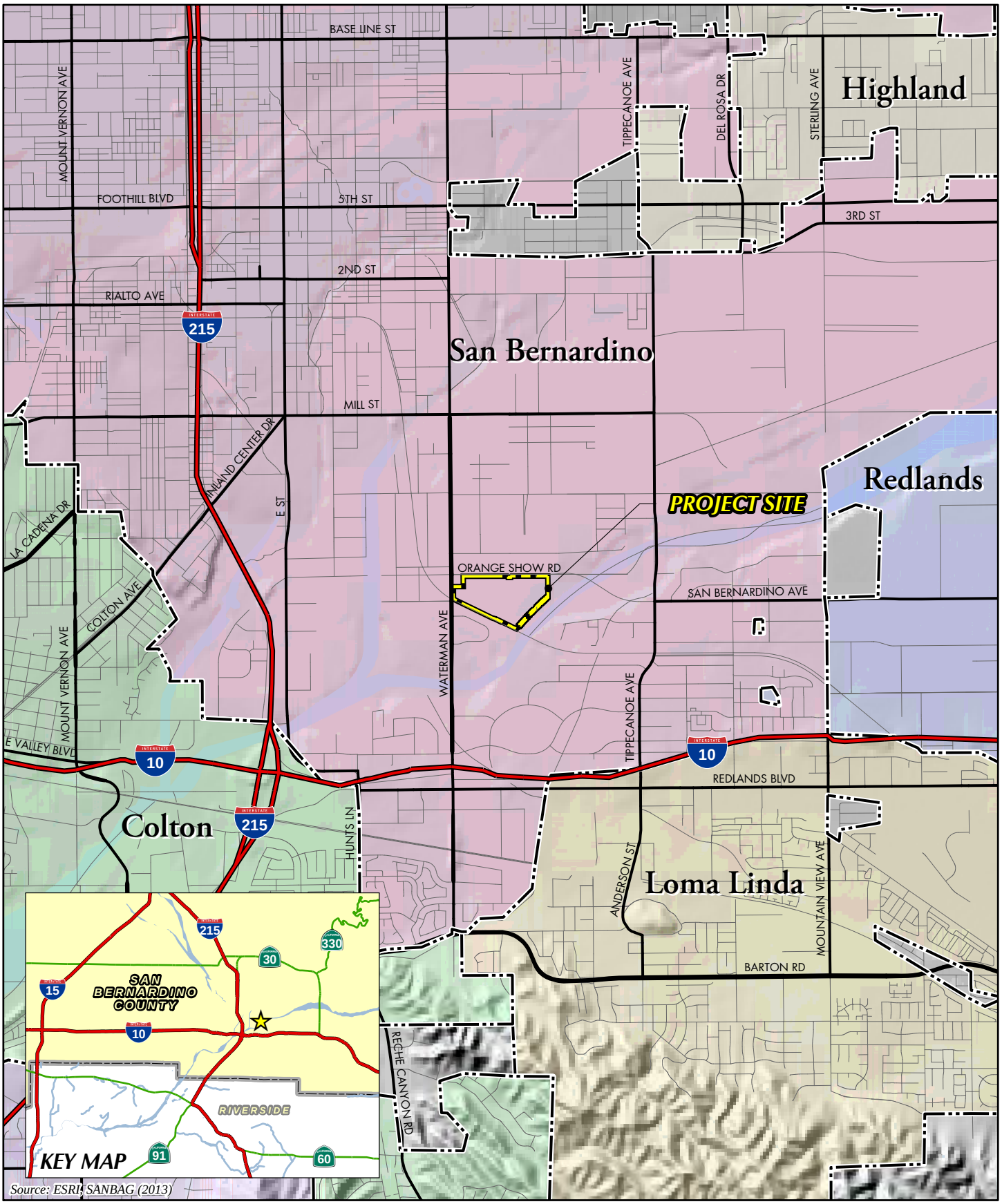
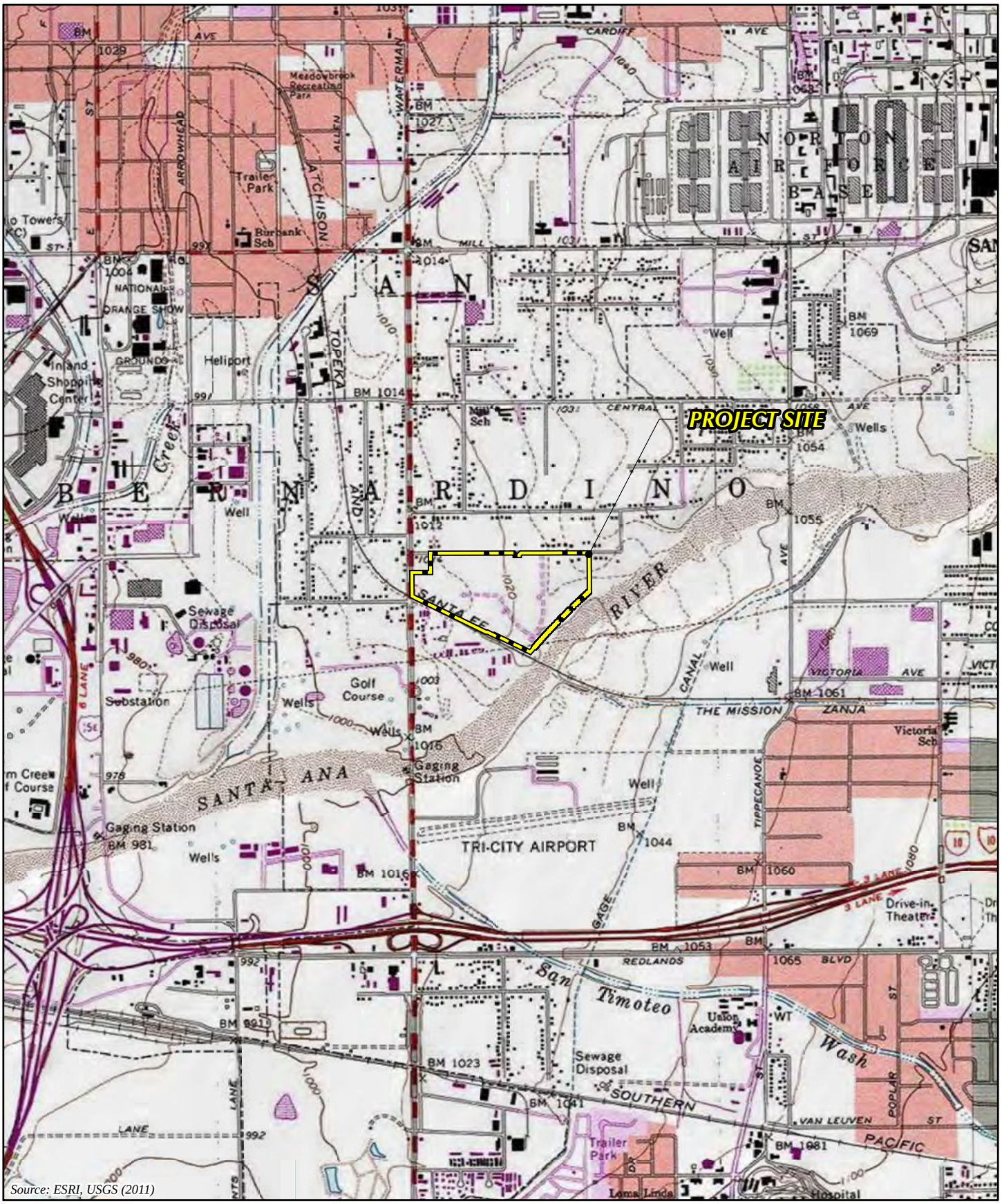


FIGURE 3-2
VICINITY MAP



Source: ESRI, USGS (2011)

0 500 1,000 2,000 Feet

FIGURE 3-3
USGS TOPOGRAPHIC MAP

3.2 STATEMENT OF OBJECTIVES

The primary objective of the proposed Project is to construct and operate one (1) new, large industrial warehouse building in the City of San Bernardino in conformance with the land use and zoning designations applied to its property by the City of San Bernardino General Plan and Development Code. The following is a list of specific objectives sought by the proposed Project:

A. To make efficient use of a vacant or underutilized property of over 50 acres that has access to available infrastructure for the development of an employment-generating use in the City of San Bernardino.

B. To develop a large industrial warehouse building on a property in conformance with the land use and zoning designations applied to that property by the City of San Bernardino General Plan and Development Code.

C. To develop a large industrial warehouse building that will attract quality tenants and be economically competitive with other similar buildings in the local area and region.

D. To develop large industrial warehouse building having loading bays to accommodate goods-movement economic activity within close proximity to regional transportation routes.

E. To develop a large industrial warehouse building that is financially feasible to construct and operate.

F. To make efficient use of vacant or underutilized property by developing the site to achieve a minimum floor area ratio (FAR) of 0.55.

G. 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 Project consists of a proposal to redevelop a portion of a 62.85-acre property with one (1) industrial warehouse building. The property is the location of a former lumber mill that operated on the property until 2009. The principal discretionary actions required of the City of San Bernardino to implement the proposed Project include the approval of a Tentative Parcel Map, a Development Permit, and certification of this EIR. Additional discretionary and administrative actions that would be necessary to implement the proposed Project are listed in Table 3-1, *Matrix of Project Approvals/Permits*, at the end of this Section 3.0. A detailed description of the proposed discretionary actions associated with the Project is provided in the following subsections.

3.3.1 TENTATIVE PARCEL MAP NO. 19487

A. General Description

Tentative Parcel Map No. 19487 (TPM No. 19487) proposes to subdivide the 62.85-acre property into two (2) parcels, as depicted on Figure 3-4, *Tentative Parcel Map No. 19487*. In addition, TPM No. 19487 identifies the size and location of needed water, sewer, drainage and utility infrastructure. Of the two Parcels that would be created by TPM No. 19847, Parcel 1 would not be developed or physically disturbed by the proposed Project. Parcel 2 would be developed as the aforementioned industrial warehouse building.

TENTATIVE PARCEL MAP NO. 19487

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

PARCELS 1, 2 AND 3 OF PARCEL MAP NO. 15890, IN THE CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP FILED IN BOOK 210, PAGES 34 THROUGH 37 INCLUSIVE OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY. PARCEL 1 OF PARCEL MAP NO. 17231, AS PER MAP FILED IN BOOK 210, PAGES 98 THROUGH 102 INCLUSIVE OF SAID PARCEL MAPS AND AMENDED BY AMENDING MAP FILED IN BOOK 224, PAGES 62 THROUGH 66 INCLUSIVE OF SAID PARCEL MAPS, TOGETHER WITH A PORTION OF LOT 9, BLOCK 72 OF THE NINETY ACRE SURVEY OF THE RANCHO SAN BERNARDINO, AS PER PLAT RECORDED IN BOOK 7, PAGE 2 OF MAPS, ALL IN THE OFFICE OF SAID COUNTY RECORDER.

OWNER:

SEE SURVEYOR'S NOTE #1
c/o HILLWOOD INVESTMENTS
268 W. HOSPITALITY LANE, SUITE 105
SAN BERNARDINO, CA 92408
PHONE: (909) 382-0033
FAX: (909) 382-0073
ATTN: JOHN SCHAEFER

SUBDIVIDER:

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

0 40 80 160 240
SCALE:1"=80'

UTILITY PROVIDER'S

WATER:
SAN BERNARDINO MUNICIPAL WATER DIST.
300 NORTH "D" STREET
SAN BERNARDINO, CALIFORNIA 92418
PHONE: (909) 384-5291

ELECTRIC:
SOUTHERN CALIFORNIA EDISON
287 TENNESSEE STREET
REDLANDS, CALIFORNIA 92374
PHONE: (909) 307-6748
FAX: (909) 307-6772

GAS:
SO. CALIF. GAS COMPANY
1981 W. LUGONIA, P.O. BOX 3003
REDLANDS, CALIFORNIA 92374-9720
PHONE: (909) 335-7725

TELEPHONE / CABLE:
VERIZON - REDLANDS
9 SOUTH 4th STREET
REDLANDS, CALIFORNIA 92373
PHONE: (909) 748-6840

SEWER:
CITY OF SAN BERNARDINO
300 N. "D" STREET
SAN BERNARDINO, CALIFORNIA 92418-0001
PHONE: (909) 384-5167

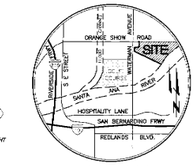
SCHOOL DISTRICT:
SAN BERNARDINO UNIFIED SCHOOL DISTRICT
777 NORTH F STREET
SAN BERNARDINO, CALIFORNIA 92411

SURVEYOR'S NOTES:

1. OWNER INFORMATION (VESTING):
   M & D JOHNSON, LLC, A LIMITED LIABILITY COMPANY
   APN: 0281-011-61, 0281-021-47, 48 & 49, 0281-031-89.

   CITY OF RIVERSIDE, A MUNICIPAL CORPORATION OF THE STATE OF CALIFORNIA
   APN: 0281-011-46, 0281-021-46 & 50, 0281-031-92.
2. PROJECT ADDRESSES: SEC OF ORANGE SHOW ROAD & WATERMAN AVENUE
   SAN BERNARDINO, CALIFORNIA
3. TOTAL SITE AREA: 2,737,892 SQ. FT. (GROSS) 2,734,446 SQ. FT. (NET)
   62.85 ACRES (GROSS) 62.78 ACRES (NET)

   NET EQUALS GROSS MINUS ORANGE SHOW ROAD EXISTING EASEMENTS (19) (20) (21)
4. ZONING INFORMATION:
   GENERAL PLAN DESIGNATION: INDUSTRIAL
   ZONING DESIGNATION: "OIP" OFFICE INDUSTRIAL PARK & "IL" INDUSTRIAL LIGHT
5. ALL ON-SITE DRIVEWAYS ARE PRIVATE.
6. DATE OF FIELD SURVEY: JULY 27, 2013 BY THIENES ENGINEERING, INC.
   FOR BOUNDARY AND FIELD TOPOGRAPHY.



VICINITY MAP
NOT TO SCALE

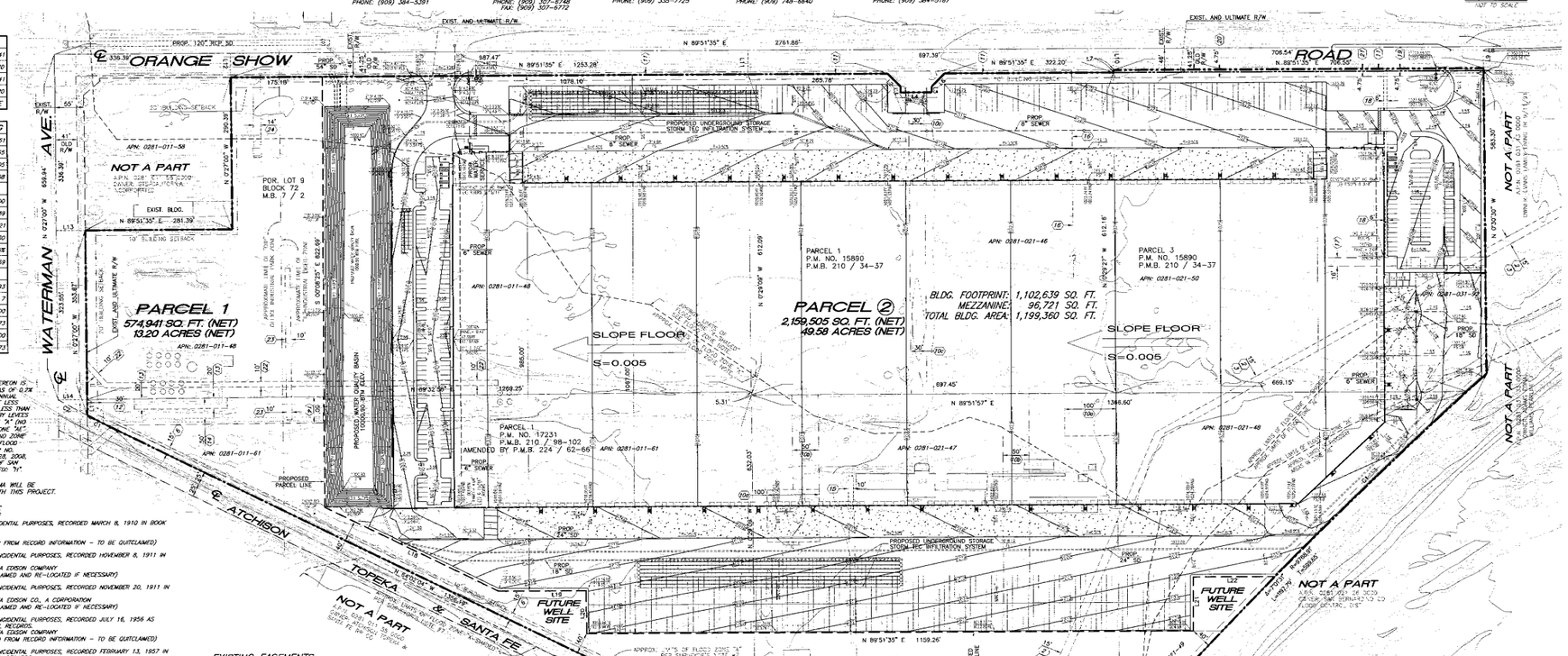
PROJECT DATA:

PARCEL 1-SITE TO REMAIN	
SITE AREA (GROSS IN SQ. FT.)	574,941
SITE AREA (GROSS IN ACRES)	13.20
SITE AREA (NET IN SQ. FT.)	574,941
SITE AREA (NET IN ACRES)	13.20
PARCEL OWNED BY CITY OF RIVERSIDE	

PARCEL 2-PROPOSED BUILDING	
SITE AREA (GROSS IN SQ. FT.)	2,162,861
SITE AREA (GROSS IN ACRES)	49.65
SITE AREA (NET IN SQ. FT.)	2,159,505
SITE AREA (NET IN ACRES)	49.58
BUILDING AREA	
OFFICE AREA (IN SQ. FT.)	10,000
WAREHOUSE AREA (IN SQ. FT.)	1,092,639
MEZZ. (IN SQ. FT.)	96,721
TOTAL BUILDING AREA	1,199,360
COVERAGE	55.5%
PARKING REQUIRED @1/1,250 S.F.	959
PARKING PROVIDED	
STANDARD	193
HANDICAP	7
TOTAL AUTO PARKING	200
TRAILERS AWAY FROM DOCK	373
TRAILER @ DOCK DOOR	200
TOTAL (TRAILER AND AUTO)	773

FLOOD ZONE NOTE:

A PORTION OF THE PROPERTY SHOWN HEREON IS SITUATED WITHIN ZONE "X-SHADED" (AREAS 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), ZONE "A" (NO BASE FLOOD ELEVATIONS DETERMINED), ZONE "AE" (BASE FLOOD ELEVATIONS DETERMINED) AND ZONE "AL" FLOOD ZONE, ALL AS SHOWN ON A FLOOD INSURANCE RATE MAP (F.I.R.M.) WITH MAP NO. 06071C8664H, EFFECTIVE DATE: AUGUST 28, 2008, COMMUNITY NUMBER: 060281 FOR CITY OF SAN BERNARDINO, PANEL NUMBER: 8664, SUFFIX: "H". (APPROXIMATE LIMITS PLOTTED HEREON).
NOTE: A SEPARATE SUBMITTAL TO FEMA WILL BE PROCESSED CONCURRENTLY WITH THIS PROJECT.



EXISTING EASEMENTS:

(1) AN EASEMENT FOR PIPES AND INCIDENTAL PURPOSES, RECORDED MARCH 8, 1910 IN BOOK 451 OF DEEDS, PAGE 182.
IN FAVOR OF: J. DRISKELL
(EASEMENT CANNOT BE DETERMINED FROM RECORD INFORMATION - TO BE QUITCLAIMED)

(2) AN EASEMENT FOR UTILITIES AND INCIDENTAL PURPOSES, RECORDED NOVEMBER 8, 1911 IN BOOK 483 OF DEEDS, PAGE 264.
IN FAVOR OF: SOUTHERN CALIFORNIA EDISON COMPANY
(PLOTTED HEREON - TO BE QUITCLAIMED AND RE-LOCATED IF NECESSARY)

(3) AN EASEMENT FOR UTILITIES AND INCIDENTAL PURPOSES, RECORDED NOVEMBER 20, 1911 IN BOOK 495 OF DEEDS, PAGE 169.
IN FAVOR OF: SOUTHERN CALIFORNIA EDISON CO., A CORPORATION
(PLOTTED HEREON - TO BE QUITCLAIMED AND RE-LOCATED IF NECESSARY)

(4) AN EASEMENT FOR UTILITIES AND INCIDENTAL PURPOSES, RECORDED JULY 16, 1956 AS BOOK 3967, PAGE 540 OF OFFICIAL RECORDS.
IN FAVOR OF: SOUTHERN CALIFORNIA EDISON COMPANY
(EASEMENT CANNOT BE DETERMINED FROM RECORD INFORMATION - TO BE QUITCLAIMED)

(5) AN EASEMENT FOR UTILITIES AND INCIDENTAL PURPOSES, RECORDED FEBRUARY 13, 1957 IN BOOK 4155, PAGE 518 OF OFFICIAL RECORDS.
IN FAVOR OF: CALIFORNIA ELECTRIC POWER COMPANY, A CORPORATION
(PLOTTED HEREON)

(6) AN EASEMENT FOR SEWER AND INCIDENTAL PURPOSES, RECORDED AUGUST 6, 1976 AS BOOK 8846, PAGE 731 OF OFFICIAL RECORDS.
IN FAVOR OF: CITY OF SAN BERNARDINO
(PLOTTED HEREON)

(7) AN EASEMENT FOR SEWER AND INCIDENTAL PURPOSES, RECORDED AUGUST 16, 1976 IN BOOK 8891, PAGE 680 OF OFFICIAL RECORDS.
IN FAVOR OF: CITY OF SAN BERNARDINO, A MUNICIPAL CORPORATION
(PLOTTED HEREON)

(8) AN EASEMENT FOR SEWER AND INCIDENTAL PURPOSES, RECORDED SEPTEMBER 28, 1976 IN BOOK 9021, PAGE 797 OF OFFICIAL RECORDS.
IN FAVOR OF: CITY OF SAN BERNARDINO, A MUNICIPAL CORPORATION
(PLOTTED HEREON)

(9) AN EASEMENT FOR RAILROAD AND INCIDENTAL PURPOSES, RECORDED MARCH 15, 1982 AS INSTRUMENT NO. 82-049737 OF OFFICIAL RECORDS.
IN FAVOR OF: THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY, A DELAWARE CORPORATION
(PLOTTED HEREON)

(10) EASEMENTS RESERVED ON PARCEL MAP NO. 15890, P.M.B. 210 / 34-37.

(10a) 100' BY 100' WELL SITE EASEMENT RESERVED TO THE CITY OF RIVERSIDE FOR THE BENEFIT OF THE CITY OF RIVERSIDE PUBLIC UTILITIES.
(PLOTTED HEREON - TO BE QUITCLAIMED)

(10b) 50' NON-EXCLUSIVE EASEMENT FOR ACCESS, UTILITIES AND WATER TRANSMISSION RESERVED TO THE CITY OF RIVERSIDE FOR THE BENEFIT OF THE CITY OF RIVERSIDE PUBLIC UTILITIES.
(PLOTTED HEREON - TO BE QUITCLAIMED)

(10c) 50' NON-EXCLUSIVE INGRESS / EGRESS EASEMENT RESERVED FOR THE BENEFIT OF THE PRESENT AND FUTURE OWNER OF PARCEL 2 OF PARCEL MAP NO. 15890.
(PLOTTED HEREON - TO BE QUITCLAIMED)

(11) VEHICULAR INGRESS AND EGRESS RIGHTS TO ORANGE SHOW ROAD HAVE BEEN RELINQUISHED TO THE CITY OF SAN BERNARDINO, EXCEPT AT APPROVED DRIVEWAYS PER PARCEL MAP NO. 15890, P.M.B. 210 / 34-37.
(PLOTTED HEREON - APPROVED DRIVEWAY LOCATIONS TO BE REVISED ON THIS MAP)

(12) AN EASEMENT FOR LANDSCAPE PURPOSES DEDICATED ON PARCEL MAP NO. 17231, M.B. 224 / 62-66
IN FAVOR OF: CITY OF SAN BERNARDINO
(PLOTTED HEREON)

(13) AN EASEMENT FOR WATER TREATMENT FACILITY AND INCIDENTAL PURPOSES, RECORDED DECEMBER 4, 2007 AS INSTRUMENT NO. 2007-0678678 OF OFFICIAL RECORDS.
IN FAVOR OF: CITY OF RIVERSIDE
(PLOTTED HEREON)

(14) AN EASEMENT FOR INGRESS AND EGRESS AND INCIDENTAL PURPOSES, RECORDED DECEMBER 4, 2007 AS INSTRUMENT NO. 2007-0678679 OF OFFICIAL RECORDS.
IN FAVOR OF: CITY OF RIVERSIDE
(PLOTTED HEREON)

EXISTING EASEMENTS:

(15) AN EASEMENT FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES, RECORDED JULY 15, 2009 AS INSTRUMENT NO. 2009-0308430 OF OFFICIAL RECORDS.
IN FAVOR OF: SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION
(PLOTTED HEREON - TO BE QUITCLAIMED AND RE-LOCATED IF NECESSARY)

(16) A CENTERLINE EASEMENT OF UNSPECIFIED WIDTH FOR UTILITIES AND INCIDENTAL PURPOSES, RECORDED NOVEMBER 28, 1951 IN BOOK 2869, PAGE 248 OF OFFICIAL RECORDS
IN FAVOR OF: SOUTHERN CALIFORNIA EDISON COMPANY
(PLOTTED HEREON - TO BE QUITCLAIMED AND RE-LOCATED IF NECESSARY)

(17) AN EASEMENT FOR INGRESS, EGRESS AND INCIDENTAL PURPOSES, RECORDED SEPTEMBER 07, 1949 IN BOOK 2458, PAGE 323 OF OFFICIAL RECORDS.
IN FAVOR OF: E.H. SMITH AND FLORENCE I. SMITH
(PLOTTED HEREON - TO BE QUITCLAIMED)

(18) AN EASEMENT FOR UTILITIES AND INCIDENTAL PURPOSES, RECORDED NOVEMBER 28, 1960 IN BOOK 5292, PAGE 89 OF OFFICIAL RECORDS.
IN FAVOR OF: SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION
(PLOTTED HEREON - TO BE QUITCLAIMED)

(19) AN EASEMENT FOR ROAD PURPOSES AND INCIDENTAL PURPOSES, RECORDED DECEMBER 26, 1996 AS INSTRUMENT NO. 96-471797 OF OFFICIAL RECORDS.
IN FAVOR OF: THE COUNTY OF SAN BERNARDINO
(PLOTTED HEREON)

(20) AN EASEMENT FOR ROAD PURPOSES AND INCIDENTAL PURPOSES, RECORDED DECEMBER 26, 1996 AS INSTRUMENT NO. 96-471798 OF OFFICIAL RECORDS.
IN FAVOR OF: THE COUNTY OF SAN BERNARDINO
(PLOTTED HEREON)

(21) AN EASEMENT FOR ROAD PURPOSES AND INCIDENTAL PURPOSES, RECORDED FEBRUARY 27, 1997 AS INSTRUMENT NO. 97-68442 OF OFFICIAL RECORDS.
IN FAVOR OF: THE COUNTY OF SAN BERNARDINO
(PLOTTED HEREON)

(22) AN EASEMENT FOR ELECTRICAL & COMMUNICATION SYSTEMS, ABOVE GROUND, BELOW GROUND AND INCIDENTAL PURPOSES, GRANTED TO SOUTHERN CALIFORNIA EDISON COMPANY, RECORDED DECEMBER 16, 1971 IN BOOK 7817, PAGE 531 OF OFFICIAL RECORDS.
(PLOTTED HEREON - PORTIONS TO BE QUITCLAIMED AND RE-LOCATED IF NECESSARY)

(23) AN EASEMENT FOR ELECTRICAL & COMMUNICATION SYSTEMS, ABOVE GROUND, BELOW GROUND AND INCIDENTAL PURPOSES, GRANTED TO SOUTHERN CALIFORNIA EDISON COMPANY, RECORDED JUNE 23, 1982 AS INSTRUMENT NO. 82-122695 OF OFFICIAL RECORDS.
(PLOTTED HEREON)

(24) AN EASEMENT FOR ELECTRICAL & COMMUNICATION SYSTEMS, BELOW GROUND AND INCIDENTAL PURPOSES, GRANTED TO SOUTHERN CALIFORNIA EDISON COMPANY, RECORDED DECEMBER 12, 1991 AS INSTRUMENT NO. 91-468017 OF OFFICIAL RECORDS.
(PLOTTED HEREON)

(25) AN EASEMENT FOR RIGHTS AND EASEMENTS HEREBY ACQUIRED BY THE UNITED STATES, INCLUDING THE RIGHT TO DRILL AND OPERATE NEW WATER WELLS, PIPELINES AND OTHER APPURTENANT FACILITIES INCLUDING A PUMP HOUSE, AND INCIDENTAL PURPOSES, RECORDED DECEMBER 16, 1966 AS INSTRUMENT NO. 84-389953 OF OFFICIAL RECORDS.
IN FAVOR OF: THE UNITED STATES OF AMERICA AND ITS ASSIGNS.
(EASEMENT CANNOT BE DETERMINED FROM RECORD INFORMATION)

EXISTING LEGAL DESCRIPTIONS:

PARCELS 1, 2 AND 3 OF PARCEL MAP NO. 15890, IN THE CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER PLAT RECORDED IN BOOK 210, PAGES 34 THROUGH 37 OF PARCEL MAPS, RECORDS OF SAID COUNTY.

ALL THAT PORTION OF LOTS 9 AND 10, IN BLOCK 72, OF THE NINETY ACRE SURVEY OF THE RANCHO SAN BERNARDINO, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER PLAT RECORDED IN BOOK 7 OF MAPS, PAGE 2, RECORDED IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF LOT 9, BLOCK 72; THENCE EAST ALONG THE NORTH LINE OF LOTS 9 AND 10, 30 CHAINS; THENCE SOUTH 20 CHAINS; THENCE WEST 10 CHAINS; THENCE NORTH 10 CHAINS; THENCE WEST 20 CHAINS TO THE WEST LINE OF SAID LOT 9; THENCE NORTH 10 CHAINS TO THE POINT OF BEGINNING.

EXCEPT THAT PORTION DESCRIBED AS FOLLOWS:
BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 9, BLOCK 72; THENCE EAST ALONG THE NORTH LINE OF SAID LOT 9, 295.14 FEET; THENCE SOUTH PARALLEL WITH THE WEST LINE OF SAID LOT 9, 295.14 FEET; THENCE WEST 295.14 FEET TO THE WEST LINE OF SAID LOT 9; THENCE NORTH 295.14 FEET TO THE POINT OF BEGINNING.

RESERVING ALL WATER ON OR UNDER THE ABOVE EXCEPTED PORTION NECESSARY FOR IRRIGATION AND DOMESTIC PURPOSES, NO WATER SHALL BE SOLD OR EXPORTED FROM SAID EXCEPTED PORTION.
ALSO EXCEPT ANY PORTION LYING WITHIN THE BOUNDARIES OF THE RIGHT OF WAY OF THE ATCHISON, TOPEKA AND SANTA FE RAILROAD COMPANY.

ALSO EXCEPT THAT PORTION CONVEYED TO SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT IN A DEED RECORDED NOVEMBER 06, 1963 IN BOOK 6924, PAGE 757, OFFICIAL RECORDS.

PARCEL NO. 1 OF PARCEL MAP NO. 17231 IN THE CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 210, PAGES 98 TO 102 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, AND AMENDED BY AMENDING MAP RECORDED IN BOOK 224, PAGE 62 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

LINE TABLE

NUMBER	BEARING	DISTANCE
L1	N 00°27'00" W	30.62'
L2	N 45°08'35" W	14.95'
L3	N 0°04'25" W	11.28'
L4	N 89°51'35" E	60.26'
L5	N 00°08'05" W	11.27'
L6	N 44°49'57" E	34.95'
L7	N 00°29'27" W	4.25'
L8	N 89°51'35" E	34.07'
L9	N 00°30'30" W	41.25'
L10	N 00°29'27" W	41.25'
L11	N 00°29'09" W	46.00'
L12	N 00°27'00" W	46.00'
L13	N 89°51'35" E	55.00'
L14	N 89°32'58" E	55.00'
L15	N 89°33'28" E	4.32'
L16	N 00°29'09" W	22.80'
L17	N 42°58'47" E	81.82'
L18	N 64°02'04" W	368.85'
L19	N 89°51'35" E	167.34'
L20	N 00°08'25" W	82.00'
L21	N 00°08'25" W	103.00'
L22	N 89°51'35" E	156.37'

CURVE TABLE

NUMBER	DELTA	RADIUS	LENGTH
C1	Δ=1°44'08"	1865.08'	57.10'
C2	Δ=1°54'46"	1865.08'	62.95'
C3	Δ=3°16'59"	9768.91'	559.76'
C4	Δ=3°44'32"	9768.91'	487.60'

LINE LEGEND:

- PROPOSED STORM DRAIN
- PROPOSED WATER LINE (WATER)
- PROPOSED SEWER LINE (SEWER)
- 5570 INDICATES PROPOSED CONTOUR
- 5572 INDICATES EXISTING CONTOUR
- INDICATES FENCE
- INDICATES STREET CENTERLINE
- INDICATES PROPERTY LINE
- INDICATES PROPOSED PARCEL LINE

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PREPARED UNDER THE DIRECTION OF:
BRIAN L. THIENES
P.L.S. NO. 5750
REG. EXP. 12/31/13
email: brian@thienesengr.com
9/26/13
DATE
PROFESSIONAL LAND SURVEYOR BRIAN L. THIENES NO. 5750 EXP.12/31/13 STATE OF CALIFORNIA

Last Update: 09/26/13
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Source: Thienes Engineering, Inc. (09-26-13)

NOT TO SCALE

FIGURE 3-4
TENTATIVE PARCEL MAP NO. 19487

Parcel 1, owned by the City of Riverside, is an irregularly-shaped 13.20-acre portion of the Project site comprising the western edge of the property, a strip of land along the southwestern boundary, and the southernmost portion of the site. The western portion of Parcel 1 contains a groundwater treatment facility operated by the City of Riverside Department of Public Utilities. There are three (3) existing water well sites and two (2) future water well sites contained in Parcel 1, owned and operated by the City of Riverside. No development or physical disturbance is proposed on Parcel 1 by the Project.

Parcel 2 is the remaining 49.58-acre portion of the property, which would be configured to accommodate the development of one (1) industrial warehouse building as depicted in Figure 3-4. The building is designed to contain 1,199,360 s.f. of interior floor space, comprising 10,000 s.f. of potential office space area, 96,721 s.f of mezzanine area and 1,092,639 s.f. for warehouse distribution or light industrial operations. Parcel 2 would have a floor-to-area ratio (FAR) of 0.56.

Vehicular access to Parcel 2 would be provided by three (3) proposed driveways connecting to Orange Show Road. The driveways at the northwestern and northeastern corners of Parcel 2 would provide direct access to automobile parking areas and loading and unloading bays on the north and south sides of the proposed industrial warehouse building. A third access point is proposed at the approximate midpoint of Parcel 2's frontage with Orange Show Road and would provide access to the loading bays on the north side of the proposed building. Traffic exiting from each of the three (3) access points would be able to make both left and right-hand turns onto Orange Show Road.

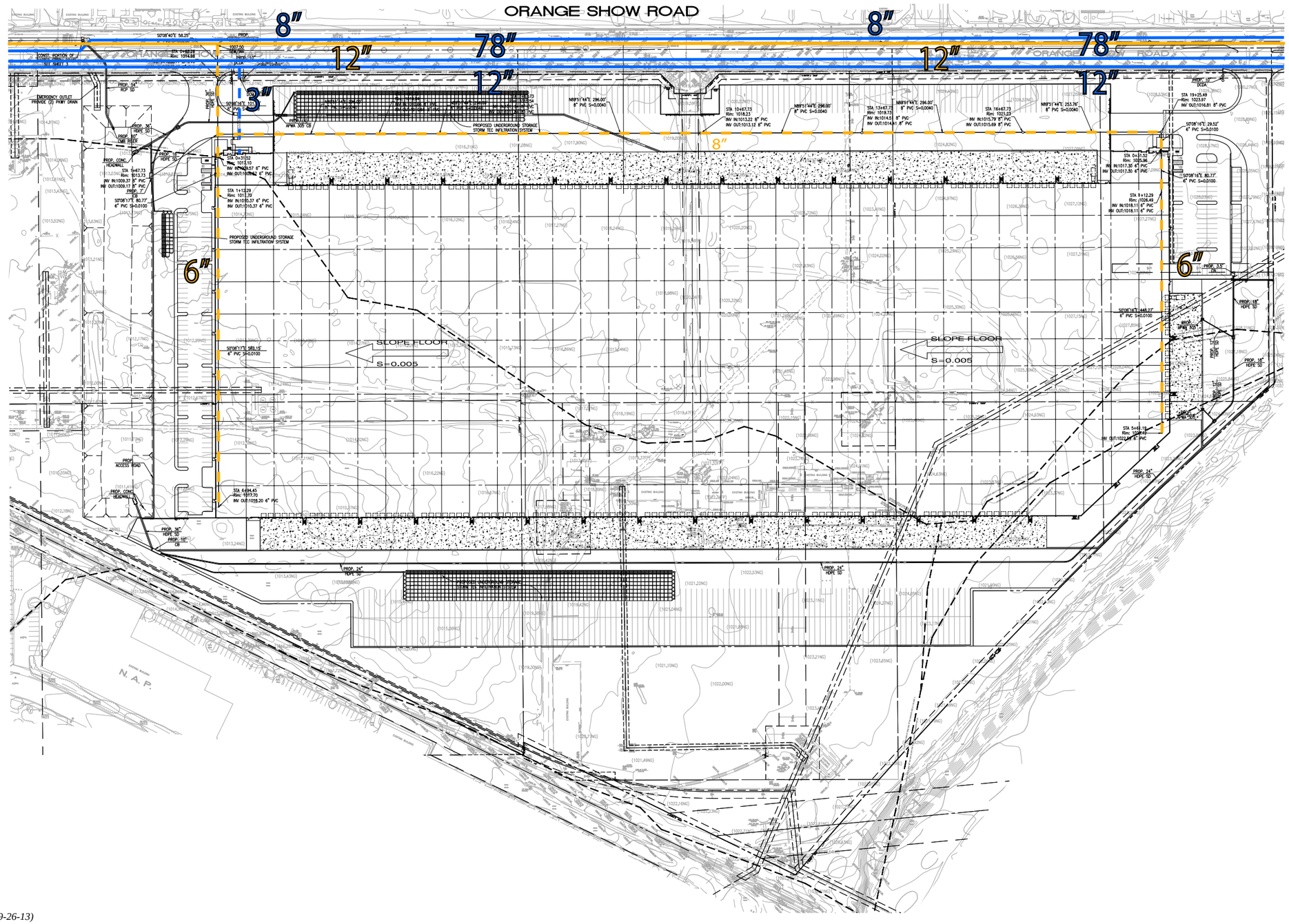
B. Public Roadway Improvements

The existing public street network servicing and abutting the Project site consists of Orange Show Road to the north. Under existing conditions, Orange Show Road is constructed to its full planned width, including four vehicular travel lanes, a raised median with landscaping, and sidewalks on both sides of the street. As part of the proposed Project, the existing raised median within Orange Show Road would be modified in front of proposed Driveway 3 (the easternmost Project driveway) to provide a new westbound left turn pocket and close the existing eastbound left turn pocket. The proposed median improvements are necessary to provide full vehicular access to Driveway 3. The existing eastbound left turn pocket within Orange Show Road that would be closed by the Project abuts a vacant, undeveloped parcel and does not provide access to any existing developed land use.

C. Water and Wastewater Conveyance Facilities

❑ Water Service

Water service would be provided to Parcel 2 by the City of San Bernardino Municipal Water Department (SBMWD). Under pre-development conditions, water service is available to the Project site via 8-inch, 12-inch, and 78-inch water mains installed beneath Orange Show Road. As depicted in Figure 3-5, *Water and Wastewater Plan,* the Project proposes to connect the proposed building to the existing 12-inch water main installed beneath Orange Show Road at the northwest corner of proposed Parcel 2 via an on-site 3-inch water line extending from the northwest corner of the building. All proposed water facilities would be designed in accordance with SBMWD standards and would require approval by SBMWD prior to installation. Additional information about the Project's proposed water system is provided in Subsection 4.11, *Utility and Service Systems.*



LEGEND
- Existing Sewer Pipe
- Existing Water Pipe
- Proposed Sewer
- Proposed Water Pipe

Source: Thienes Engineering, Inc. (09-26-13)

NOT TO SCALE

FIGURE 3-5
WATER AND WASTEWATER PLAN

❑ Wastewater Service

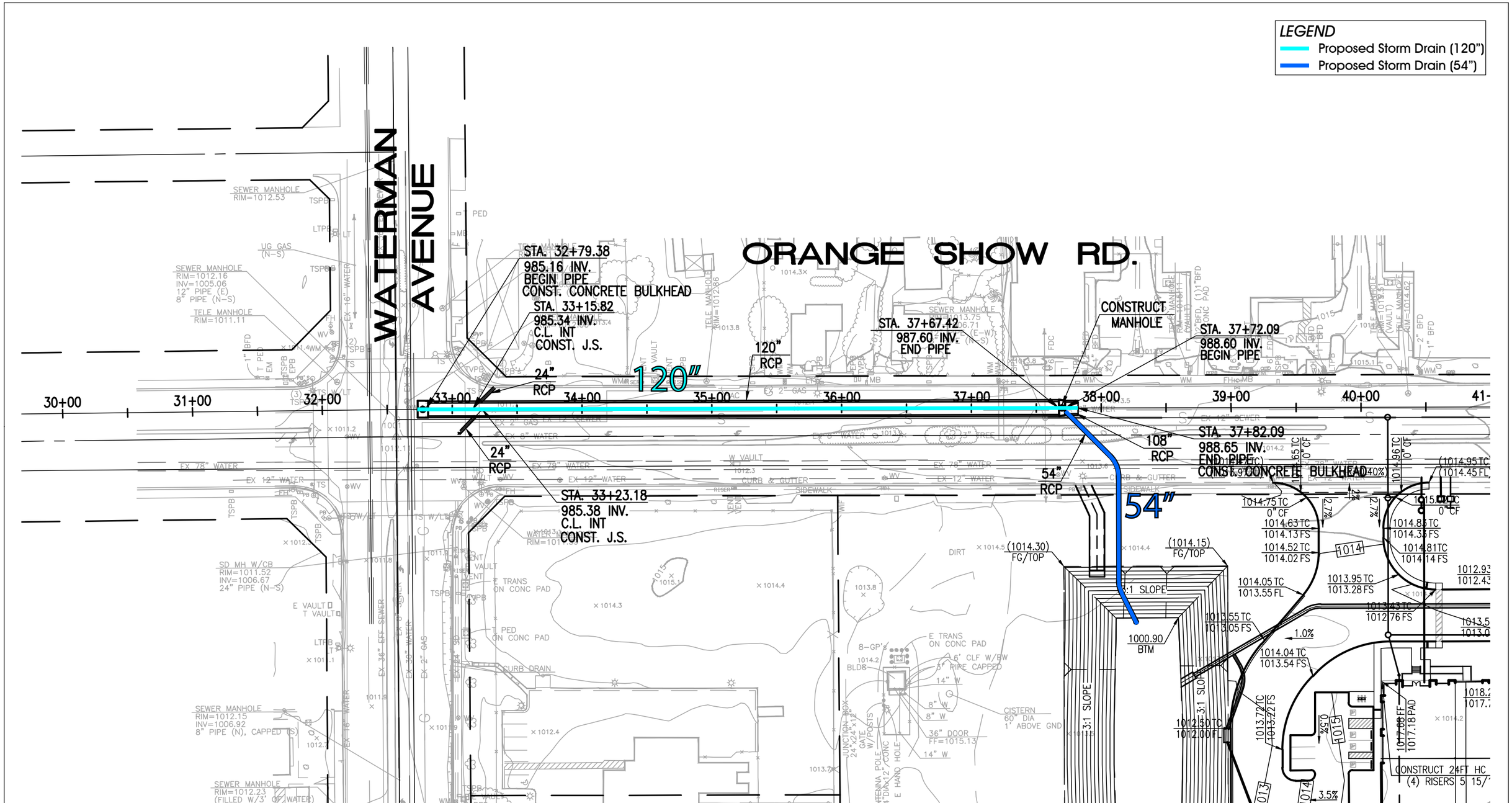
Wastewater conveyance and treatment service to the Project site is provided by the SBMWD. Under pre-development conditions, wastewater service is available to the Project site via an existing 12-inch sewer main installed beneath Orange Show Road. As depicted in Figure 3-5, the Project proposes to connect to this existing line at the northwestern corner of the site. On-site wastewater flows would be conveyed via two proposed 6-inch lateral lines and one proposed 8-inch sewer main line. The two 6-inch lateral lines would be located under the proposed building's eastern and western boundaries. The 8-inch sewer main would run from east to west below the proposed Project's northern parking lot area. The proposed on-site wastewater conveyance system would converge by gravity-flow and connect to the aforementioned existing 12-inch sewer main installed under Orange Show Road.

Additional information about the Project's wastewater conveyance facilities is provided in Subsection 4.11, *Utility and Service Systems*. All proposed wastewater facilities would be designed in accordance with SBMWD standards and would require approval by SBMWD prior to installation.

D. Drainage Plan

The drainage system proposed to accommodate the development proposed on Parcel 2 is depicted in Figure 3-4. The proposed Project's drainage system would consist of underground storm drain pipes and two (2) Storm-Tech MC3500 Underground Infiltration Chambers, as well as an on-site infiltration/water quality detention basin. The system is designed to collect, treat, and store stormwater runoff and discharge treated flows into a storm drain to be installed by the Project beneath Orange Show Road. Stormwater flows generated on-site would be captured and routed to one of two (2) underground infiltration chambers. The proposed Storm-Tech system would provide runoff storage and filtration to maximize on-site infiltration and minimize off-site water discharge. As shown on Figure 3-4, one underground infiltration chamber would be provided beneath the truck trailer parking lot on the southern side of the building and the second chamber would be provided beneath the truck trailer parking lot on the northern side of the building. From each of these two chambers, the stormwater runoff would be routed to a proposed infiltration/water quality detention basin located along the western boundary of Parcel 2. Under near-term conditions (prior to build out of the Master Plan of Drainage described below), all stormwater runoff captured on the Project site would percolate into the ground via the proposed underground infiltration chambers and the infiltration/water quality detention basin.

The Project would also install a regional storm drain line. As depicted in Figure 3-6, *Off-Site Drainage Plan*, the Project would install a 120-inch storm drain beneath the westbound lanes of Orange Show Road. This storm drain is part of a Master Plan of Drainage prepared for the Inland Valley Development Agency (IVDA) redevelopment area, but has not yet been installed by the IVDA. The proposed Project would install the segment of this storm drain system (running from east to west) that begins immediately in front of the Project's proposed building and continues to Waterman Avenue. Additional information about the installation of this storm drain is provided in Subsection 3.3.3, *Project Construction and Operational Characteristics*. Upon buildout of the IVDA's Master Plan of Drainage, the Project's on-site drainage system would connect to the regional storm drain via an underground 54-inch storm drain. The connection would occur in front of Parcel 2's western boundary.



Source: Thienes Engineering, Inc. (09-26-13)

NOT TO SCALE

FIGURE 3-6
OFF-SITE DRAINAGE PLAN

The City of San Bernardino Public Works Department, Engineering Division, is responsible for approving all proposed storm drain improvements to ensure proper facility sizing and construction, as well as consistency with the City's Master Plan of Drainage. Additional information about the Project's proposed drainage facilities is provided in Subsection 4.11, *Hydrology and Water Quality*.

E. Earthwork and Grading

As shown on Figure 3-4, *Tentative Parcel Map No. 19487,* earthwork and grading would only occur on Parcel 2. No grading or ground disturbance would occur within Parcel 1. Earthwork and grading activities on the 49.58-acre Parcel 2 would occur in one phase and would result in the movement of approximately 333,567 cubic yards of earth materials on the property, including excavation, over-excavation, and compaction. No import or export of earth materials is anticipated. When grading is complete, Parcel 2 would have a moderate slope from east to west, with the highest point being 1,029 feet above mean sea level (AMSL) in the northeast corner of Parcel 2, sloping downward to an elevation of 1012 ft. AMSL on the parcel's western boundary.

The only measurable manufactured slope that would be located on the property would occur surrounding the water quality detention basin proposed along the western boundary of Parcel 2. The basin, as depicted in Figure 3-4, is rectangular in shape and would have a maximum slope of 3:1. The elevation at the top of the basin would be approximately 1013 ft. AMSL, and the bottom would be approximately 1000 ft. AMSL.

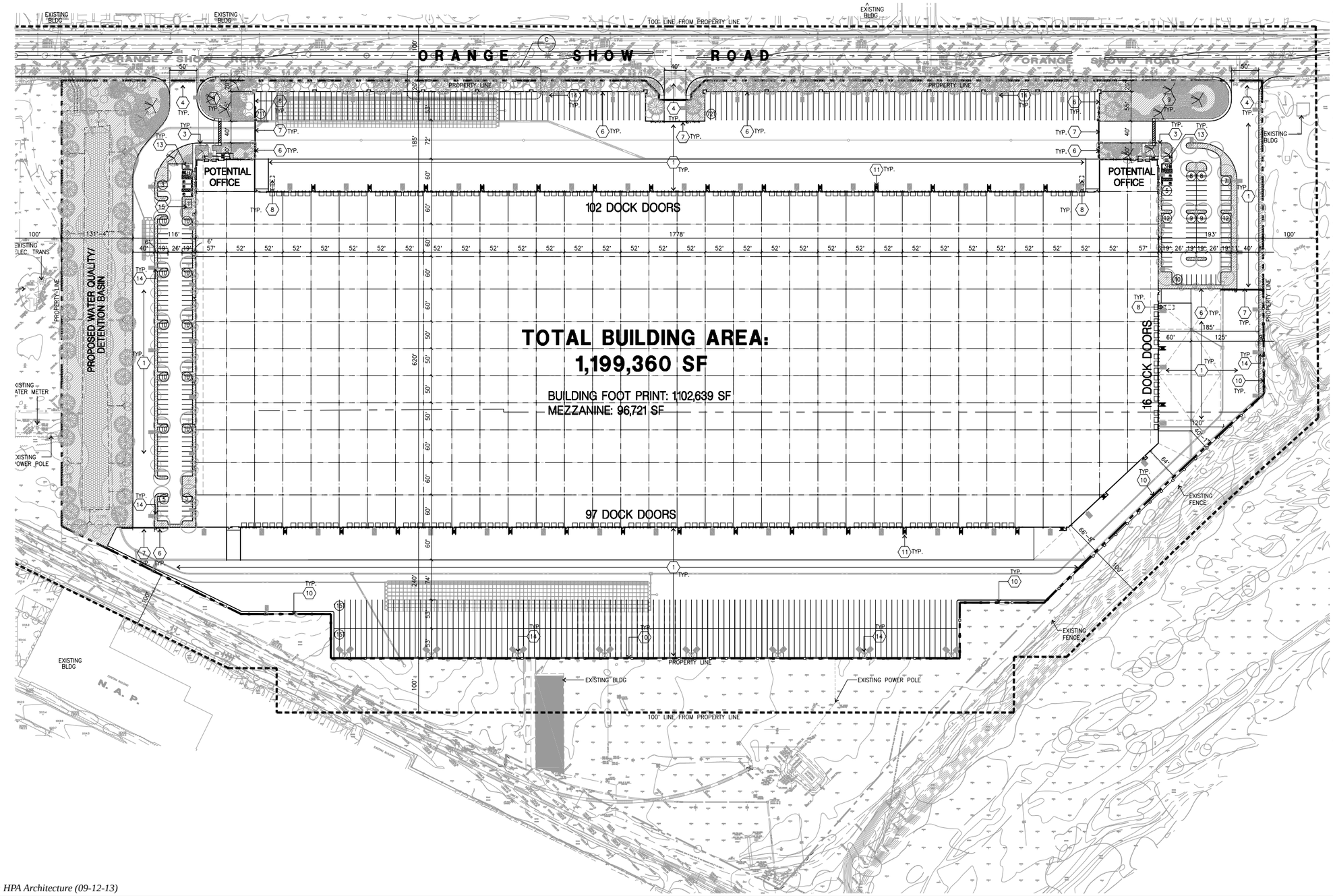
3.3.2 DEVELOPMENT PERMIT/SITE PLAN NO. DP-P13-09

Development Permit No. DP-P13-09 is proposed on the 49.58-acre Parcel 2 described above. The Development Permit proposes the construction of an industrial warehouse building containing 1,199,360 s.f. of interior floor space, comprising 10,000 s.f. of potential office space area, 96,721 s.f of mezzanine area, and 1,092,639 s.f. for warehouse distribution or light industrial operations. Figure 3-7, *Development Permit/Site Plan,* depicts the proposed site layout.

A. Architecture, Walls, and Fences

Figure 3-8, *Conceptual Elevations*, depicts the conceptual architecture elevations proposed by the Development Plan. The proposed industrial warehouse building would be constructed to a height of approximately 36 feet above finished grade, with architectural projections reaching up to 42 feet. The building would be constructed with concrete tilt-up panels and blue-reflective glass. Articulated building elements, including clear-anodized mullions and metal canopies, are proposed to be provided as decorative elements. The exterior color palette for the proposed building is comprised of various mild, earth-toned colors, including shades of beige, grey and white.

As shown in Figure 3-8, solid screen walls would be provided along the site's border adjacent to Orange Show Road to screen the loading bays and tractor trailer parking areas from public view. The heights of these walls would be in accordance with City standards, with a proposed height of eight (8) to 12 feet tall. Two additional screen walls would be constructed on the site, one on the southwest corner of the building to separate and conceal the loading bays from public view, and one on the east side of the building directly behind the automobile parking, also to conceal the loading bays. All screen walls would be painted to match the color and texture of the adjacent building wall.



SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONC. PAVEMENT, SEE "C" & "S" DWGS..
2. NOT USED
3. CONCRETE WALKWAY, SEE "L" DRAWINGS.
4. DRIVEWAY APRONS TO BE CONSTRUCTED PER "L" DRAWINGS.
5. 5'-6"X5'-6"X4" MIN. THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. SLOPE TO BE 1/4" : 12" MAX. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY W/ 1:20 MAX. AS REQ. BY CITY INSPECTOR.
6. CONCRETE TILT-UP SCREEN WALL – TO BE TREATED TO MATCH THE ADJACENT BUILDING WALL.
7. PROVIDE METAL, MANUAL OPERATED GATES W/ KNOX-PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY. GATE TO BE DESIGNED FOR 85 MPH WIND LOAD, EXP. "C". CONTRACTOR TO DESIGN & DETAIL GATES, PROVIDE SHOP DRAWINGS & CALCS. PRIOR TO FABRICATION.
8. 7' SIDE X 15' LONG TRASH COMPACTOR W/ 8' WIDE X 22' LONG REFUSE CONTAINER. PER THE CITY OF SAN BERNARDINO STANDARDS
9. LANDSCAPE. SEE "L" DWGS. LANDSCAPE AREAS INDICATED BY SHADED PATTERN.
10. 8'H CHAIN-LINK FENCE
11. EXTERIOR CONC. STAIR.
12. NOT USED
13. BIKE RACK
14. EXTERIOR LIGHT POLE. SEE "E" DRAWINGS.
15. APPROXIMATE LOCATION OF TRANSFORMER.

SITE PLAN GENERAL NOTES

1. NOT USED
2. IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE.
3. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINE U.N.O.
4. SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES. DETAILS ON SHEET AD.1 ARE MINIMUM STANDARDS.
5. THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM, PRIOR TO INSTALLATION & AT LEAST 60 DAYS BEFORE BLDG. COMPLETION.
6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
9. SEE "C"DRAWINGS FOR FINISH GRADE ELEVATIONS.
10. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY W/ 1:20 MAX. SLOPE. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4". SEE "L" DRAWINGS FOR FINISH.
11. NOT USED
12. PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.
13. CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND IRRIGATION OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
14. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
15. NOT USED
16. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
17. NOT USED.
18. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB
19. APPROVED CONCEPTUAL LANDSCAPE PLAN PRIOR TO GRADING PERMIT

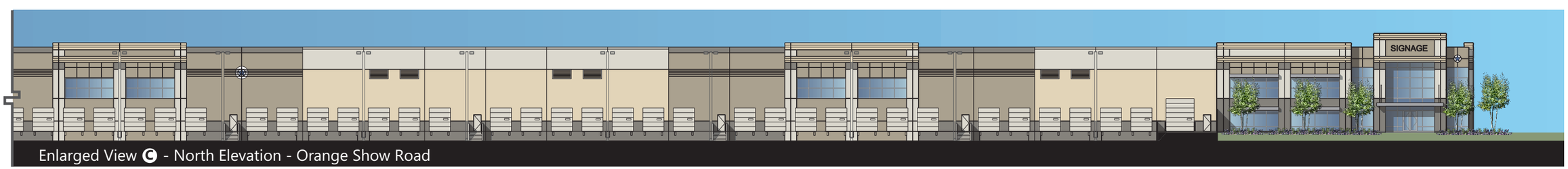
SITE LEGEND

- LANDSCAPED AREA
- CONCRETE PAVING SEE "C" DRWGS. FOR THICKNESS
- STANDARD PARKING STALL (9' X 19') W/ 2'-6" OVERHANG
- HANDICAP PARKING STALL (9' X 19')
- PATH OF TRAVEL
- LIGHT STANDARD
- EXISTING PUBLIC FIRE HYDRANT
- PRIVATE FIRE HYDRANT– APPROXIMATE LOCATION

Source: HPA Architecture (09-12-13)

NOT TO SCALE

FIGURE 3-7
DEVELOPMENT PERMIT/SITE PLAN NO. DP-P13-09



Source: HPA Architecture (09-19-13)

NOT TO SCALE

FIGURE 3-8
CONCEPTUAL ELEVATIONS

B. Parking and Loading

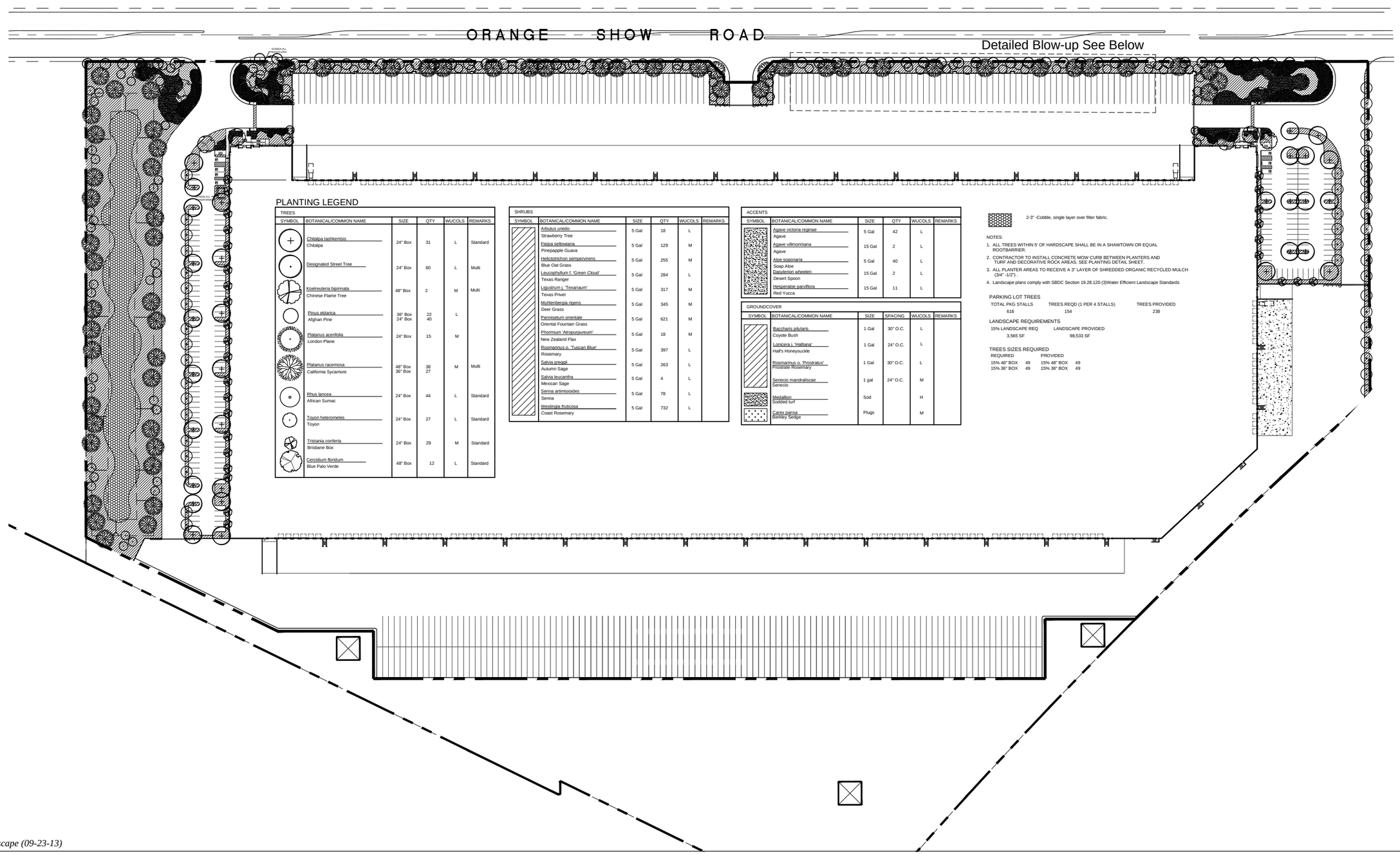
Figure 3-7, depicts the number and location of parking spaces (including passenger car and truck trailer parking) and loading bays for the structure. The Project would include 788 total parking spaces: 193 automobile spaces, seven (7) handicap-accessible spaces, and 588 truck trailer spaces. The proposed Development Plan also specifies the provision of bicycle parking in compliance with the City of San Bernardino Development Code Section 19.20.030(26.A), which requires bicycle parking to be provided at a rate of one (1) per thirty (30) parking spaces.

As part of the proposed building, 215 loading would be used for the loading, unloading, and short-term parking of tractor trailers. The loading bays are designed to be distributed at the exterior of the structure as follows: 102 bays on the north side of the building, 16 bays on the west side of the building, and 97 bays on the south side of the building. At a warehouse building, loading bays (also called "docks") are used for the receiving of goods and the shipment of goods. Quite often, these docks are on different sides of the building. The proposed Project's building has been designed in this manner, with one side of the building primarily for the receiving of goods and the other side primarily for the shipment of goods. Although all of the loading bays are rarely used simultaneously, most warehouse tenants like to have as many bays as possible to facilitate operations inside the structure, where goods are sorted and stored. When trucks have the option to dock close to the area where their cargo is sorted and stored inside the structure, workers inside the building have a shorter distance to cover when moving goods from the truck to the storage area and vice versa (Stertil 2002 1-5).

The proposed Development Plan contains an alternate site plan to accommodate less trailer parking spaces and more passenger car parking spaces, if required by the City based on the tenant that would eventually occupy the structure. This alternate plan would require only re-striping the proposed parking area and would not require any substantive modifications of the Project's design.

C. Conceptual Landscape Plan

The conceptual landscape plan prepared for the Project is depicted in Figure 3-9, *Conceptual Landscape Plan.* The landscape plan indicates that trees, shrubs, and groundcovers are proposed to be planted along the site's frontage with Orange Show Road (including landscaping within the public right-of-way), at building entries and driveways to partially shade the structure and parking areas, along proposed screen walls and fencing, and along the eastern and western boundaries of Parcel 2. Proposed landscaping would be ornamental in nature. The water quality detention basin on the western portion of Parcel 2 would be landscaped with groundcover and shrubbery, with the bottom surface to be paved with cobble. Prior to the issuance of a building permit for the proposed industrial warehouse building, 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. The planting and irrigation plans would be required to comply with Development Code Section 19.28 which establishes requirements for landscape design, automatic irrigation system design, and water-use efficiency.



PLANTING LEGEND

TREES

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	REMARKS
	Chitalpa tashkentsis Chitalpa	24" Box	31	L	Standard
	Designated Street Tree	24" Box	60	L	Multi
	Koelreuteria bipinnata Chinese Flame Tree	48" Box	2	M	Multi
	Pinus eldarica Afghan Pine	36" Box 24" Box	22 40	L	
	Platanus acerifolia London Plane	24" Box	15	M	
	Platanus racemosa California Sycamore	48" Box 36" Box	38 27	M	Multi
	Rhus lancea African Sumac	24" Box	44	L	Standard
	Toyon heteromeles Toyon	24" Box	27	L	Standard
	Tristania conferta Brisbane Box	24" Box	29	M	Standard
	Cercidium floridum Blue Palo Verde	48" Box	12	L	Standard

SHRUBS

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	REMARKS
	Arbutus unedo Strawberry Tree	5 Gal	18	L	
	Feijoa sellowiana Pineapple Guava	5 Gal	129	M	
	Helictotrichon sempervirens Blue Oat Grass	5 Gal	255	M	
	Leucophyllum f. 'Green Cloud' Texas Ranger	5 Gal	284	L	
	Ligustrum j. 'Texanaum' Texas Privet	5 Gal	317	M	
	Muhlenbergia rigens Deer Grass	5 Gal	345	M	
	Pennisetum orientale Oriental Fountain Grass	5 Gal	621	M	
	Phormium 'Atropurpureum' New Zealand Flax	5 Gal	18	M	
	Rosmarinus o. 'Tuscan Blue' Rosemary	5 Gal	397	L	
	Salvia greggii Autumn Sage	5 Gal	263	L	
	Salvia leucantha Mexican Sage	5 Gal	4	L	
	Senna artimisioides Senna	5 Gal	78	L	
	Westringia fruticosa Coast Rosemary	5 Gal	732	L	

ACCENTS

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	REMARKS
	Agave victoria reginae Agave	5 Gal	42	L	
	Agave villmoriniana Agave	15 Gal	2	L	
	Aloe saponaria Soap Aloe	5 Gal	40	L	
	Dasylirion wheeleri Desert Spoon	15 Gal	2	L	
	Hesperaloe parviflora Red Yucca	15 Gal	11	L	

GROUNDCOVER

SYMBOL	BOTANICAL/COMMON NAME	SIZE	SPACING	WUCOLS	REMARKS
	Baccharis pilularis Coyote Bush	1 Gal	30" O.C.	L	
	Lonicera j. 'Halliana' Hall's Honeysuckle	1 Gal	24" O.C.	L	
	Rosmarinus o. 'Prostratus' Prostrate Rosemary	1 Gal	30" O.C.	L	
	Senecio mandraliscae Senecio	1 gal	24" O.C.	M	
	Medallion Sodded turf	Sod		H	
	Carex pansa Berkley Sedge	Plugs		M	

2-3" -Cobble, single layer over filter fabric.

NOTES:

1. ALL TREES WITHIN 5' OF HARDSCAPE SHALL BE IN A SHAWTOWN OR EQUAL ROOTBARRIER.
2. CONTRACTOR TO INSTALL CONCRETE MOW CURB BETWEEN PLANTERS AND TURF AND DECORATIVE ROCK AREAS. SEE PLANTING DETAIL SHEET.
3. ALL PLANTER AREAS TO RECEIVE A 3" LAYER OF SHREDDED ORGANIC RECYCLED MULCH (3/4" -1/2") .
4. Landscape plans comply with SBDC Section 19.28.120 (3)Water Efficient Landscape Standards

PARKING LOT TREES

TOTAL PKG STALLS	TREES REQD (1 PER 4 STALLS)	TREES PROVIDED
616	154	238

LANDSCAPE REQUIREMENTS

15% LANDSCAPE REQ	LANDSCAPE PROVIDED
3,565 SF	98,533 SF

TREES SIZES REQUIRED

REQUIRED		PROVIDED	
15% 48" BOX	49	15% 48" BOX	49
15% 36" BOX	49	15% 36" BOX	49

Source: Hunter Landscape (09-23-13)

NOT TO SCALE

FIGURE 3-9
CONCEPTUAL LANDSCAPE PLAN

3.3.3 PROJECT CONSTRUCTION AND OPERATIONAL CHARACTERISTICS

A. Construction Details

The Project Applicant indicates that the proposed Project would be constructed in one phase over approximately 280 days. The construction phase would be divided into five (5) sub-phases: Site Preparation (20 days), Site Grading (40 days), Paving (20 days), Building Construction (150 days), and Architectural Coating (50 days). Construction equipment is expected to operate on the Project site eight (8) hours per day. The types and numbers of heavy equipment expected to be used during Project construction activities are listed in the air quality technical report attached to this EIR as *Technical Appendix B1*. For purposes of evaluation in this EIR, it is assumed that the proposed Project would complete construction and would be occupied in the Year 2015.

Additionally, it is anticipated that the Project's proposed installation of a 120-inch storm drain on the north side of Orange Show Road between the Project site's frontage and Waterman Avenue would result in temporary lane closures of the westbound lanes in this segment of the road for a period of approximately three (3) weeks. The two westbound lanes would be closed and the two eastbound lanes would be converted to one westbound lane and one eastbound lane. The storm drain line installation would include trenching, installation of the line, backfilling, and repaving.

B. Operational Details

At the time this EIR was prepared, the future tenant(s) of the proposed Project's building is unknown. The Project Applicant estimates that the building would be primarily occupied by a warehouse distribution, e-logistics, fulfillment center, or light-industrial operator(s). For the purpose of analysis in this document, the future tenant types are assumed to be any of those uses permitted by the City of San Bernardino Development Code's "Industrial Light" designation as described in Development Code Chapter 19.08. Furthermore, this EIR assumes the proposed building would be operational 24 hours per day, with exterior areas lit at night. Lighting would be subject to compliance with Development Code Chapter 19.20.030.14, which states that exterior lighting shall be energy-efficient, shielded or recessed, and directed downward and away from adjoining properties. The building is designed such that business operations would be conducted within the enclosed building, with the exception of traffic movement, parking, and the loading and unloading of tractor trailers at designated loading bays.

Because the building's tenant(s) is not yet known, the number of jobs that the Project would generate cannot be precisely determined; therefore, for purposes of analysis within this EIR, employment estimates have been calculated using the Project Applicant's understanding and experience from projects that are of comparable size and intended usages (Schaefer, 2013). Using an employment generation rate of 1 employee per 2,000 s.f. of building area, the proposed Project is expected to create approximately 600 new, recurring jobs.

According to a Water Supply Assessment prepared for the Project by SBMWD (*Technical Appendix J* to this EIR), the Project is estimated to result in a demand for approximately 113 acre-feet of potable water per year for indoor use and 145 acre-feet of water per year for outdoor irrigation. The total water demand for the proposed Project would be 258 acre-feet per year. The Project also is estimated to result in an average daily demand of 49,580 gallons per day of wastewater treatment capacity (based on the City of San Bernardino's wastewater generation factor of 1,000 gallons per

day per acre for light industrial land uses) (Psomas 2002 4-5). Energy use is estimated at approximately 2,060,500 thousand British Thermal Units (kBTU) and 3,622,070 kilowatt-hours (kWh) per year, respectively (Qureshi 2013).

3.4 STANDARD REQUIREMENTS AND CONDITIONS OF APPROVAL

The proposed Tentative Parcel Map and Development Permit and their technical aspects have been reviewed in detail by the City of San Bernardino. Various City departments and divisions are responsible for reviewing land use applications for compliance with City codes and regulations. These departments and divisions also were responsible for reviewing this EIR for technical accuracy and compliance with CEQA. The City of San Bernardino departments and divisions responsible for technical review include:

- City Attorney's Office
- Community Development Department, Planning Division
- Community Development Department, Land Development Division
- Fire Department
- Public Works Department, Engineering Division

Review of the proposed Tentative Parcel Map and Development Permit will result in the production of 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. These conditions will be considered by the City's Development/Environmental Review Committee (D/ERC) and Planning Commission in conjunction with their consideration of the Project. If approved, the Project would be required to comply with all imposed Conditions of Approval.

Conditions of Approval and other applicable regulations, codes, and requirements that the Project is required to comply with and that result in the reduction or avoidance of an environmental impact are specified in each subsection of Chapter 4.0, *Environmental Analysis*.

3.5 SUMMARY OF REQUESTED ACTIONS

The City of San Bernardino has primary approval responsibility for the proposed Project. As such, the City is serving as the Lead Agency for this EIR pursuant to CEQA Guidelines §15050. (The role of the Lead Agency was previously described in more detail in Section 1.3 of this EIR.) The City's Development/Environmental Review Committee (D/ERC) will consider the Project's requested discretionary permit applications and make advisory recommendations to the City's Planning Commission. The Planning Commission will have authority over approval, approval with changes, or denial of the requested actions that are within the City's jurisdiction. The City 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 would conduct administrative reviews and grant ministerial permits and approvals to implement the Project. A list of the primary actions under City jurisdiction and the jurisdiction of other agencies is provided in Table 3-1, *Matrix of Project Approvals/Permits*. This EIR covers all federal, state, local government and quasi-government approvals which may be needed to construct or implement the Project, whether or not they are explicitly listed in Table 3-1, or elsewhere in this EIR (CEQA Guidelines § 15124(d)).

Table 3-1 Matrix of Project Approvals/Permits

PUBLIC AGENCY	APPROVALS AND DECISIONS
City of San Bernardino	
Development/Environmental Review Committee (D/ERC)	• Provide recommendations to the San Bernardino Planning Commission whether to approve Tentative Parcel Map No. 19487 (SUB13-07) and Development Permit/Site Plan No. DP-P13-09. • Provide recommendation to the City of San Bernardino Planning Commission regarding certification of this EIR.
Planning Commission	• Approve, conditionally approve, or deny Tentative Parcel Map No. 19487 (SUB13-07). • Approve, conditionally approve, or deny Development Permit/Site Plan No. DP-P13-09. • Reject or certify this EIR along with appropriate CEQA Findings.
Subsequent City of San Bernardino Discretionary and Ministerial Approvals	
City of San Bernardino Subsequent Implementing Approvals	• Approve final maps, parcel mergers, lot line adjustments, or parcel consolidations, as may be appropriate. • Approvals for water, sewer, and storm drain infrastructure. • Issue grading permits. • Issue building permits. • Approve road improvement plans. • Issue encroachment permits. • Accept public right-of-way dedications.
Other Agencies – Subsequent Approvals and Permits	
Federal Emergency Management Agency	• Revision of the Flood Insurance Rate Map
Santa Ana Regional Water Quality Control Board	• Issuance of a Construction Activity General Construction Permit. • Issuance of a National Pollution Discharge Elimination System Permit.
County of San Bernardino	• Encroachment permit(s).

4.0 ENVIRONMENTAL ANALYSIS

4.0.1 SUMMARY OF EIR SCOPE

In accordance with CEQA Guidelines §§15126-15126.4, this EIR Section 4.0, *Environmental Analysis*, provides analyses of potential direct, indirect, and cumulative impacts that could occur from planning, constructing, and operating the proposed Project.

In compliance with the procedural requirements of CEQA, an Initial Study was prepared to determine the scope of environmental analysis for this EIR. Public comment on the scope was considered in the form of written comments received by the City of San Bernardino in response to the NOP issued for this EIR and oral comments provided by members of the public at the EIR scoping meeting held on October 30, 2013, at the San Bernardino City Hall. Taking all known information and public comments into consideration, 11 primary environmental subject areas are evaluated in this Section 4.0, as listed below and presented alphabetically by subsection. Each subsection evaluates several specific subject matters related to the general topic of the subsection. The title of each subsection is not limiting; therefore, refer to each subsection for a full account of the subject matters addressed therein.

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

Six (6) environmental subjects were determined by the City to have no potential to be significantly impacted by the Project, 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 on the scope of this EIR and documented in the City's administrative record. These six (6) subjects are discussed briefly in Section 5.0, *Other CEQA Considerations*, and include: Agriculture and Forestry Resources, Geology/Soils, Land Use/Planning, Population/Housing, Public Services, and Recreation.

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 in this EIR, except for the evaluation of cumulative traffic impact. The analysis of cumulative traffic impacts uses the list of project approach, as is required to be used by the City of San Bernardino's *Traffic Impact Study Guidelines* (September 2004).

Using the summary of projections approach, the cumulative study area includes the geographic area of the Upper Santa Ana River Valley, which is framed by the San Bernardino Mountains on the northeast and east, Blue Mountain and Box Springs Mountain to the south, the San Gabriel Mountains to the northwest, and the Jurupa Hills to the southwest. Areas within the Upper Santa Ana River Valley exhibit similar climatological, geological, and hydrological characteristics as the Project area, and, therefore, are likely to have similar biological and archaeological characteristics as well. The Upper Santa Ana River Valley includes the incorporated cities of Yucaipa, Highland, Loma Linda, Grand Terrace, Colton, Rialto, and Fontana, and the unincorporated San Bernardino County communities of Mentone, Muscoy, and Bloomington. 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 be cumulatively considerable.

Environmental impacts associated with buildout of the cumulative study area were evaluated in CEQA compliance documents prepared for the respective General Plans of each of the above-named jurisdictions. The location where each of these CEQA compliance documents is available for review is provided below. All of the CEQA compliance documents listed below are herein incorporated by reference.

- City of Yucaipa General Plan Negative Declaration (SCH No. 2004061123), available for review at City of Yucaipa Development Services Department, 34272 Yucaipa Boulevard, Yucaipa, CA 92399

- 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 92373.
- 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. La Cadena Drive, Colton, CA 92324
- City of Rialto General Plan EIR (SCH No. 2008071100), available for review at the City of Rialto Development Services Department, 150 S. Palm Avenue, Rialto, CA 92376
- City of Fontana General Plan EIR (SCH No. 2003031083), available for review at the City of Fontana Community Development Department, 8353 Sierra Avenue, Fontana, CA 92335
- 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

A specific cumulative study area was established to assess the cumulative effect of the Project's impacts to traffic and transportation, as required by the City of San Bernardino's *Traffic Impact Study Guidelines* (September 2004) and in consultation with the City of San Bernardino Community Development Department and the City of San Bernardino Public Works Department, Engineering Division. The cumulative study area for traffic generally includes approved and pending development projects within a five (5)-mile radius of the Project site, as well as several large, traffic-intensive projects falling just beyond a five (5)-mile radius of the Project site. As such, the cumulative impact analysis of traffic impacts in EIR Subsection 4.10 analyzes 25 other past, present, and reasonably foreseeable projects within this study area. This methodology presents a more reasonable approach to cumulative traffic analysis than the General Plan projection approach by recognizing development projects that actually have the potential to contribute traffic to the same intersections, roadway segments, and/or freeway segments as the proposed Project and have the potential to be made fully operational during a similar timeframe as the proposed Project. Specific development projects included in the traffic impact cumulative analysis shown in Figure 4-1, *Cumulative Development Location Map* are listed below in Table 4-1, *List of Cumulative Developments*.

4.0.3 IDENTIFICATION OF IMPACTS

Subsections 4.1 through 4.11 of this EIR evaluate the 11 environmental subjects warranting detailed analysis, as determined by this EIR's Initial Study. 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 potential environmental impacts based on specified 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. As required by CEQA Guidelines §15126.2(a), impacts are identified as direct, indirect, cumulative, short-term, long-term, on-site, and/or off-site impacts of the proposed Project.

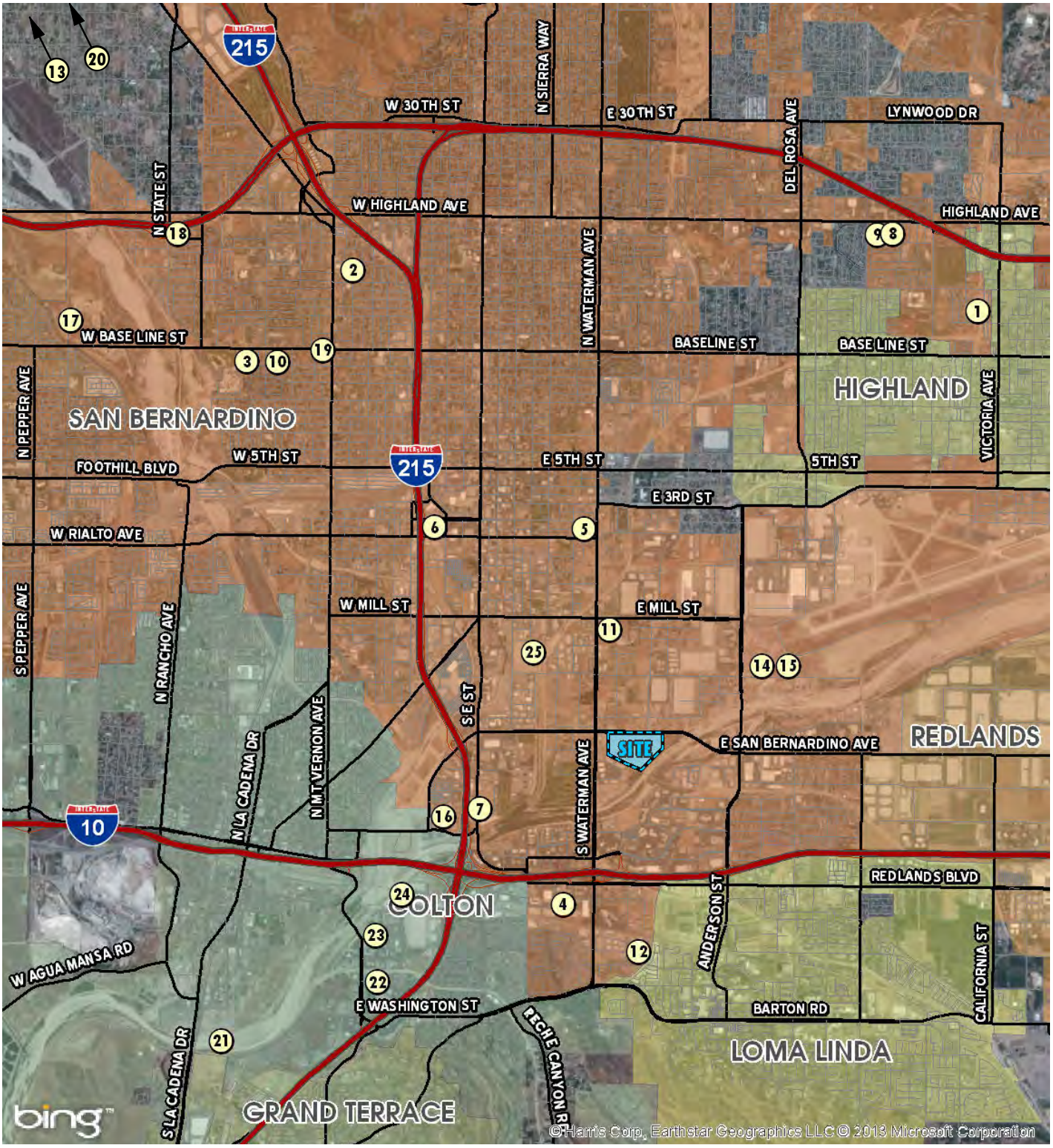
A summarized "impact statement" is provided in each subsection following the analysis. The following terms are used to describe the level of significance as related to the physical conditions within the area affected by the proposed Project:

- No Impact: An adverse change in the physical environment would not occur.
- Less-than-Significant Impact: An adverse change in the physical environment would occur but the change would not be substantial or potentially substantial and would not exceed the threshold(s) of significance presented in this EIR.
- Significant Impact: A substantial or potentially substantial adverse change in the physical environment would occur and would exceed the threshold(s) of significance presented in this EIR, requiring the consideration of mitigation measures.

Each subsection also includes a discussion of the applicable regulatory criteria (laws, policies, regulations) that the Project is required to comply with (if any). If impacts are identified as significant with mandatory adherence to regulatory criteria, mitigation measures are presented that could be applied to either avoid the impact or to reduce the magnitude of the impact, if mitigation is feasible and has a proportional nexus to the Project's level of impact. The following terms are used to describe the level of significance following the application of recommended mitigation measures:

- Less-than-Significant Impact With Mitigation: A substantial or potentially substantial adverse change in the physical environment would occur that would exceed the threshold(s) of significance presented in this EIR; however, the impact can be avoided or reduced to a less than significant level through the application of feasible mitigation measures.
- Significant and Unavoidable Impact: A substantial or potentially substantial adverse change in the physical environment would occur that would exceed the threshold(s) of significance presented in this EIR. Feasible mitigation measures are either not available or would not be fully effective in avoiding or reducing the impact to below a level of significance.

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.



Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.0-1
CUMULATIVE DEVELOPMENT LOCATION MAP

Table 4.0-1 List of Cumulative Developments

TAZ	Project Name	Land Use[1]	Quantity	Units[2]
1	CUP 12-04	Religious Facility Addition	0.714	TSF
2	CUP 12-06	Commercial Retail	9.180	TSF
		Fast Food w/ Drive Thru	2.400	TSF
3	CUP 12-12	K-6 Charter School	300	STU
4	CUP 12-13	Auditorium, Community Center	20.000	TSF
5	CUP 12-14	Discount Store	9.026	TSF
6	CUP 12-20	Discount Store	10.500	TSF
7	CUP 12-22	Auditorium, Banquet Hall	5.233	TSF
		Restaurant	0.800	TSF
8	CUP 13-01	Discount Store	26.907	TSF
9	CUP 13-07	Discount Store	12.500	TSF
10	CUP 13-14	Gas Station w/ Convenience Market	2.789	TSF
11	DP2 12-02	Warehousing	345.802	TSF
12	DP2 12-03	Automobile Parts and Service Center	24.953	TSF
13	DP2 12-09	Industrial Park	1,789.990	TSF
14	DP2 12-10	General Light Industrial	480.570	TSF
15	DP2 12-14	General Light Industrial	871.900	TSF
16	DP2 12-18	Automobile Dealership	30.300	TSF
17	DP-D13-01	Shipping Container Storage Yard	12	AC
18	DP-D13-02	Discount Store	12.406	TSF
19	DP-D13-05	Commercial Retail	9.180	TSF
20	Spring Trails Specific Plan	SFDR	304	DU
21	Soil Safe Land Improvement Project	Soil Safe Project	19	AC
22	Education/Office Building	General Office	114.071	TSF
23	Pacific Rail - Metal Shredder	Metal Shredder	1	MS
24	Steel Road/Santa Ana Redevelopment	Industrial Park	159.276	TSF
25	National Orange Show Industrial	High-Cube Warehouse	616.000	TSF
		General Light Industrial	57.750	TSF
		Warehousing	78.960	TSF

[1] SFDR = Single Family Detached Residential

[2] DU = Dwelling Units; TSF = Thousand Square Feet; STU = Students; AC = Acres; MS = Metal Shredder

4.1 AESTHETICS

This subsection describes the aesthetic qualities and visual resources present on the Project site and in the site's vicinity. This subsection also analyzes the potential impacts that the Project could have on these resources.

In particular, descriptions of existing visual characteristics, both on site and in the vicinity of the Project site, are provided. Potential aesthetic impacts resulting from implementing the proposed Project are based in part on a site visit and site photographs collected by T&B Planning, Inc. in September 2013 (LaMar 2013), analysis of aerial photography (ESRI, 2013), Project application materials submitted to the City of San Bernardino and described in Section 3.0 of this EIR, and information provided in reports appended to this EIR. This subsection also is based in part on information contained in the Natural Resources and Conservation Section of the City of San Bernardino General Plan (City of San Bernardino 2005a Ch. 12, 12-22 – 23), and the Aesthetics section of the certified Final EIR prepared for the General Plan (SCH No. 2004111132) (City of San Bernardino 2005b Sec. 5.1, 5.1-1 – 5.1-30).

4.1.1 EXISTING CONDITIONS

The Project site encompasses 62.85 acres in the City of San Bernardino, of which approximately 49.65 would be developed as part of the Project. The site is located immediately south of Orange Show Road and approximately 450 feet east of Waterman Avenue. To the southeast, the Project site abuts the Santa Ana River. To the southwest, the Project site abuts the BNSF Railway railroad. The eastern site boundary is located approximately 0.6 miles west of Tippecanoe Road. Topographically, the site ranges in elevation from approximately 1,031 feet above mean sea level (AMSL) in the northeast corner of the site to approximately 1,012 feet AMSL in the western portion of the site, with an overall topographic relief of approximately 19 feet. Thus, the site is perceived as generally flat or gently sloping to the west under existing conditions.

Pursuant to CEQA Guidelines §15125, the physical environmental condition for purposes of establishing the setting on an EIR is the environment as it existed at the time the EIR's NOP was released for public review. The NOP for this EIR was released on October 8, 2013. As of that date, the Project site consisted of vacant land that has been subjected to substantial disturbance due to on-going and historic activities on the site. On-going disturbances include routine weed abatement activities across the entire property. Historic disturbances on-site include the former operation of a lumber mill and the drilling of five (5) City of Riverside groundwater production wells (which are all still in operation on the site). The former lumber mill occupied seven (7) wooden structures in the south-central portion of the site, all of which are still present on the Project site in various states of disrepair. Severely-cracking asphaltic paving is located in and around the abandoned lumber facility. Abandoned machinery is also present at the former lumber mill site. The five (5) City of Riverside groundwater production wells are located in the central, southern, and western portions of the Project site. Two (2) wells are located within the development area of the Project site and would be re-located to the southern portion of the site under a separate action by the City of Riverside. Relocation of the wells is not a part of the proposed Project evaluated in this EIR. There is one paved north-south private driveway with access to Orange Show Road located at the approximate midpoint of the Project site's frontage with Orange Show Road, and utility poles are scattered throughout the Project site. There are no rock outcroppings or unique topographic features on the Project site, and the only landscape features on-site include overgrown, ornamental trees and shrubs associated with

the abandoned lumber mill facility. The existing conditions of the Project site were previously shown on Figure 2-4, *Aerial Photograph*.

To illustrate the existing visual conditions of the Project site in more detail, a photographic inventory has been prepared. Figure 4.1-1, *Site Photo Key Map*, depicts the locations of four (4) vantage point photographs, each of which are described below. These photographs, shown on Figure 4.1-2 and Figure 4.1-3, provide a representative visual inventory of the site's visual characteristics as seen from surrounding public viewing areas.

- Site Photo 1 (Figure 4.1-2): Site Photo 1 was taken from the approximate midpoint of the Project site's northern boundary along Orange Show Road. The photo depicts a 180-degree view of the Project site facing south, with the site's eastern boundary in the left side of the photo and the western boundary on the right side of the photo. As shown from this photo, the Project site consists of generally flat land that has been subjected to on-going weed abatement activities, with small non-native shrubbery scattered throughout the site. Additionally, this photo depicts the private driveway that bisects the site and provides access to the abandoned lumber mill facility. The lumber facility can be seen in the background of the photo, along with ornamental landscaping. Neighboring industrial/commercial office land uses are visible in the right-center portion of the photo. Along the horizon, albeit mostly obscured by smog, rugged topographic features (either Reche Canyon or Box Springs Mountain) are visible, although no prominent topographic features are distinctly visible along the horizon of the proposed Project site.

- Site Photo 2 (Figure 4.1-2): Site Photo 2 was taken from the Project site's southwest border looking north. The left side of the photo is a northwest-facing view along the Project's southwest boundary. The center of the photo faces northeast and looks across the Project site towards the northeastern corner of the site. The right side of the photo faces southeast looking toward the southern point of the site. The foreground of the photo depicts a detailed view of the vegetative character of the southwestern portion of the site, which is comprised of 1-2-foot tall non-native grasses and associated ruderal plant species. From this view it is clear that the southwestern portion of the site has not been subjected to the same level of historic and on-going disturbance as the remaining portions of the Project site. In the mid-ground of the photo large blue tanks are visible, which are part of the groundwater wells owned and operated by the City of Riverside. The right side of the photo depicts the view of the lumber facility from the west, with the ornamental trees and wooden structures clearly visible. In the background of the photo, although mostly obscured by smog, the San Bernardino Mountains are visible.

- Site Photo 3 (Figure 4.1-3): Site Photo 3 was taken from the Project site's southern tip facing north. The photo provides a closer look at the abandoned lumber facility that occupies the southern portion of the subject property. In the foreground on the left-hand side of the photo, a large wooden canopy structure is visible. The center of the photo depicts the bulk of the abandoned lumber mill and its associated development features (floodlights, utility poles, paving, etc.). The concrete structure that is surrounded by chain-link fence on the right-hand side of the photo is another water well that is owned and operated by the City of Riverside. This water well will not be disturbed by the

0 150 300 600 Feet

FIGURE 4.1-1
SITE PHOTO KEY MAP

EAST

WEST

SITE PHOTO 1: FROM NORTHERN MID-POINT OF PROJECT SITE LOOKING EAST TO WEST

NORTHWEST

SOUTHEAST

SITE PHOTO 2: FROM SOUTHWESTERN EDGE OF PROJECT SITE LOOKING NORTHWEST TO SOUTHEAST

NOT TO SCALE

FIGURE 4.1-2
SITE PHOTOS 1 & 2

NORTH-WEST

NORTH-EAST

SITE PHOTO 3: FROM SOUTHERN CORNER OF PROJECT SITE LOOKING NORTHWEST TO NORTHEAST

SOUTH-WEST

NORTH-EAST

SITE PHOTO 4: FROM EASTERN EDGE OF PROJECT SITE LOOKING SOUTHWEST TO NORTHEAST (OFF-SITE)

NOT TO SCALE

FIGURE 4.1-3
SITE PHOTOS 3 & 4

Project. There is sparse non-native vegetation on this portion of the site; the overgrown ornamental landscaping associated with the lumber mill can be seen in the mid-ground of this photo. The San Bernardino and the San Gabriel Mountains are faintly visible in the background of this photo.

- Site Photo 4 (Figure 4.1-3): Site Photo 4 was taken from the Project site's eastern boundary, at the approximate midpoint. The left-hand side of the photo looks along the site's southeastern boundary toward the southern tip of the Project site. The center of the photo looks west across the Project site. The right-hand side of the photo looks north, along the site's eastern boundary towards the site's northeast corner. In the foreground, evidence of on-going weed abatement activities on the site is clearly visible. In the mid-ground of the photo, to the right-hand side, off-site non-conforming residential structures are visible, located south of Orange Show Road. The San Bernardino and San Gabriel Mountains are visible in the background of the photo, but again are mostly obscured by smog.

The Project site does not produce any source of artificial light under existing conditions. The abandoned lumber mill has five (5) floodlights, but these artificial lights are not utilized because the lumber mill is no longer in operation. Artificial light sources occur in the Project vicinity, most notably along Orange Show Road and on privately owned residential and commercial/industrial properties surrounding the Project site (LaMar 2013).

The City of San Bernardino General Plan includes policies related to development along "Scenic Highways and Routes," (City of San Bernardino 2005a 6-7, 6-26). However, according to the California Department of Transportation (Caltrans) Scenic Highway Program (Caltrans "Eligible (E) and Officially Designated (OD) Routes") and as shown in Figure 4.1-4, *Scenic Highways and Routes*, the proposed Project site is not located within close proximity to any designated or eligible scenic highway or route.

4.1.2 BASIS FOR DETERMINING SIGNIFICANCE

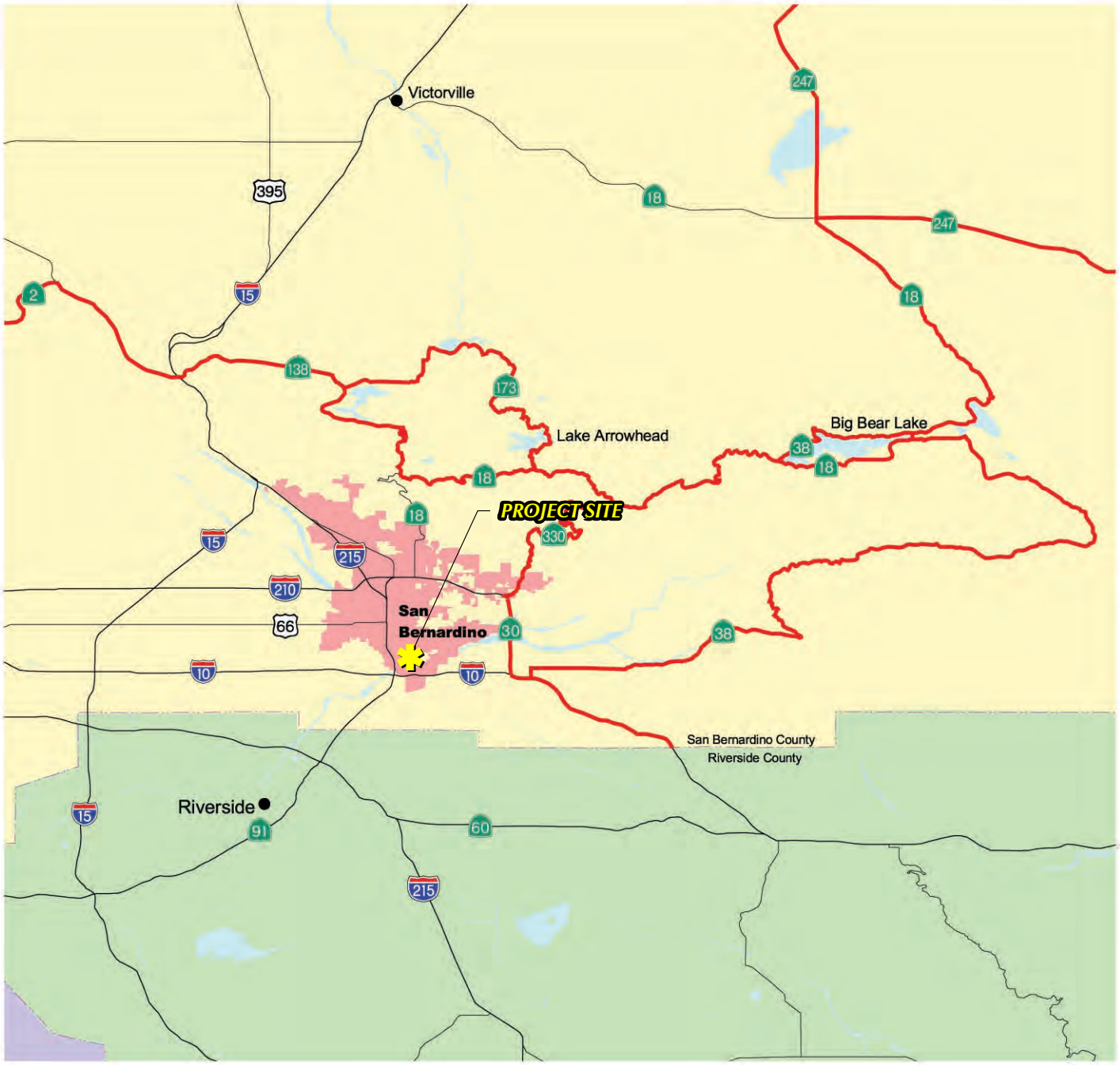
The proposed Project would result in a significant impact to aesthetics if the Project or any Project-related component would:

1. *Have a substantial adverse effect on a scenic vista;*

2. *Substantially damage scenic resources, included but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway;*

3. *Substantially degrade the existing visual character of the site and its surroundings;*

4. *Create a new source of substantial light or glare, which would adversely affect daytime or nighttime view of the area.*



Scenic Highways/Routes

Source: City of San Bernardino (11-01-05)

NOT TO SCALE

FIGURE 4.1-4
SCENIC HIGHWAYS AND ROUTES

4.1.3 IMPACT ANALYSIS

Threshold 1: 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 a flat parcel of land and does not contribute to a scenic vista under existing conditions. 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 12-22 – 23).

Scenic vistas within the City of San Bernardino are defined by the San Bernardino Mountains to the north and east, and Box Springs Mountain and Reche Canyon to the south. 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 poor air quality conditions (as shown on Figure 4.1-2 and Figure 4.1-3). On clear days when Reche Canyon, Box Springs Mountain, and/or the San Bernardino Mountains are visible, the proposed warehouse building – which would reach a height up to 42 feet above finished grade – would not block views from public viewing areas (i.e., public roads) because these landforms would still be visible beyond the building and along the horizon.

The southeastern boundary of the Project site is formed by the Santa Ana River, which is identified in the City of San Bernardino General Plan as having scenic qualities; however, the River's channel ranges between approximately seven (7) and 15 feet below the existing grade of the Project site and is not visible from public viewing areas along the Project site's frontage with Orange Show Road under existing conditions. Accordingly, implementation 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 proposed Project would have a less than significant effect on scenic vistas.

Threshold 2: Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The proposed 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. 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"). The nearest State-eligible scenic highway is State Route (SR) 38, which is located approximately 5.0 miles southeast of the Project site (Caltrans "Eligible (E) and Officially Designated (OD) Routes", Google Earth). The Project's proposed physical features (one industrial warehouse building with loading bays, screen walls, parking lots, truck yards, landscaping, etc.) would not be visible from Highway 38 due to intervening development and distance. Because the Project site is not visible from a state scenic highway and contains no scenic resources under existing conditions, the proposed Project would not adversely impact the viewshed 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 impact would occur, and no further analysis is required on this subject.

Threshold 3: Substantially degrade the existing visual character of the site and its surroundings?

❑ Construction-Related Activities

As described in Subsection 3.3.1 of the Project Description portion of this EIR, the proposed Project would be constructed in one phase, with five (5) different sub-phases consisting of: 1) site preparation, 2) site grading, 3) paving, 4) building construction, and 5) architectural coating. It is estimated that construction of the proposed industrial warehouse building would last approximately 280 days. 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 area's visual quality. 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 substantially visible to the surrounding area. 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. Project-related changes to local visual character would be less than significant during temporary, near-term construction activities.

❑ Project Buildout

At buildout of the proposed Project, views of the site from the surrounding area would change from that of a mostly vacant property containing remnants of an abandoned lumber mill to a redeveloped site containing a large distribution warehouse operation. As part of this Project and as more fully described in EIR Section 3.0, the Project would result in the construction and operation of one (1) 1,199,360 square foot industrial warehouse facility. The proposed building would consist of conventional concrete tilt-up construction. Example building elevations were previously depicted on Figure 3-8, *Conceptual Elevations.* In addition to a large industrial warehouse structure, the site also would contain surface parking areas and drive aisles, loading docks, screen walls (measuring up to 14 feet in height), fencing, landscaping elements, a water quality detention/basin, utility infrastructure, and other site improvements.

In order to determine if the proposed Project would substantially degrade the existing visual character or quality of the site and its surroundings, an analysis of the representative site photo locations was conducted. Refer also to the site plan (Figure 3-7), conceptual building elevations (Figure 3-8), and conceptual landscape plan (Figure 3-9) for illustrations of the Project's site design, architecture, and landscape plans.

- Site Photo 1 (Figure 4.1-2): Site Photo 1 was taken at the midpoint of the Project site's frontage with Orange Show Road and provides a 180-degree of the Project site, facing south. With buildout of the Project, the northern edge of the proposed warehouse building would be clearly visible, with a driveway into the site provided at the center of the view. Architectural enhancements would be provided along the northern edge of the building to break-up the wall plane. Loading docks would be provided along the entire northern edge of the proposed warehouse building; however, the loading docks would be screened from view by a 14-foot tall masonry wall. In front of the masonry screen wall

and adjacent to the existing sidewalk along Orange Show Road, landscaping would occur within a 20-foot wide area which would reduce the visual prominence of the screen wall. Landscaping, which would be visible in the foreground from this location, would include densely planted flowering, deciduous accent trees, and large canopied deciduous trees and evergreen coniferous trees. The canopies of these trees would overlap creating a single mass of tree canopies. The tree understory would be planted with a combination of shrubs and groundcover. Distant views of Box Springs Mountain/Reche Canyon may be partially obstructed from this segment of Orange Show Road due to close proximity to development and landscaping associated with the proposed warehouse building, but the view would not be completely obstructed.

- Site Photo 2 (Figure 4.1-2): Site Photo 2 was taken from the Project site's southwest border looking north. This vantage point would be partially visible from Waterman Avenue. The southwest corner of the proposed warehouse building would be visible from this location. In the foreground, an employee/visitor parking area would be visible, which would be enhanced with landscaping (groundcover, shrubs, and trees). To the left of the employee/visitor parking area, the water quality/detention basin would be visible. To the right of the employee/visitor parking area would be the southern edge of the building, which would contain a loading dock area, truck parking stalls, and drive aisles – all of these features would be screened from view by a 14-foot tall masonry screen wall painted to match the warehouse building's color palette.

- Site Photo 3 (Figure 4.1-3): Site Photo 3 depicts views from the southern tip of the Project site looking north. This view would not be available from any public viewing area. The southern elevation of the proposed warehouse building would be clearly visible from this location on the left-, central, and right-hand portions of the view. In the mid-ground would be loading docks, truck parking stalls, and drive aisles. Chain link fencing would separate the building's southerly loading area from the City of Riverside-owned parcel and the Santa Ana River. The City of Riverside water well located in the foreground of this photo on the left-hand side (concrete block building with red roof) would remain in its existing location and would not be disturbed by the Project. Distant views of the San Gabriel and San Bernardino Mountains would not be obstructed from this location.

- Site Photo 4 (Figure 4.1-3): Site Photo 4 depicts a view from the eastern property boundary looking west. This view would not be available from any public viewing area. With buildout of the Project, this location would afford a close-up view of the eastern building elevation. On the left-hand portion of Site Photo 4, the southeastern corner of the building and a drive aisle would be visible. A loading dock would be visible in the central portion of this viewpoint. Chain link fencing would run from the loading area to the southeastern corner of the warehouse building, which would allow views into the interior loading areas of the site. Between the fencing and the eastern boundary of the Project site, trees and shrubs would be planted that would obscure the fence. The northeastern corner of the proposed warehouse building would be visible on the right-hand side of Site Photo 4. This corner of the building would feature enhanced architectural treatments. An employee/visitor parking area would also be visible on the right-hand portion of this Photo. The parking area would be enhanced with landscaping

(groundcover, shrubs, and trees), and additional landscaping would be provided along the interface between the parking area and the eastern property boundary.

As indicated in the above descriptions, buildout of the proposed Project would change the existing visual character of the Project site from undeveloped land formerly occupied by a lumber mill to that of a redeveloped property consisting of a large warehouse building and associated improvements. Although the aesthetic changes would be substantial compared to existing conditions, the Project incorporates a number of features intended to soften the visual prominence of the building from public viewing areas. In addition to enhanced architectural treatments and use of landscaping, the Project also incorporates 14-foot tall walls to screen loading and docking bays from public views along Orange Show Road. The visual prominence of these screening walls would be reduced at public viewing areas through the installation of landscaping (trees, shrubs, and groundcover) in front of the walls. These visual features of the proposed development would help ensure a high-quality visual character for the site from public viewing areas. Therefore, based on the foregoing analysis, implementation of the proposed Project would not result in any significant adverse impacts to the visual character or quality of the Project site.

With respect to the visual character and quality of the surrounding area, the proposed Project would be visually compatible with the existing industrial/business park land uses located in the vicinity of the Project site and would be similar in character to the long-term vision for the area, as planned by the City of San Bernardino General Plan. Accordingly, implementation of the Project would not substantially degrade the existing visual character of the Project site's surroundings, and impacts would be less than significant.

Threshold 4: Create a new source of substantial light or glare, which would adversely affect daytime or nighttime view of the area?

The City of San Bernardino Development Code Section 19.20.030 includes the following standards for lighting, which apply to all development 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.*

The Project is designed to adhere to Development Code Section 19.20.030, and future implementing projects (i.e., building permits) would be required to demonstrate compliance with these standards. A lighting plan submitted to the City in association with the proposed Project indicates the use of Challenger light fixtures with cut-offs. Compliance with Development Code Section 19.20.030 would ensure that the proposed Project does not produce substantial amounts of light or glare that could result in off-site light spillage or affect nighttime views in the area.

With respect to daytime glare impacts that could result from reflective building materials, the proposed Project would involve the construction and operation of one industrial warehouse building.

The majority of the exterior building surfaces would consist of tilt-up concrete construction that does not include any properties that would produce substantial amounts of glare. At the northeast and northwest corners of the proposed warehouse building, enhanced architecture would be provided, including the use of blue-reflective glazed glass. While glazing has a potential to result in glare effects, such effects would not adversely affect the daytime views of any surrounding properties, including motorists along Orange Show Road because the glass would not be mirrored. Additionally, not only would areas proposed for glazing be limited to the corners of and main entrances to the buildings, but such glazing would be screened from public view by the screen walls and landscaping proposed along the Project's perimeter. Accordingly, a less-than-significant daytime glare impact would occur.

In conclusion, the proposed Project would not create a new source of substantial light or glare and would not adversely affect daytime or nighttime view of the area. Impacts would be less than significant.

4.1.4 CUMULATIVE IMPACT ANALYSIS

As noted under the discussion of Threshold 1, the Project site does not offer any prominent scenic vistas under existing conditions. Views of Box Springs Mountain, Reche Canyon, the San Gabriel Mountains, and the San Bernardino Mountains are available in the Project area, but such views are available throughout the City of San Bernardino. The Project site abuts the Santa Ana River, which is identified by the City of San Bernardino General Plan as a potential scenic resource; however, the elevation of the River channel at this location is below the existing grade of the Project site and is not visible from public viewing areas along Orange Show Road. With buildout of the proposed Project and other developments within the Project's viewshed there would be no significant adverse impact to any existing scenic vistas. This conclusion is consistent with the City of San Bernardino General Plan EIR, which found that revitalizing underutilized urban areas would improve the aesthetic quality of the City (City of San Bernardino 2005b 5.1-18). As previously noted, the proposed Project is consistent with the City's General Plan. Accordingly, a cumulatively significant adverse impact to scenic vistas would not occur with buildout of the proposed Project.

As noted under the analysis of Threshold 2, the Project site is not located within close proximity to any designated Scenic Routes and does not contain any scenic resources under existing conditions, including, but not limited to, trees, rock outcroppings, and historic buildings. Therefore, the proposed Project has no potential directly impact a scenic resource or to contribute to a cumulatively significant scenic resource impact.

With respect to the visual character of the site and surrounding area, under cumulative conditions the geographic area within the Project's viewshed would be fully built out in accordance with the City of San Bernardino General Plan and would be primarily characterized by light industrial and office park land uses. As with the proposed Project, other development projects would be subject to development regulations and design standards contained in the City's Development Code. Mandatory compliance with these standards would ensure consistency and quality standards regarding building materials and efficient land use to minimize the potential for any adverse effects. The warehouse building that would be constructed as part of the Project would display aesthetically pleasing qualities as detailed in Section 3.0, *Project Description*. As such, the Project would not considerably contribute to an

adverse cumulative impact to the existing visual character or quality of the Project site or its surroundings.

With respect to potential cumulative light and glare impacts, City of San Bernardino Development Code Section 19.20.030 sets standards for development to ensure minimal impact upon surrounding development relating to light pollution and glare. Although the proposed Project would create artificial lighting on the Project site, the required compliance with the Development Code would minimize impacts to less-than-significant levels. All development within the City of San Bernardino is required to comply with these standards; therefore the Project's contribution to cumulative lighting impacts is determined to be less than significant.

4.1.5 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold 1: 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; therefore, impacts to scenic vistas would be less than significant.

Threshold 2: No Impact. The Project has no potential to damage scenic resources within a scenic highway corridor. The Project site is not located within the viewshed of a scenic highway and the Project site does not contain any scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings. Accordingly, a significant impact to scenic resources within a state scenic highway has no potential to occur.

Threshold 3: Less-than-Significant Impact. The Project would not substantially degrade the existing visual character or quality of the site or its surrounding areas during Project construction or operation. Although the proposed Project would result in a change to the existing visual character of the site (i.e., from a former lumber mill property to a light industrial warehouse building), 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 view. Impacts would be less than significant.

Threshold 4: Less-than-Significant Impact. The Project would not create substantial light or glare. Compliance with City of San Bernardino requirements for artificial lighting would ensure less-than-significant impacts associated with light and glare affecting day or nighttime views in the area.

4.1.6 MITIGATION

Impacts would be less than significant; therefore, mitigation measures are not required.

4.2 AIR QUALITY

This subsection is based on two technical studies that were prepared by Urban Crossroads, Inc. to evaluate the Project's potential to adversely affect local and regional air quality. These studies include the following: 1) "Alliance Gateway South Building 3 Air Quality Analysis," dated September 25, 2013, which is included as *Technical Appendix B1* to this EIR (Urban Crossroads 2013a); and 2) "Alliance Gateway South Building 3 Mobile Source Health Risk Assessment," dated September 25, 2013, which is included as *Technical Appendix B2* to this EIR (Urban Crossroads 2013).

4.2.1 EXISTING CONDITIONS

A. Atmospheric Setting

The Project site is located in the South Coast Air Basin (SCAB, or "Basin") which is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAB encompasses approximately 6,745 square miles and includes Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The SCAB is bound by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, respectively; and the San Diego County line to the south (Urban Crossroads 2013a 7).

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 distinctive climate of the SCAB is determined by its terrain and geographical location, which comprises a coastal plain connected to broad valleys and low hills and surrounded by the Pacific Ocean and high mountains. The annual average temperatures throughout the SCAB vary from the low to middle 60s, measured in degrees Fahrenheit (F). Inland areas in the SCAB, like where the Project site is located, show more variability in annual minimum and maximum temperatures than coastal areas within the SCAB due to a decreased marine influence (Urban Crossroads 2013a 7-9).

The climate of the SCAB is characterized as semi-arid; 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 SCAB climate. Humidity restricts visibility in the SCAB and the relative high humidity also 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. The annual average relative humidity within the SCAB is 71% along the coast and 59% inland (Urban Crossroads 2013a 8).

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution, as the direction and speed of wind patterns determines the horizontal dispersion and transport of the air pollutants. 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 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. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the "Catalina Eddy," a low level cyclonic (counter-clockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections. In the Project area, the prevailing winds move predominately from the northwest to the southeast and southeast to northwest (Urban Crossroads 2013a 9)

In the SCAB, there are two distinct temperature inversion structures that control 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 (Urban Crossroads 2013a 8).

A second inversion-type forms in conjunction with the drainage of cool air off 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 from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline (Urban Crossroads 2013a 8).

C. Air Quality Pollutants and Associated Health Effects

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.

- 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 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 in the SCAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections (Urban Crossroads 2013a 15).

  CO combines with hemoglobin to produce carboxyhemoglobin (COHb), which interferes with the transport of oxygen throughout the body. The most common symptoms associated with CO poisoning include headache, nausea, vomiting, dizziness, fatigue, and weakness. Exposure to CO can also result in chest pain. 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 (Urban Crossroads 2013a 18).

- Sulfur Dioxide (SO_2) is a colorless, extremely irritating gas or liquid. It 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) (Urban Crossroads 2013a 16).

  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, resistance to air flow, 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 (Urban Crossroads 2013a 19).

- 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). Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. Nitrogen oxides are typically created during combustion processes, and are major contributors to smog formation and acid deposition. NO_2 absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. 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 may be exposed to higher concentrations of NO_2 than those indicated by regional monitoring stations (Urban Crossroads 2013a 16).

  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_X. Short-term exposure to NO_X can result in resistance to air flow and airway contraction in healthy subjects. Exposure to NO_X can result in larger decreases in lung functions in individuals with asthma or chronic obstructive pulmonary diseases (e.g., chronic bronchitis, emphysema), as these individual are more susceptible to the effects of NO_X than healthy individuals (Urban Crossroads 2013a 18-19).

- 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 (Urban Crossroads 2013a 16).

  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 preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for ozone effects. An increased risk for asthma has been found in children who participate in multiple sports and live in communities with high ozone levels (Urban Crossroads 2013a 17).

- Particulate Matter is a major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. Particles less than 10 microns or smaller (PM_{10}) easily become airborne and can reduce visibility. Particles less than 2.5 microns or smaller ($PM_{2.5}$) are formed in the atmosphere by sulfates or nitrates, a byproduct of primary gaseous emissions of SO_2 and NO_X (Urban Crossroads 2013a 18-19).

  Elevated ambient concentrations of fine particulate matter (PM_{10} and $PM_{2.5}$) have been linked to respiratory infections, number and severity of asthma attacks, and increased hospital admissions. In recent years, 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 more susceptible to the effects of high levels of PM_{10} and $PM_{2.5}$ (Urban Crossroads 2013a 17).

- Volatile Organic Compounds (VOCs) and Reactive Organic Gasses (ROGs) are 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. 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 (Urban Crossroads 2013a 16-17).

  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 (Urban Crossroads 2013a 17).

- 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, there have been no violations at any of the SCAQMD's regular air monitoring stations since 1982. Currently, emissions of lead are largely limited to stationary sources such as lead smelters (Urban Crossroads 2013a 17.

  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 (Urban Crossroads 2013a 18).

D. Existing Air Quality

The quality of the air is measured based upon ambient air quality standards. 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. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect, as well health effects of each pollutant regulated under these standards are detailed in Table 4.2-1, *Ambient Air Quality Standards*, and in *Technical Appendix B1*, pages 9-20.

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), inhalable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) are not equaled or exceeded at any time in any consecutive three-year period; and the federal standards (other than O_3, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not exceeded more than once per year. The ozone (O3) standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when 99% of the daily concentrations, averaged over three years, are equal to or less than the standard (Urban Crossroads 2013a 9).

Air quality in the SCAB has dramatically improved over the past 30 years. The CARB's recent *Almanac of Emissions and Air Quality* (CARB 2009, Chapter 3) indicates that NOx and reactive organic gas (ROG) emissions trends and forecasts are trending downward, showing an overall improvement in air quality. Continued improvement in air quality is expected to occur through the continued implementation of federal, state, and SCAQMD regulations such as California's low carbon fuel (Pavley) and low sulfur diesel fuel programs and renewable electricity standards.

California AB 1493, enacted on July 22, 2002 (Pavley), required the CARB to develop and adopt regulations that reduce passenger vehicle and light duty truck emissions. Although the regulation was stalled by automaker lawsuits and by the U.S. EPA's denial of an implementation waiver to the state of California, in June 2009, the U.S. EPA granted the waiver request. The standards phase in during the 2009 through 2016 vehicle model years. When fully phased in, the near term (2009-2012) standards are projected to result in about a 22-percent reduction of greenhouse gas emissions compared with the 2002 fleet, and the mid-term (2013-2016) standards will result in about a 30-percent reduction. Executive Order S-01-07 (2007) directed the establishment of a Low Carbon Fuel Standard, and CARB adopted the Low Carbon Fuel Standard on April 23, 2009. The standard reduces the carbon intensity of California's transportation fuels by at least 10 percent by 2020. Although there have been legal challenges to this standard, it has been upheld to-date, allowing the CARB to continue to implement and enforce the regulation. Regarding renewable electricity standards, Executive Order S-21-09 (2009) requires the state's load serving entities to meet a 33 percent renewable energy target by 2020. The CARB Board approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23.

SCAQMD's *Fiscal Year 2012-2103 Budget & Work Program* (herein incorporated by reference and available for review at the location cited in Section 7.0, *References*, (SCAQMD, 2013 2)) states that although the SCAB has suffered unhealthful air since World War II and is one of the most

Table 4.2-1 Ambient Air Quality Standards

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)	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)		0.075 ppm (147 µg/m^3)		
Respirable Particulate Matter (PM10)	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)	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	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)[8]	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/m3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[9]	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)[9]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[9]	—	
Lead[10,11]	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)[11]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[12]	8 Hour	See footnote 12	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[10]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes in Technical Appendix B1, Table 2-1.
Source: Urban Crossroads 2013a, Table 2-1.

unhealthful air basins in the United States, the 65-year history of the region's air pollution control efforts is, in many ways, one of the world's key success stories. Peak ozone levels have been cut by almost three-fourths since air monitoring began in the 1950 and population exposure was cut in half during the 1980s alone (SCAQMD, 2013 2). Thus, overall air quality within the SCAB is dramatically improving as the result of regulatory programs and is expected to continue to improve in the future as regulations become more stringent. As stated in AQMD's *Fiscal Year 2012-2013 Budget and Work Program*:

> "Ozone levels have fallen by about three-quarters since peaks in the mid-1950s. Lead, nitrogen dioxide, sulfur dioxide, and carbon monoxide levels have gone down from nonattainment to full attainment of federal health standards. In November 2008, US EPA revised the lead standard from a 1.5 µg/m3 quarterly average to a 0.15 µg/m3 rolling 3-month average. The current Basin lead network remains below the new standard…. In 2011, the Basin exceeded the current federal 8-hour ozone standard on 107 days. 2010 was the cleanest year on record for ozone in the Basin, exceeding the federal standard on 102 days. The standard was exceeded on 113 days in 2009.
>
> In 2007 US EPA formally redesignated the Basin from nonattainment to full attainment of the federal health standard for carbon monoxide. Basin-wide maximum levels of carbon monoxide have been consistently measured at more than 30% below the federal standard since 2004. In 2010, US EPA established a new NO2 1-hour standard at a level of 100 ppb (0.100ppm) and SO_2 1-hour standard at a level of 75 ppb (0.075 ppm). In 2011, a few sites in Los Angeles County exceeded the new 1-hour NO_2 standard on one day. Based on the 3-year design values, the region continues to remain in attainment of the NO_2 and SO_2 standards.
>
> In 2006, US EPA rescinded the annual federal standard for PM10 but retained the 24-hour standard. Ambient levels of PM_{10} in the Basin meet the federal 24-hour PM_{10} standard and the AQMD has requested US EPA to redesignate the Basin as in attainment of the health based standard for PM_{10}. $PM_{2.5}$ levels have decreased dramatically in the Basin since the beginning of the decade; however, regional concentrations continue to exceed the federal annual and 24-hour standards." (SCAQMD, 2013, pages 3-4).

As air quality relates to human health, the SCAQMD conducted an in-depth analysis of the toxic air contaminants (TACs) and their resulting health risks for all of Southern California. This study, titled "Multiple Air Toxics Exposure Study in the South Coast Air Basin, MATES III," shows that the average excess cancer risk level from exposure to TACs is approximately 1,200 in one million basin-wide (SCAQMD, 2008). These model estimates were based on monitoring data collected at ten fixed sites within the SCAB. None of the fixed monitoring sites are within the local area of the Project site. However, MATES-III has extrapolated the excess cancer risk levels throughout the Air Basin by modeling the specific grids. MATES-III modeling predicted an excess cancer risk of 1,318 in one million for the Project area (SCAQMD 2008, MATES III Carcinogenic Interactive Map). MATES-III estimates that diesel particulate matter (DPM) accounts for 83.6% of the total risk shown in MATES-III. DPM is generated by the burning of diesel fuel.

❑ Regional Air Quality

The SCAQMD monitors levels of various criteria air pollutants at 40 permanent monitoring stations throughout its jurisdiction. In 2012, the most recent year for which detailed data is available, the federal and state standards for O_3, PM_{10}, and $PM_{2.5}$ were exceeded on at least one day at most monitoring locations within the SCAB. Measured levels of SO_2, CO, sulfates and lead within the SCAB did not exceed Federal and state standards in 2012 (Urban Crossroads 2013a 13). The attainment status for criteria pollutants within the SCAB is summarized on Table 4.2-2, *Attainment Status of Criteria Air Pollutants in the South Coast Air Basin (SCAB)*.

Table 4.2-2 Attainment Status of Criteria Pollutants in the South Coast Air Basin (SCAB)

CRITERIA POLLUTANT	STATE DESIGNATION	FEDERAL DESIGNATION
Ozone - 1hour standard	Nonattainment	No Standard
Ozone - 8 hour standard	Nonattainment	Extreme Nonattainment[1]
PM_{10}	Nonattainment	Serious Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment
Carbon Monoxide	Attainment	Attainment/Maintenance
Nitrogen Dioxide	Nonattainment[2]	Attainment/Maintenance
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment/Nonattainment[3]	Attainment/Nonattainment[4]
All others	Attainment/Unclassified	Attainment/Unclassified

1. The USEPA approved re-designation from Severe 17 to Extreme Nonattainment on May 5, 2010 to be effective June 4, 2010.
2. The SCAB was reclassified from attainment to nonattainment for nitrogen dioxide on March 25, 2010.
3. Los Angeles County portion of the SCAB was reclassified from attainment to nonattainment for lead on March 25, 2010; the remainder of the SCAB is in attainment of the State Standard.
4. The Los Angeles County portion of the SCAB is classified as nonattainment; the remainder of the SCAB is in attainment of the State Standard.

Source: Urban Crossroads 2013a, Table 2-2.

❑ Local Air Quality

The nearest long-term air quality monitoring station to the Project site for O_3, PM_{10}, CO, NO_2, and $PM_{2.5}$ is the San Bernardino 2 monitoring station, located approximately 1.96 miles north of the Project site in San Bernardino. (Urban Crossroads 2013a 13). Table 4.2-3, *Project Area Air Quality Monitoring Summary*, provides a summary of ambient air quality conditions in the general vicinity of the Project site over the most recent three (3)-year period for which air quality data is available (i.e., 2010-2012).

❑ Air Quality Conditions at Project Site

The Project site is vacant under existing conditions except for remnants of an abandoned lumber mill and, therefore, does not generate quantifiable air emissions. Maintenance activities at the Project site (i.e., disking) may generate temporary fugitive dust emissions (PM_{10} and $PM_{2.5}$); however, because detailed information is not available and given the infrequent and intermittent nature of site maintenance activities, temporary fugitive dust emissions that may be generated during site maintenance activities cannot be accurately calculated and would be speculative in nature. Absent additional information, existing air quality conditions at the Project site would likely be similar to local ambient conditions presented in Table 4.2-3.

Table 4.2-3 Project Area Air Quality Monitoring Summary

POLLUTANT	STANDARD	YEAR		
		2010	2011	2012
Ozone (O_3)[a]				
Maximum 1-Hour Concentration (ppm)	--	0.129	0.135	0.124
Maximum 8-Hour Concentration (ppm)	--	0.105	0.121	0.109
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	27	40	41
Number of Days Exceeding State 8-Hour Standard	> 0.07 ppm	63	66	77
Number of Days Exceeding Federal 1-Hour Standard	> 0.12 ppm	1	2	0
Number of Days Exceeding Federal 8-Hour Standard	> 0.075 ppm	40	77	54
Number of Days Exceeding Health Advisory	≥ 0.15 ppm	0	0	0
Carbon Monoxide (CO)[b]				
Maximum 1-Hour Concentration (ppm)	--	2	2.3	3.1
Maximum 8-Hour Concentration (ppm)	--	1.7	1.7	1.7
Number of Days Exceeding State 1-Hour Standard	> 20 ppm	0	0	0
Number of Days Exceeding Federal / State 8-Hour Standard	> 9.0 ppm	0	0	0
Number of Days Exceeding Federal 1-Hour Standard	> 35 ppm	0	0	0
Nitrogen Dioxide (NO_2)[b,c]				
Maximum 1-Hour Concentration (ppm)	--	0.0692	0.0619	0.067
Annual Arithmetic Mean Concentration (ppm)	--	0.0.0188	0.0169	--
Number of Days Exceeding State 1-Hour Standard	> 0.18[c] ppm	0	0	0
Inhalable Particulates (PM_{10})[a]				
Maximum 24-Hour Concentration (μg/m^3)	--	63	56	53
Number of Samples	--	59	58	55
Number of Samples Exceeding State Standard	> 50 μg/m^3	3	3	--
Number of Samples Exceeding Federal Standard	> 150 μg/m^3	0	0	0
Ultra-Fine Particulates ($PM_{2.5}$)[b]				
Maximum 24-Hour Concentration (μg/m^3)	--	39.3	65.0	34.8
Annual Arithmetic Mean (μg/m^3)	--	11.1	12.2	11.8
Number of Samples Exceeding Federal 24-Hour Standard	> 35[d] μg/m^3	2	2	0

Source: Urban Crossroads 2013a, Table 2-3.

E. Applicable Environmental Regulations

The following is a brief description of the federal, state, and local environmental laws and related regulations governing air quality emissions.

❑ Federal Regulations

The U.S. Environmental Protection Agency (EPA) is responsible for setting and enforcing the NAAQS for O_3, CO, NO_X, SO_2, PM_{10}, and lead. The U.S. 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 U.S. 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.

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years. The CAA establishes the federal air quality standards, the National Ambient Air Quality Standards (NAAQS), and specifies future dates for achieving compliance. The 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.

The 1990 amendments to the CAA, that identify specific emission reduction goals for areas not meeting the NAAQS, require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the 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: O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and lead. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. Table 4.2-1 provides the NAAQS within the SCAB.

Mobile source emissions are regulated in accordance with 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.

❑ California Regulations

The California Air Resources Board (CARB), which became part of the California EPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (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 ambient air quality standards by the earliest practical date. The CARB established the California Ambient Air Quality Standards (CAAQS) for all pollutants for which the federal government has NAAQS and, in addition, established standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. However at this time, 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.

All air pollution control districts have been formally designated as being in attainment or non-attainment for each CAAQS (refer to Table 4.2-2). 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. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than 5% per year under certain circumstances.

❑ Air Quality Management Planning

Currently, 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 Clean Air Act, the SCAQMD has adopted an Air Quality Management Plan (AQMP) to plan for the regional improvement of 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 most recent AQMP was adopted by the AQMD Governing Board on December 7, 2012. The 2012 AQMP incorporates the latest scientific and technological information and planning assumptions, including the 2012 Regional Transportation Plan/Sustainable Communities Strategy and updated emission inventory methodologies for various source categories. The 2012 AQMP was based on assumptions provided by both CARB and SCAG in the latest available EMFAC model for the most recent motor vehicle and demographics information, respectively. The air quality levels projected in the 2012 AQMP are based on several assumptions. For example, the 2012 AQMP has assumed that development associated with general plans, specific plans, residential projects, and wastewater facilities will be constructed in accordance with population growth projections identified by SCAG in its 2012 RTP. The 2012 AQMP also has assumed that such development projects will implement strategies to reduce emissions generated during the construction and operational phases of development.

4.2.2 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:

1. *Conflict with or obstruct implementation of the applicable air quality plan;*

2. *Violate any air quality standard or contribute substantially to an existing or projected air quality violation;*

3. *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 which exceed quantitative thresholds for ozone precursors);*

4. *Expose sensitive receptors to substantial pollutant concentrations; or*

5. *Create objectionable odors affecting a substantial number of people.*

Within the context of the above threshold considerations, emissions generated by a development project would be significant under Thresholds 2 and 3 if they exceeded the regional thresholds established by the SCAQMD for criteria pollutants and would be significant pursuant to Threshold 4 if they exceeded the localized thresholds established by the State of California and the SCAQMD for criteria pollutants. The criteria applicable to the proposed Project are summarized in Table 4.2-4, *Regional and Localized Thresholds for Criteria Pollutants*. Pursuant to SCAQMD guidance, any project in the SCAB with daily emissions that would exceed any of the thresholds summarized in Table 4.2-4 would be considered as having a significant impact to air quality on both a direct (individual) and cumulative basis (Urban Crossroads 2013a 23-24).

In addition, pursuant to the thresholds established by the SCAQMD, any project that would emit toxic air contaminants, like diesel particulate matter (DPM), and expose receptor populations to an incremental cancer risk of greater than 10 in one million is considered to have a significant impact to air quality under Threshold 4 (Urban Crossroads 2013b 6).

Table 4.2-4 Regional and Localized Thresholds for Criteria Pollutants

POLLUTANT	CONSTRUCTION	OPERATIONAL
Maximum Daily Emissions (Regional Thresholds)		
NO_X	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
SO_X	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Ambient Air Quality for Criteria Pollutants (Localized Thresholds)		
NO_2 (1-hour average)	0.18 ppm	0.18 ppm
PM_{10} (24-hour average)	10.40 µg/m^3	2.50 µg/m^3
$PM_{2.5}$ (24-hour average)	10.40 µg/m^3	2.50 µg/m^3
CO (1-hour average)	20 ppm	20 ppm
CO (8-hour average)	9 ppm	9 ppm

NOTE: ppm = parts per million; µg/m3 = micrograms per cubic meter.
Source: Urban Crossroads 2013a, Table 3-1.

The AQMD published a report giving direction on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (AQMD 2003). In this report the AQMD states on page D-3:

> "…the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.
>
> Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."

Given this direction from the SCAQMD, the proposed Project evaluated in this EIR would result in a significant direct and cumulative impact associated with carcinogenic risk if it increased risk by more than 10 persons per million people.

The SCAQMD has also established non-carcinogenic risk parameters. Non-carcinogenic risks are quantified by calculating a "hazard index," expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). An REL is a concentration at or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse health effects are not expected. Thus, non-carcinogenic exposures of less than 1.0 are considered less-than-significant in this EIR.

4.2.3 IMPACT ANALYSIS

Threshold 1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?

The 2012 SCAQMD AQMP, which is the applicable air quality plan for the Project area, projects long-term air quality conditions for the SCAB. The air quality conditions presented in the 2012 AQMP are based in part on the growth forecasts that were used as inputs for the regional transportation model. The growth forecasts utilized in the 2012 AQMP are based on the growth projections identified by Southern California Association of Governments (SCAG) in its 2012 Regional Transportation Plan (RTP). The RTP assumed that development in the various incorporated and unincorporated areas within the SCAB would occur in accordance with the adopted general plans for these areas. In addition, the air quality conditions presented in the 2012 AQMP are based on the assumption that future development projects would implement strategies to reduce emissions generated during the construction and operational phases of development. Accordingly, if a proposed project is consistent with these growth forecasts, and if available emissions reduction strategies are implemented as effectively as possible on a project-specific basis, then the project would be considered to be consistent with the AQMP. (Urban Crossroads 2013a 41)

The SCAQMD has established criteria for determining consistency with the AQMP. These criteria are defined in Chapter 12, Sections 12.2 and 12.3 of the SCAQMD 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 CAAQS and NAAQS. As evaluated under Threshold 4 (below), the Project would not exceed localized significance thresholds for any criteria pollutant during construction (after mitigation) or during long-term operation. Accordingly, localized emissions would not contribute substantially to an existing or potential future violation or delay the attainment of air quality standards.

As discussed under Thresholds 2 and 3 (below), the Project is anticipated to exceed regional threshold criteria for NO_X during short-term construction activities and long-term operational activities. The Project's long-term emissions of VOCs also are projected to exceed regional threshold criteria. However, the proposed Project would be consistent with the adopted land use designations for the subject property as applied by the City of San Bernardino General Plan and Zoning Ordinance. Therefore, the Project is evaluated as being consistent with the growth forecast

utilized in the 2012 AQMP and the emissions that would be generated by the Project are assumed to be accounted for in the AQMP. Thus, the Project's regional emissions would not contribute substantially to an existing or potential future violation or delay the attainment of air quality standards.

- ***Consistency Criterion No. 2:*** *The proposed project will not exceed the assumptions in the AQMP in 2011 or increments based on the years of project buildout phase.*

The growth forecasts used in the AQMP to project future emissions levels are based in part on land use data provided by lead agency general plan documentation. Projects that propose to increase the intensity of use on a subject property may result in higher traffic volumes than accounted for in the applicable local general plan, thereby resulting in increased stationary area source emissions and/or vehicle source emissions when compared to the AQMP assumptions. If however, 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.

The prevailing planning document for the proposed Project site is the City of San Bernardino General Plan. The City of San Bernardino General Plan Land Use Map designates the Project site for Industrial Light (IL) land use. The proposed Project would be consistent with the General Plan land use designation for the subject property. As such, the proposed Project would not exceed the assumptions of the AQMP. The Project is consistent with the AQMP and no impact due to inconsistency with the AQMP would occur.

Threshold 2:	***Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?***
Threshold 3:	***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 which exceed quantitative thresholds for ozone precursors)?***

On July 26, 2013, the SCAQMD released the California Emissions Estimator Model (CalEEMod™). The purpose of this model is to estimate construction-source and operational-source air quality emissions for criteria pollutants from direct and indirect sources and quantify applicable air quality pollutant reductions achieved from mitigation measures. As such, the July 2013 CalEEMod™ was used for estimating Project-related emissions of criteria pollutants NO_X, VOC, PM_{10}, $PM_{2.5}$, SO_X, and CO, associated with construction and operational activities proposed by the Project.

❑ Construction Emissions

Information about the Project's anticipated construction schedule and equipment as supplied by the Project Applicant was input into the CalEEMod™ model and defaults for all other assumptions were utilized. Refer to Appendix BA of *Technical Appendix B1* to this EIR for model outputs. A detailed summary of construction equipment assumptions by phase that were used as model inputs is provided on Table 4.2-5, *Construction Equipment Assumptions*.

Table 4.2-5 Construction Equipment Assumptions

OPERATION	SCRAPER	GRADER	RUBBER TIRED DOZER	TRACTOR/LOADER/BACKHOE	EXCAVATOR	PAVERS	PAVING EQUIPMENT	ROLLERS	FORKLIFT	CRANES	AIR COMPRESSOR	GENERATOR SET	WELDER	WATER TRUCK
Site Preparation	3	1	2	4										2
Grading	6	2	2	2	2									2
Paving						2	2	2						1
Building Construction									5	2		2	2	1
Architectural Coating											2			

Source: Urban Crossroads 2013a, Table 3-3.

For purposes of analysis, it is assumed that construction of the Project would occur in Year 2015. In the event that construction activities occur at a later date, emissions associated with construction vehicle exhaust would be less than disclosed in this subsection as the analysis year increases due to implementation of mandatory regulatory requirements and vehicle fleet turnover contained in the model. The estimated maximum daily construction emissions associated with Project construction are presented in Table 4.2-6, *Construction-Related Emissions Summary (Pounds per Day)*. Detailed construction-related emissions model outputs are presented in Appendix A of the Air Quality Impact Analysis (*Technical Appendix B1* to this EIR).

Table 4.2-6 Emissions Summary of Overall Construction Without Mitigation in Pounds per Day

YEAR	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	**103.59**	**171.28**	**108.08**	**0.18**	**24.14**	**13.68**
SCAQMD Regional Threshold	75	100	550	150	150	55
Significant?	**YES**	**YES**	**NO**	**NO**	**NO**	**NO**

Source: Urban Crossroads 2013a, Table 3-4.

As shown, construction activities associated with the Project would exceed the SCAQMD regional criteria pollutant threshold for emissions of NO_X during construction. In addition, the SCAB does not attain state criteria for NO_X concentrations, as previously presented in Table 4.2-2. In addition, NO_X is a precursor for ozone, and the SCAB is identified as a federal and state non-attainment area for ozone (see Table 4.2-2). Accordingly, the Project's emissions of NO_X 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 non-attainment (NO_X and O_3). This impact is significant on a direct and cumulative basis and mitigation would be required.

To further reduce the Project's construction-related effects to air quality, the Project is required to comply with the provisions of SCAQMD Rule 403, "Fugitive Dust." Rule 403 requires implementation of best available dust control measures during construction activities that generate fugitive dust, such as earth moving activities, grading, and equipment travel on unpaved roads.

Additionally, the Project is required to comply with the provisions of SCAQMD Rule 1113, "Architectural Coatings," Rule 1186, "PM_{10} Emissions from Paved and Unpaved Roads, and Livestock Operations, " and Rule 1186.1, "Less-Polluting Street Sweepers."

❑ Operational Emissions

A. Analysis Methodology

Operational emissions associated with the proposed Project would be expected from vehicles, combustion emissions associated with use of natural gas and electricity, fugitive dust related to vehicular travel, use of landscape maintenance equipment, and architectural coatings (painting). The following analysis methodology was used to assess each of these activities.

- *Vehicles*

Trip characteristics available from the Project's traffic report contained as *Technical Appendix I1* to this EIR were utilized in the analysis. It should be noted that the Project's traffic study presents the total Project vehicle trips in terms of Passenger Car Equivalents (PCEs) in an effort to recognize and acknowledge the effects of heavy vehicles at the study area intersections. The PCE trips were not used for the purposes of quantifying air emissions; rather, to be more representative of actual emissions, the actual number of passenger cars (including light trucks) and heavy trucks were used in the analysis. The vehicle fleet mix, in terms of actual vehicles, as derived from the traffic study for the Project is comprised of approximately 79.57% passenger cars (1,603 vehicles) and approximately 20.43% total trucks (411 vehicles) (Urban Crossroads 2013a 27-28).

A technical deficiency inherent in calculating the projected mobile source vehicle emissions associated with any project is related to the estimation of trip length and vehicle miles traveled (VMT). VMT for a given project is calculated by the total number of vehicle trips a project would generate multiplied by average trip length. This method of estimating VMT for use in calculating vehicle emissions likely results in the over-estimation and double-counting of emissions because for a distribution warehouse business center such as the proposed Project, the land use is likely to attract (divert) existing vehicle trips that are already on the circulation system as opposed to generating new trips. As such, the proposed Project would merely redistribute existing mobile emissions. Accordingly, the use of models that measure overall emissions can overstate emission levels without acknowledging that some level of emissions associated with a project under study would still occur in the region regardless of whether the project is built. As such, criteria pollutant emissions associated with the proposed Project and disclosed herein assumes a VMT value that very likely overestimates the actual impact of the Project (Urban Crossroads 2013a 29).

SCAG maintains a regional transportation model. In its most recent (2008) transportation validation for the 2003 Regional Model, SCAG indicates the average internal truck trip length for the SCAG region (which includes the proposed Project site) is 5.92 miles for Light Duty Trucks, 13.06 miles for Medium Duty Trucks, and 24.11 miles for Heavy Duty Trucks (Urban Crossroads 2013c 35). For analysis of the proposed Project, for passenger car trips, a one-way trip length of 13.3 miles based on CalEEMod™ model defaults is used, which relies on data provided by SCAG for trip length. For heavy duty trucks, an average trip length was derived from distances from the Project site to the far edges of the South Coast Air Basin (SCAB) based on the Project's traffic pattern shown in *Technical Appendix I1*. It is appropriate to stop the VMT calculation at the boundary of the SCAB because any

activity beyond that boundary would be speculative at best (the SCAB encompasses 6,745 square miles) and because the selected approach is consistent with professional industry practice. Further, the applicable regional emissions thresholds are relative to the air basin in which emissions occur – in other words, there are different emission thresholds for different air basins and it would be speculative to analyze trips outside of the SCAB because the ultimate destinations of those trips are unknown and different thresholds would apply in other air basins. (Urban Crossroads 2013c 36).

- Project site to the Port of Los Angeles/Long Beach: 74 miles;
- Project site to Rail Yard: 5 miles; and
- Project site to I-10 East to the end of the SCAB: 40 miles.

Assuming that 55% of all delivery trips will travel to and from the Project and the Port of Los Angeles/Long Beach, and the remainder as distribution trips to all other locations, the average truck trip length is calculated as 55.19 miles. For analysis purposes, as a conservative measure, the average truck trip length was rounded to 60 miles. An overall weighted-average trip length for the Project was calculated using the percentage of trips associated with passenger cars (including light duty trucks) versus heavy trucks, the passenger car trip length of 13.3 miles and truck trip length of 60 miles was utilized. The resulting weighted average trip length of 22.84 miles was entered into the CalEEMod™ model calculations (Urban Crossroads 2013a 30-31).

Vehicles traveling on paved roads would be a source of PM_{10} and $PM_{2.5}$ emissions due to the generation of road dust, break/tire-wear particulates, and road-wear particulates. The emissions estimates for travel on paved roads were calculated using the CalEEMod™ model (Urban Crossroads 2013a 31).

- *Combustion*

Electricity and natural gas are used by almost every operational development project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from offsite generation of electricity is generally excluded from the evaluation of significance and only natural gas use is considered. The emissions associated with natural gas use were calculated using the CalEEMod™ model. (Urban Crossroads 2013a 31)

- *Landscape Maintenance Equipment*

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in the CalEEMod™ model. (Urban Crossroads 2013a 31-32)

- *Architectural Coatings*

Over a period of time the buildings that are part of this Project will be subject to emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings as

part of Project maintenance. The emissions associated with architectural coatings were calculated using the CalEEMod™ model. (Urban Crossroads 2013a 32)

B. Operational Analysis

Project-related operational emissions are summarized in Table 4.2-7 *Operational Emissions Summary (Pounds per Day)*. Detailed emissions model outputs are presented in Appendix A of the Air Quality Impact Analysis (*Technical Appendix B1* to this EIR). As presented in Table 4.2-7, long-term emissions associated with operation of the Project would violate the SCAQMD regional criteria for VOCs and NO_X. Furthermore, the SCAB is a designated non-attainment area for NO_X concentrations and for O_3 concentrations (NO_X is a precursor for O_3) as described above. Accordingly, the Project's long-term emissions of NO_X would result in a considerable net increase of a criteria pollutant for which the Project region is in non-attainment (i.e. NO_X and O_3). These impacts are significant on a direct and cumulative basis and mitigation would be required.

Table 4.2-7 Operational Emissions Summary (Pounds per Day)

OPERATIONAL ACTIVITIES	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Peak Operational Emissions (Summer)						
Area Source Emissions	26.18	1.23e-3	0.13	1.00e-5	4.60e-4	4.6e-4
Energy Source Emissions	0.08	0.69	0.58	4.14e-5	0.05	0.05
Mobile Emissions	45.87	113.11	189.92	0.54	35.63	10.87
Maximum Daily Emissions	**72.13**	**113.8**	**190.62**	**1.55**	**35.68**	**10.93**
SCAQMD Regional Threshold	55	55	550	150	150	55
Significant?	**YES**	**YES**	**NO**	**NO**	**NO**	**NO**
Peak Operational Emissions (Winter)						
Area Source Emissions	26.18	1.23e-3	0.13	1.00e-5	4.60e-5	4.60e-4
Energy Source Emissions	0.08	0.69	0.58	4.14e-3	0.05	0.05
Mobile Emissions	49.06	117.82	175.72	0.52	35.64	10.88
Maximum Daily Emissions	**76.32**	**118.52**	**176.42**	**0.52**	**35.69**	**10.93**
SCAQMD Regional Threshold	55	55	550	150	150	55
Significant?	**YES**	**YES**	**NO**	**NO**	**NO**	**NO**

Source: Urban Crossroads 2013a, Table 3-6.

All new development in California must comply with the California Green Building Standards Code (CalGreen), which has become increasingly stringent regarding requirements for energy efficiency. The most recent version of the CalGreen Code (2013) becomes effective on January 1, 2014. Therefore, the proposed Project like all other development projects in California would be obligated to implement the applicable provisions of CalGreen. The on-site area sources of air pollution that are within the direct control of the Project Applicant and future tenants of the Project and that are addressed by building design and operation are below the significance thresholds. The Project is also required to comply with the provisions of SCAQMD District Rule 402, "Nuisance" and Rule 431.2, "Sulfur Content of Liquid Fuels" and is required to comply with California Code of Regulations Title 13, Division 3, Chapter 1, Article 4.5, Section 2025, "Regulation to Reduce Emissions of Diesel

Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles" and Title 13, Division 3, Chapter 10, Article 1, Section 2485, "Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling."

Regardless, the Project's significant emissions of VOC and NO_X are primarily the result of mobile source emissions (vehicles traveling to and from the Project site), which are regulated by state and federal emissions and fuel use standards that are not within the purview of the Project Applicant, future tenants of the Project, or the City of San Bernardino. The application of mobile source emission requirements in a single locale such as the City of San Bernardino would not result in the improvement of regional air quality and would not ensure uniform CEQA review throughout the SCAB. For example, if the City applied emission control requirements to one or more development project more stringent than state and federal laws already mandate, the realities of the southern California economy would render that development project less competitive in attracting tenants and perspective tenants that will not or cannot meet the heightened requirement would simply occupy another site in the Inland Empire area, resulting in no improvement to the Air Basin. Thus the criteria pollutant emissions would simply be shifted to another portion of the Air Basin and the Air Basin's overall air quality would not be benefited. As previously mentioned, although the SCAB experiences one of the worst air quality levels in the United States, air quality in the SCAB has dramatically improved over the past 30 years and is expected to continue improving through the enforcement of state and federal laws.

Threshold 4: Would the Project expose sensitive receptors to substantial pollutant concentrations?

During both construction and long-term operation, the Project has the potential to expose nearby sensitive receptors to substantial pollutant concentrations. The following provides an analysis based on the applicable localized significance thresholds (LSTs) established by the State of California and SCAQMD. An analysis is also presented regarding the potential for CO hotspots and the carcinogenic and non-carcinogenic health risks associated with DPM and other emissions.

❑ Construction-Related Localized Emissions

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology*. As previously discussed, the SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs) (Urban Crossroads 2013a 35).

The significance of localized emissions impacts depends on whether ambient levels in the vicinity of any given project are above or below State standards. In the case of CO and NO_2, if ambient levels are below the standards, a project is considered to have a significant impact if project emissions exceed one or more of these standards. If ambient levels already exceed a state or federal standard, then project emissions are considered significant if they increase ambient concentrations by a measurable amount. This would apply to PM_{10} and $PM_{2.5}$; both of which are non-attainment pollutants (Urban Crossroads 2013a 35).

The SCAQMD issued guidance on applying CalEEMod™ to LSTs. Since CalEEMod™ calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, the following table is used to determine the maximum daily disturbed-acreage for comparison to LSTs.

Construction Phase	Equipment Type	Equipment Quantity	Acres graded per 7 hour day	Operating Hours per Day	Acres graded per day
Grading	Tractors	2	0.4375	7	0.875
	Graders	2	0.4375	7	0.875
	Rubber Tired Dozers	2	0.4375	7	0.875
	Scrapers	6	0.875	7	5.25
Total acres graded per day					7.875
Applicable LST Mass Rate Look-up Table					5 acres

Source: Urban Crossroads 2013a, p. 35.

Based on this table and the construction equipment assumptions embedded in the CalEEMod™ model defaults, the proposed Project would result in a maximum of 7.875 acres that would be disturbed during the peak construction activity on any given day (Urban Crossroads 2013a 35-36). For purposes of LSTs using a 5.0 acre disturbance area is more conservative than if a larger area was disturbed, due to the fact that emissions become more localized in a smaller area than they would be spread out over a larger area.

For the proposed Project, the appropriate Source Receptor Area (SRA) for the LST is the East San Bernardino Valley area (SRA 34). LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. SCAQMD's Methodology clearly states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs." Therefore, for purposes of the construction LST analysis only emissions included in the CalEEMod "on-site" emissions outputs were considered (Urban Crossroads 2013a 36).

The nearest sensitive receptor land use (defined as a place where an individual could remain for 24-hours) would be the existing residential unit located approximately 140 feet (42.85 meters) north of the Project site. There is also a residential unit located approximately 197 feet (60 meters) east of the Project site. Also, although a business park is not typically considered to be a sensitive receptor, for analysis purposes as a conservative measure, the business park located approximately 64 feet southwest of the Project site is also considered in the LST analysis for localized emissions. Notwithstanding, the Methodology explicitly states that "*It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters.*" Accordingly, LSTs for receptors at 25 meters are utilized in this analysis for localized emissions and provide for a conservative i.e. "health protective" standard of care as any receptors located further away would be exposed to a lesser impact (Urban Crossroads 2013a 37-38).

Without mitigation, LST emissions during construction activity would exceed the SCAQMD's localized significance thresholds for PM_{10} and $PM_{2.5}$. This is considered a significant direct impact of the proposed Project's construction phase. Table 4.2-8, *Localized Significance Summary – Construction,* identifies the unmitigated localized impacts at the nearest receptor location in the vicinity of the Project. It should be noted that the impacts without mitigation do not take credit for

reductions achieved through best management practices (BMPs) and standard regulatory requirements (SCAQMD's Rule 403) (Urban Crossroads 2013a 36). Detailed construction-related localized emissions model outputs are presented in Appendix A of the Air Quality Impact Analysis (*Technical Appendix B1* to this EIR).

Table 4.2-8 Localized Significance Summary – Construction

Grading	NO_x	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	171.01	103.52	24.72	13.56
SCAQMD Localized Threshold	270.00	1,746.00	14.00	8.00
Significant?	NO	NO	YES	YES

Source: Urban Crossroads 2013a, Table 3-8

❑ Operation-Related Localized Emissions

The LST analysis includes on-site sources only; however, the CalEEMod™ model outputs do not separate on-site and off-site emissions from mobile sources. In an effort to establish a maximum potential impact scenario for analytic purposes, the calculated operational LST emissions represent all on-site Project-related stationary (area) sources and five percent (5%) of the Project-related mobile sources. Considering that the weighted trip length used in CalEEMod™ for the Project is approximately 22.84 miles, 5% of this total would represent an on-site travel distance for each car and truck of approximately 1 mile or 5,280 feet, thus the 5% assumption is conservative and would tend to overstate the actual impact. Refer to *Technical Appendix B1*, pages 37-38 for more information about the analysis methodology.

Table 4.2-9, *Localized Significance Summary – Operations*, presents the results of the long-term localized significance threshold analysis. Detailed operational localized emissions model outputs are presented in Appendix A of the Air Quality Impact Analysis (*Technical Appendix B1* to this EIR). Results of the analysis indicate that estimated Project-related long-term operational emissions would not exceed localized emissions thresholds established by the SCAQMD. Accordingly, under long-term operating conditions, the proposed Project would not expose any sensitive receptors to substantial Project-related pollutant concentrations. Impacts would be less than significant.

Table 4.2-9 Localized Significance Summary – Operations

Grading	NO_x	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	73.82	71.37	9.85	6.11
SCAQMD Localized Threshold	270.00	1,746.00	14.00	8.00
Significant?	NO	NO	NO	NO

Source: Urban Crossroads 2013a, Table 3-9

❑ CO Hotspots

It has long been recognized that CO exceedances ("hot spots") are caused by vehicular emissions, primarily when idling at intersections. Vehicle emissions standards have become increasingly morestringent in the last twenty years. Currently, the CO standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels and implementation of control technology on industrial facilities, CO concentrations in the Project vicinity have steadily declined,

as shown based on historical data presented in *Technical Appendix B1*. Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard (Urban Crossroads 2013a 38-39).

To determine the relative potential for the proposed Project to result in potential CO hot spots, traffic volumes from the four highest-volume intersections recorded in the AQMD's 1992 CO Plan were compared with the four highest-volume intersections reflected in the Project's traffic study (refer to *Technical Appendix I1*). Although the Project's traffic volumes may be slightly greater than those identified in the 1992 CO Plan modeling analysis as shown in *Technical Appendix B1*, emission factors for CO from tailpipe emissions have been dramatically reduced over time; thus, incremental increase in volume of vehicles would be offset by the reduced CO emission factors from tailpipe emissions. Consequently, at buildout of the Project, none of the intersections in the vicinity of the Project would result in higher CO concentrations than those identified in the 1992 CO Plan/2003 AQMP analysis, resulting in a less-than-significant impact (Urban Crossroads 2013a 37-38).

❑ Diesel Particulate Emissions

The proposed Project would generate/attract diesel trucks, which emit diesel particulate matter (DPM), which is known to be associated with increased hazards to health, including cancer. To evaluate the Project's potential to expose nearby sensitive receptors to substantial amounts of DPM during long-term operation, a Mobile Source Health Risk Assessment was prepared for the proposed Project and is included as *Technical Appendix B2* to this EIR.

Vehicle DPM emissions were estimated using emission factors for particulate matter less than 10µm in diameter (PM10) generated with the 2011 version of the Emission FACtor model (EMFAC) developed by the ARB. EMFAC 2011 is a mathematical model that was developed to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources. The most recent version of this model, EMFAC 2011, incorporates regional motor vehicle data, information and estimates regarding the distribution of vehicle miles traveled (VMT) by speed, and number of starts per day (Urban Crossroads 2013b 11).

The effect of Project-related diesel particulate emissions was quantified in accordance with 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, the U.S. EPA's AERMOD model was used to evaluate the significance of Project-related diesel particulate emissions (Urban Crossroads 2013b 15). Refer to page 19 of the *Technical Appendix B2* for a detailed description of the model inputs and equations used in the estimation of average particulate concentrations associated with operations at the Project site.

Health risks associated with exposure to DPM emissions are defined in terms of the probability of developing cancer as a result of exposure to a chemical at a given concentration. The cancer risk probability is 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 the California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (Urban Crossroads 2013b 20). Refer to pages 20-21 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 operations at the Project site.

The results of the detailed analysis contained in *Technical Appendix B2* indicate that diesel particulate emissions generated during operation of the proposed Project would create a less-than-significant health risk to sensitive receptors in the vicinity of the Project site. Detailed air dispersion model outputs and risk calculations are presented in Appendices A and B, respectively, of *Technical Appendix B2*. At the point of maximum impact, the maximum increase in cancer risk generated by the proposed Project is estimated to be 5.88 in one million for nearby residents (assuming that the resident would stay at their home seven days a week, 365 days a year, for 70 years), 1.15 in one million for employees at the Project site (assuming that employees would work at the Project site for 40 years), and 0.08 in one million for nearby school children (assuming that children would attend the same school for nine years). The level of risk for each sensitive receptor class (i.e., residents, workers, school children) would not exceed the SCAQMD's direct and cumulative significance threshold of 10 in one million.

An evaluation of the Project's potential to result non-carcinogenic health effects associated with chronic exposure to diesel particulate emissions also was conducted. As documented in *Technical Appendix B2*, the non-cancer hazard index for Project-related emissions would be less than one (1) for all sensitive receptors in the Project vicinity (Urban Crossroads 2013b 22). Detailed air dispersion model outputs and risk calculations are presented in Appendices A and B, respectively, of *Technical Appendix B2*. The level of risk for each sensitive receptor class (i.e., residents, workers, school children) would not exceed the SCAQMD's direct and cumulative non-cancer hazard index of one (1).

Based on the foregoing analysis, long-term operation of the Project would not expose any sensitive receptors to substantial concentrations of diesel particulate emissions and impacts would be less than significant.

Threshold 5: 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 are evaluated as 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 source of odor; however, Project-generated refuse would be stored in covered containers and removed at regular intervals in

compliance with the City's solid waste regulations, thereby precluding any potential 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.

4.2.4 CUMULATIVE IMPACT ANALYSIS

The Project proposes to implement the City of San Bernardino General Plan land use designation of Industrial applied to the Project site. As such, the Project would be consistent with the growth forecasts used in the SCAQMD's AQMP to predict future air quality conditions in the SCAB. Accordingly, emissions that would be generated by the Project are assumed to be accounted for in the AQMP. Accordingly, the Project would not conflict with or obstruct the implementation of the SCAQMD on a cumulative basis.

As indicated in the analysis of Thresholds 2 and 3 in Subsection 4.2.3 above, the Project would exceed SCAQMD criteria pollutant standards for emissions of NO_X during construction. Under long-term operation, the Project's emissions of VOCs and NO_X also would exceed the SCAQMD criteria pollutant standards. In addition, the SCAB is classified as being a non-attainment area of O_3, for which NO_X is a precursor, under both federal and state criteria. When considered with emissions that can reasonably be assumed from other development within the cumulative study area, including buildout of the City of San Bernardino and other areas of the SCAB, the Project's construction-related emissions of NO_X and operational emissions of NO_X and VOCs would represent a cumulatively considerable contribution to an existing air quality violation and cumulative impact, requiring mitigation.

Construction of the proposed Project would exceed localized significance thresholds for PM_{10} and $PM_{2.5}$ in the short-term during the Project's construction activities. Concentrations of particulate matter (PM_{10} and $PM_{2.5}$) could substantially increase if construction activities were to occur simultaneous with construction activities on adjacent properties that affect the same receivers. Thus, implementation of the Project could expose nearby sensitive receptors to substantial concentrations of criteria pollutants. The Project's localized emissions of particulate matter (PM_{10} and $PM_{2.5}$) during construction are evaluated as cumulatively considerable and mitigation would be required.

Long-term operation of the Project would not exceed localized significance thresholds for any criteria pollutant. In addition, Project-related operational emissions of diesel particulates would result in less-than-significant mobile-source health risks to any nearby sensitive receptors. Under long-term operating conditions, Project emissions would be well below SCAQMD's localized significance and carcinogenic exposure thresholds. Therefore, it is reasonable to conclude that even when combined with localized emissions from future developments within close proximity to the Project site, such emissions would not exceed SCAQMD thresholds. Further, the residential receivers located closest to the Project site are non-conforming residential structures that are anticipated to be replaced with industrial and business park uses in the future in accordance with the land uses called for on this properties by the City of San Bernardino General Plan. Accordingly, long-term operation of the Project would not expose nearby sensitive receptors to substantial localized pollutant concentrations, and a cumulative considerable impact would not occur.

As indicated in the analysis of Threshold 6 in Subsection 4.2.3 above, there are no components of the proposed Project's construction or long-term operation that would result in the exposure of a substantial number of sensitive receptors to objectionable odors. There also are no odor emitters in the Project's cumulative study area which, when combined with Project-related odors, could affect a substantial number of people. Accordingly, a cumulatively significant impact would not occur.

4.2.5 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold 1: No Impact. The proposed Project would not conflict with or obstruct implementation of the SCAQMD AQMP.

Thresholds 2 and 3: Significant Direct and Cumulative Impact (Near-Term and Long-Term). Emissions during Project construction would violate the SCAQMD regional threshold for NO_X. In addition, long-term operation of the Project is projected to exceed SCAQMD regional thresholds for VOC and NO_X emissions. Near- and long-term emissions of NO_X also would contribute to an existing air quality violation in the SCAB (i.e., non-attainment status for NO_X and ozone). As such, Project-related emissions would violate SCAQMD air quality standards and contribute to the non-attainment status of a criteria pollutant (i.e., NO_X and ozone), which is significant on a direct and cumulative basis.

Threshold 4: Significant Direct and Cumulative Impact (Near-Term). The Project would expose nearby sensitive receptors to substantial concentrations of localized particulate matter (PM_{10} and $PM_{2.5}$) during construction. This impact is significant on a direct and cumulative basis. Long-term operation of the Project would not expose nearby sensitive receptors to substantial pollutant concentrations of any criteria pollutant or diesel particulate matter. As such, a less than significant impact would occur during long-term operation of the Project.

Threshold 5: Less than Significant Impact. Although near-term construction activities could produce odors associated with construction equipment exhaust, the application of asphalt, and the application of architectural coatings, standard construction requirements would minimize odor impacts to less than significant levels. Odors associated with long-term operation of the proposed Project would not significantly impact nearby sensitive receptors.

4.2.6 MITIGATION

The following measures are recommended to reduce the Project's significant near-term LST impact (PM_{10} and $PM_{2.5}$) to a less than significant level.

MM 4.2-1 Prior to grading permit issuance, the City shall verify that the following notes are specified on the grading plan to ensure implementation of SCAQMD Rule 403. It should be noted that the following list is non-exclusive, and identifies only key provisions of the SCAQMD Rule 403 requirements; regardless the Project shall be required to comply with all applicable provisions of SCAQMD Rule 403, whether listed below or not. Specifically, Project contractors shall be required to comply with the following notes and all other applicable SCAQMD Rule 403 requirements, and shall maintain written records of such compliance that can be inspected by the City of San Bernardino upon request.

a) All clearing, grading, earth-moving, and excavation activities shall cease when winds exceed 25 miles per hour.

b) All unpaved roads and disturbed areas shall be watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day.

c) The contractor shall ensure that traffic speeds on unpaved roads and areas where soil is exposed are reduced to 15 miles per hour or less.

d) Public streets shall be swept at the end of each workday using a street sweeper meeting SCAQMD Rule 1186.1 if visible soil is carried onto paved public roads.

e) The cargo area of all vehicles hauling soil, sand, or other loose earth materials shall be covered.

MM 4.2-2 Prior to the start of grading, the construction contractor shall post legible, durable, weather-proof signs at the property's frontage with Orange Show Road stating the name and phone number of an authorized individual to be contacted to resolve dust complaints. These signs shall remain posted on the property until grading is complete. All legitimate dust complaints shall be resolved in 24 hours.

The following measure is recommended to reduce the Project's significant near-term construction-related impact associated with the emission of NO_X and NO_X contributions to the SCAB's non-attainment status for O_3. This measure also would further reduce the Project's less than significant impact associated with near-term diesel particulate matter emissions.

MM 4.2-3 Prior to grading permit and building permit issuance, the City shall verify that the following notes are specified on all grading and building plans. Project contractors shall be required to comply with these notes and permit periodic inspection of the construction site by City of San Bernardino staff to confirm compliance.

a) During grading, no more than five (5.0) acres (surface area) of land or topsoil shall be actively disturbed on any given day.

b) During construction activity, diesel engines shall not idle in excess of five (5) minutes.

c) During construction activity, the operating time of all pieces of off-road diesel-powered equipment shall not exceed a combined total of 147 operating hours per day.

d) During construction activity, all off-road diesel construction equipment greater than or equal to 100 horsepower shall be CARB Tier 3 Certified or better.

e) Construction parking shall be located and configured to minimize traffic interference on public streets.

The following measure is recommended to reduce the Project's significant near-term construction-related impact associated with the emission of VOCs and VOC contributions to the SCAB's non-attainment status for O_3.

MM 4.2-4 Prior to building permit issuance, the City shall verify that the following note is specified on all building plans. Project contractors shall be required to comply with these notes and maintain written records of such compliance that can be inspected by the City of San Bernardino upon request.

a) All surface coatings shall consist of Zero-Volatile Organic Compound paints (no more than 125 gram/liter of VOC) and/or be applied with High Pressure Low Volume (HPLV) applications consistent with SCAQMD Rule 1113. Alternatively, building materials may be used that do not require painting or are delivered to the construction site pre-painted.

The following measures are recommended to reduce the Project's significant long-term operational-related impact associated with the emission of NO_X and NO_X contributions to the SCAB's non-attainment status for O_3. These measures also would further reduce the Project's less than significant impact associated with long-term diesel particulate matter emissions.

MM 4.2-5 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; and 3) telephone numbers of the building facilities manager and the CARB to report violations. Prior to occupancy permit issuance, the City shall conduct a site inspection to ensure that the signs are in place.

MM 4.2-6 Prior to the issuance of building permits, the City shall verify that the parking lot striping and security gating plan allows for adequate truck stacking at gates to prevent queuing of trucks outside the property.

MM 4.2-7 The Project's property owner shall provide documentation to tenants informing them about benefits of implementing a voluntary carpool or rideshare program for employees.

MM 4.2-8 Prior to the issuance of a building permit, documentation shall be provided to the City of San Bernardino confirming that the building design exceeds the California Title 24 Energy Efficiency Standards (2008) by a minimum of 20 percent.

MM 4.2-9 Prior to the issuance of permit that would allow the installation of landscaping, the City of San Bernardino shall review and approve landscaping plans for the site which show a plant palette emphasizing drought-tolerant plants and use of water-efficient irrigation techniques.

MM 4.2-10 In the event that the building design is modified to accommodate refrigeration, all loading docks shall be equipped with an electrical hookup to power refrigerated tractor trailers.

4.2.7 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Thresholds 2 and 3: Significant Direct and Cumulative Impact (Near-Term and Long-Term). Implementation of Mitigation Measure MM 4.2-3 would reduce Project emissions of NO_X during construction; however, these emissions would remain above the SCAQMD regional threshold for NO_X. Emissions of NO_X during Project construction also would cumulatively contribute to an existing air quality violation in the SCAB (NO_X and O_3), as well as cumulatively contribute to the net increase of a criteria air pollutant for which the SCAB is in non-attainment (NO_X and O_3). Accordingly, the Project's emissions of NO_X during construction represent a near-term significant and unavoidable impact on both a direct and cumulative basis.

Operational emissions of VOCs and NO_X are projected to remain above regional pollutant thresholds during long-term operation of the Project, primarily from mobile source emissions that are beyond the control of the Project Applicant, future Project tenants and the City of San Bernardino. The Project Applicant will incorporate design features into the Project to reduce long-term emissions of criteria area pollutants (see Mitigation Measures MM 4.2-5 through MM 4.2-10). It is likely that incorporation of these features would reduce the Project's long-term emissions of VOCs and/or NO_X but not to below a level of significance. In addition, the Project's long-term emissions of NO_X would cumulatively contribute to an existing air quality violation in the SCAB (NO_X and O_3), as well as cumulatively contribute to the net increase of a criteria air pollutant for which the SCAB is in non-attainment (NO_X and O_3). Accordingly, the Project's long-term emissions of VOCs and NO_X are evaluated as a significant and unavoidable impact on the Project on both a direct and cumulative basis.

Threshold 4: Less than Significant Impact with Mitigation. Implementation of Mitigation Measure MM 4.2-1and MM 4.2-2 would reduce the Project's construction-related concentrations of localized particulate matter (PM_{10} and $PM_{2.5}$) to below a level of significance.

4.3 BIOLOGICAL RESOURCES

This subsection assesses the Project's potential to impact sensitive biological resources that may be present on site or within off-site improvement areas. As previously described in EIR Section 3.0, *Project Description*, off-site improvement areas associated with the proposed Project include a segment of existing Orange Show Road beneath which a storm drain line is proposed to be installed. The analysis in this subsection is based in part on information contained in a site-specific technical report titled, "Approximate 66 Acre Orange Show Road Property Habitat Assessment," prepared by RBF Consulting, and dated August 2013. This report is provided as *Technical Appendix C* to this EIR.

4.3.1 EXISTING CONDITIONS

A. Scope and Methodology

Biologists/Regulatory Specialists from RBF Consulting conducted a site-specific evaluation of biological resources present or potentially present on the Project site on August 26, 2013. The field survey did not include off-site improvement areas within the Orange Show Road public right-of-way because this area is developed as a paved road under existing conditions and has no potential to contain sensitive biological resources. Plant communities identified on aerial photographs were ground-truthed by walking meandering transects through the plant communities and along boundaries between plant communities. Plant communities were evaluated for their potential to support sensitive plant and wildlife species. Notes were taken on species observed. Potential jurisdictional features were identified. Observations included scat, trails, tracks, burrows, nests, visual and aural observation. In addition, site characteristics such as soil condition, topography, presence of indicator species, condition of plan communities, hydrology, and evidence of human use of the site were noted. The plant communities were classified in accordance with CDFW (2000) and Holland (1986), delineated on an aerial photograph, and then digitized into GIS Arcview (RBF Consulting 2013 7).

Methods of study included a review of relevant literature and a query of the California Department of Fish and Wildlife (CDFW), California Natural Diversity Database (CNDDB), the California Native Plant Society's (CNPS) *Electronic Inventory of Rare and Endangered Vascular Plants of California*, Calflora Database, compendia of special – status species published by CDFW, and the United States Fish and Wildlife Service (USFWS) species listings. RBF assessed resources within the Project's impact areas using methodologies and accepted scientific and technical standards and survey guideline requirements issued by the USFWS, the CDFW, and the CNPS (RBF Consulting 2013 6-7).

Please refer to the Habitat Assessment (Section 2.0 of *Technical Appendix C*) for a detailed description of the scope and methodology used for the general biological resources assessment.

B. Existing Vegetation Communities

The Project site was previously used as a commercial lumber mill and has been routinely subjected to human disturbances (i.e. routine weed abatement and illegal dumping). As such majority of the site no longer supports vegetation. Native vegetation and native plant communities are not present on the Project site or in the general vicinity (RBF Consulting 2013 10).

Figure 4.3-1, *Vegetation Map*, illustrates the location and extent of vegetation communities on the Project site. A detailed description of each vegetation/land use type present on the Project site is provided below (RBF Consulting 2013 10-12). None of these communities are biologically sensitive.

- Disturbed. Disturbed areas cover a majority of the Project site, and occupy the northern portions of the Project site (approximately 31.9 acres). These areas continue to be actively disturbed, have been exposed to a long history of disturbance, and are currently devoid of vegetation.

- Developed. Developed areas cover the southern portion of the Project site (approximately 17.3 acres). These areas are generally devoid of vegetation, however, some weedy plant species have established. Disturbed areas also include an improved roadway, parking lot, remnant structures, and staging areas associated with the former lumber mill operation.

- Ruderal Areas. The southwestern portion of the Project site supports an approximately 8.2-acre ruderal plant community dominated by non-native grasses and Russian thistle (*Salsola tragus*). Other plant species occurring include tamarisk (*Tamarix ramosissima*), puncture vine (*tribulus terrestris*), brittlebush (*Encelia farinosa*), jimsonweed (*Datura wrightii*), London rocket (*Sisymbrium irio*) and Palmers's pigweed (*Amaranthus palmeri*).

- Ornamental. Isolated stands of ornamental vegetation and a number of non-native species including fan palm (*Washingtonia robusta*), tree of heaven (*Ailanthus altissima*), bush sunflower (*Encelia californica*), tree tobacco (*Nicotiana glauca*), and short pod mustard (*Hirschfeldia incana*) occur in the central portion of the Project site. Approximately 0.25-acre of the site is occupied by ornamental vegetation.

C. Special Status Plants

RBF Consulting evaluated the Project site for the presence of special status plant species. Potential special status plant species were identified from the following sources: 1) species identified by the California Natural Diversity Database (CNDDB) as occurring (either currently or historically) on, or in the vicinity of the Project site, and 2) the habitats and distribution of vascular plants as identified by the CNPS Inventory of Rare and Endangered Vascular Plants of California (RBF Consulting 2013 14-15). Plant species that have the potential to occur within the general vicinity of the Project site are presented in Appendix B of *Technical Appendix C*.

❑ Special-Status Plants Observed On Site

No special-status plants were observed on the Project site during site-specific biological surveys conducted in August 2013 and the Project site does not provide suitable habitat for sensitive plant species known to occur within the general area (RBF Consulting 2013 15).

D. Special-Status Wildlife

RBF Consulting evaluated the Project site for the presence of special-status animal species. The CNDDB Rarefind4 online software was used to identify any species occurring (either currently or

Source: RBF (August 2013)

NOT TO SCALE

FIGURE 4.3-1
VEGETATION MAP

historically) on or in the vicinity of the subject property (RBF Consulting 2013 15). Special-status animals that have the potential to occur within the general vicinity of the Project site are presented in Appendix B of *Technical Appendix C*

The Santa Ana River corridor is located off-site and immediately adjacent to the Project site's southeastern boundary. Natural vegetation (i.e., riparian, Riversidean Alluvial Fan Sage Scrub) within the Santa Ana River corridor has the potential to provide suitable habitat for several listed species including San Bernardino kangaroo rat (*Dipodomys merriami parvus*) (SBKR), Southwestern willow flycatcher (*Empidonax traillii extimus*) (SWWF), and least Bell's vireo (*Vireo bellii pusillus*) (LBVI). SWWF and LBVI are listed as endangered on federal and state lists. SBKR is listed as endangered on the federal list and threatened on the state list (RBF Consulting 2013 15).

❑ Special-Status Wildlife Observed On Site

No special status wildlife species were observed by RBF Consulting on the site. The Project site is devoid of native habitats needed to support any of the identified sensitive wildlife species known to occur within the area and does not support foraging habitat or cover habitat for any of these species (RBF Consulting 2013 15).

E. Nesting Birds

The Project site primarily consists of heavily disturbed land. On-site plant communities provide limited foraging and cover habitat for year-round/seasonal avian residents and migrating songbirds that could occur in the area. Ornamental vegetation and on-site remnant structures have the potential to provide suitable roosting opportunities for a number of owl species including barn owl (*Tyto alba*) and great horned owl (*Bubo virginianus*). Several remnant nests were observed within on-site storage hangers and under roof overhangs (RBF Consulting 2013 13). Several stands of Eucalyptus (*Eucalyptus ssp.*) grow adjacent to the northeast and southwest corners of the Project site and provide suitable nesting opportunities for a variety of raptor species including red-tailed hawk (*Buteo jamaicensis*) and red-shouldered hawk (*Buteo lineatus*) (RBF Consulting 2013 13). Cavities were observed on the Project site that could provide suitable nesting opportunities for the western burrowing owl (*Athene cunicularia*), which is designated as a CDFW California Species of Special Concern (RBF Consulting 2013 18).

The segment of the Santa Ana River adjacent to the Project site supports a variety of riparian plant species including cottonwood (*Pupulus fremontii*), muelfat (*Baccharis salicifolia*), arroyo willow (*Salix lasiolepis*) and black willow (*Salix gooddingii*) and that have the potential to provide suitable nesting/foraging opportunities for a variety of avian species including least Bell's vireo (Vireo *bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*) (RBF Consulting 2013 13).

The Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code prohibit impacts to migratory nesting birds.

F. Jurisdictional Waters

No drainage or wetland features are present on the Project site. The segment of the Santa Ana River located off-site and adjacent to the Project site's southeast boundary contains areas within the

jurisdictions of the United States Army Corps of Engineers (USACE), CDFW, and the Regional Water Quality Control Board (RWQCB) (RBF Consulting 2013 14).

G. Regulatory Setting

The Project site is subject to state and federal regulations associated with a number of regulatory programs. These programs often overlap and were developed to protect natural resources, including: state and federally listed plants and animals; aquatic resources including rivers and creeks, ephemeral streambeds, wetlands, and areas of riparian habitat; other special-status species which are not listed as threatened or endangered by the state or federal governments; and other special-status vegetation communities. Provided below is an overview of the federal, state, and regional laws, regulations, and requirements that apply to the Project site. For more information, refer to *Technical Appendix C.*

❑ State and/or Federally Listed Plants and Animals

- *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 addresses 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.

- *Federal Endangered Species Act*

The Federal Endangered Species Act (FESA) of 1973 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 United States Fish and Wildlife Service (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.

- *State and Federal Take Authorizations for Listed Species*

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

- Section 7 of the FESA 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. 16 U.S.C. 1536(a) (2).
- 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.
- 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.

4.3.2 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, CEQA provides guidance primarily in §15065, Mandatory Findings of Significance, and the CEQA Guidelines, 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:

1. *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;*

2. *Have a substantially 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. Wildlife Service;*

3. *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;*

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

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

6. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or state habitat conservation plan.*

4.3.3 IMPACT ANALYSIS

Threshold 1:	***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?***

A. Impacts to Vegetation/Land Use Types

As previously noted under Subsection 4.3.1B, the Project site contains Disturbed, Developed, Ruderal, and Ornamental vegetation communities, none of which are considered a sensitive, natural habitat or habitat for any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations (RBF Consulting 2013 16, 18). As such, Project impacts to Disturbed, Developed, Ruderal, and Ornamental vegetation communities that would occur on approximately 49.58 acres of the Project site would be less than significant and mitigation would not be required.

B. Impacts to Special-Status Plants

As documented by RBF Consulting, there are no special status plants on the Project site (RBF Consulting 2013 15). Due to the highly disturbed nature of the Project site and lack of natural plant communities on the subject property, the site does not have potential to support sensitive plant

species known to occur in the area. Therefore, there is no potential for the Project to directly impact special-status plant species on-site. Impacts would be less than significant and no mitigation would be required.

C. Impacts to Special-Status Wildlife

❑ Direct Impacts to Special-Status Wildlife

No special status wildlife species were observed on the site during site-specific biological surveys and the Project site does not contain suitable foraging or cover habitat for special-status wildlife species with the potential to exist in the area (RBF Consulting 2013 15). Although sensitive species were not observed on the Project site, the site does contain cavities which could provide suitable nesting habitat for the western burrowing owl (RBF Consulting 2013 18). Accordingly, it is possible that the species could migrate onto the property prior to Project construction. If burrowing owls were present on-site during grading activities, the Project's impact to the species would be significant and mitigation would be required.

❑ Indirect Impacts to Special-Status Wildlife

The Project would develop a 49.58-acre portion of the site, the southeast corner of which abuts ~~abutting~~ the Santa Ana River. The Project would not directly disturb the River corridor and therefore would have no potential to directly impact special-status wildlife or habitat occupied by special-status wildlife species in the River corridor. As previously shown on Figure 3-7, *Development Permit Site Plan*, the Project would install a barrier wall between the proposed warehouse building and the Santa Ana River, which would minimize the potential for unauthorized public access and illegal dumping within the Santa Ana River. Additionally, the southeast boundary of the Project site which is adjacent to the northern bank of the Santa Ana River, is separated from the River by a 100 foot wide manufactured bank reinforced with concrete rubble to prevent erosion under existing conditions. Regardless, there is still the potential for indirect effects to occur.

Adjacent to the Project site, the Santa Ana River contains critical habitat for three species, the Santa Ana sucker (a fish), San Bernardino Merriam's kangaroo rat (SBKR) (a mammal), and the Southwestern willow flycatcher (a bird). Additionally, minimal habitat is present for the least Bell's vireo. Indirect impacts to these species could result if the species are present and construction or operation of the Project would indirectly disturb sensitive species or their habitats by changing drainage patterns, introducing toxins, or increasing noise and light levels to the point where the species would be stressed.

Although the segment of the Santa River adjacent to the Project site is designated as Santa Ana sucker critical habitat, it does not support the fish but was set aside as critical habitat for sediment transport (McGill, 2013). The fish is present further downstream beginning in the City of Rialto. As discussed in Subsection 4.7, *Hydrology & Water Quality*, the Project would implement water quality control and stormwater drainage measures during near-term construction and long-term operational activities to ensure the quality and quantity of stormwater runoff that may enter the Santa Ana River is not altered in an adverse way when compared with existing conditions. Because the Project would not interrupt the flooding regime in the Santa Ana River nor disrupt or prevent the movement of sediments, no indirect impact to the species would occur.

The Santa Ana River is also critical habitat for Southwestern willow flycatcher; however, the flycatcher is not known to occupy the segment of the river adjacent to the Project site because this stretch of the river does not contain well-developed riparian forest habitat that is necessary to support the species (McGill, 2013). For SBKR, the species is likely present within the river corridor and in bench habitat above the river which serves as refugia habitat (habitat where portions of the population live above the main habitat in the river). Adjacent to the Project site, however, the Project's biologist, RBF, confirmed that the primary constituent elements needed by SBKR are not present on the Project site and there is no passage onto the site that would allow SBKR to enter the Project site (RBF, January 2014). Thus, no indirect impacts to SBKR or its Critical Habitat has the potential to occur as a result of the development of the Project site. Indirect impacts to the ~~Southwestern willow flycatcher and SBKR~~ least Bell's vireo that has the potential to occupy off-site, low-quality habitat in the Santa Ana River corridor could result from indirect noise (stress on the species) and light (exposing them to predators at night) associated with the Project's operation and construction.

As described in Subsection 4.9, *Noise*, a 24-hour noise reading was collected at the Project site's boundary adjacent to the Santa Ana River in October 2013, which measured existing daytime hourly noise levels ranging from 45.2 to 56.8 dBA Leq and existing nighttime noise levels ranging from 49.1 to 60.7 dBA Leq. The energy (logarithmic) average daytime noise level under existing conditions was calculated at 51.3 dBA Leq with an average nighttime noise level of 55.3 dBA Leq. As also described in Subsection 4.9, hourly noise levels associated with operation of the proposed Project are expected to range from 37.9 to 52.0 dBA Leq. Project operations would increase the noise level at the edge of the Santa Ana River corridor to 53.6 DBA Leq during daytime hours (a 2.3 dBA Leq. increase) and to 56.4 dBA Leq. during nighttime hours (a 1.1 dBA Leq. increase) (refer to *Technical Appendix H*). ~~Southwestern willow flycatcher~~ Least Bell's vireo can be adversely impacted by noise during its nesting season (March 1 through August 31) when noise levels exceed 65 dBA. Because the species is not known to occupy the river segment adjacent to the Project site and because the off-site disturbed riparian habitat is very low quality and provides limited nesting opportunities for the species, the potential for the species to be present and indirectly impacted is low. ~~and f~~Further, because noise levels in the segment of the Santa Ana River corridor adjacent to the Project would remain sufficiently below 65 dBA with the Project in operation, indirect noise impacts to sensitive species during Project operation would be less than significant.

During Project construction, temporary noise from the construction activity has the potential to exceed 65 dBA in the Santa Ana River corridor and have indirect, adverse effects on the ~~Southwestern willow flycatcher~~ least Bell's vireo, if the species is present. ~~However, as noted above, the species is not known to occupy the river segment adjacent to the Project site due to lack of well-developed forest habitat.~~ If the species were to be present and construction activities that generate noise above 65 dBA occurred during its nesting season (March 1 through August 31), a significant indirect impact to the species could occur.

Long-term operation of the Project would include the installation and use of exterior, artificial lighting. In the absence of special design measures, artificial light sources have the potential to indirectly impact special-status wildlife species (~~SBKR and Southwestern willow flycatcher~~ least Bell's vireo) that may occupy the adjacent, off-site Santa Ana River corridor. However, the proposed Project would be required to comply with (and has been designed to adhere to) City of San Bernardino Development Code Section 19.20.030, which requires that exterior lighting fixtures be

shielded or recessed and focused on the area of illumination, and prohibits the use of any lighting of unusually high intensity or brightness. Mandatory compliance with the City of San Bernardino Development Code would ensure that exterior lighting proposed by the Project would not contribute substantial amounts of spill light or glare off-site within the Santa Ana River corridor. Accordingly, the Project would result in a less-than-significant indirect effect associated with artificial exterior lighting.

Threshold 2: Would the Project have a substantially adverse effect on 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 Game or U.S. Wildlife Service?

The Project site is occupied by Disturbed, Developed, Ruderal, and Ornamental vegetation communities (RBF Consulting 2013 10). The Project's off-site improvement area includes disturbed land associated with existing, paved Orange Show Road. None of the existing habitat types within the Project impact area are considered riparian habitats, nor are these habitats identified as sensitive natural communities in local or regional plans, policies, or regulations, or by the CDFW or the USFWS. Accordingly, the proposed Project has no potential to result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS.

Threshold 3: 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 proposed Project site and its off-site improvement area do not contain any special aquatic resources and none would be impacted by the Project (RBF Consulting 2013 14). Accordingly, the proposed Project has no potential to result in 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, through direct removal, filling, hydrological interruption, or other means. No impact would occur.

Threshold 4: Would the Project interfere substantially with the movement of any resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The Project site is highly disturbed, was previously used as a lumber mill, and does not support a diversity of native wildlife. Developed areas surrounding the Project site block any terrestrial wildlife movement from the north, south, east or west. Accordingly, the Project site is not considered to be a wildlife movement corridor.

<u>The southeast boundary of the Project site, which is adjacent to the northern bank of the Santa Ana River, is physically separated from the River by a 100 foot wide manufactured bank reinforced with concrete rubble to prevent erosion under existing conditions.</u> The Santa Ana River, located off-site and adjacent to the southeastern Project boundary, provides biological functions as a movement corridor and linkage to natural habitat areas; however, the Project would not result in direct, physical

impacts to the Santa Ana River corridor and, therefore, would not disrupt wildlife movement within the Santa Ana River corridor.

The proposed Project would, however, result in the removal of vegetation (i.e., trees and shrubs) on a portion of the Project site with the potential to support nesting migratory birds. Impacts to such species are prohibited under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code. The Project's potential to impact nesting migratory birds is a significant direct impact for which mitigation is required.

Threshold 5: Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

City of San Bernardino Ordinance MC-1027 and MC-682 (Municipal Code, Title 15, Chapter 15.34) prohibits the removal and/or destruction of more than five (5) trees from a development site within a 36-month period without first being issued a tree removal permit by the City. Per the Municipal Code, a written application must be filed with the City prior to the destruction or removal of the trees and the City will issue a permit to allow the removal of the trees if they can make findings that the trees can be removed without detriment to the environment and welfare of the community. Although the portion of the subject property proposed for redevelopment is mostly vacant under existing conditions, ornamental landscaping associated with the former on-site lumber mill operation is present, including more than five (5) trees. Prior to removal of these trees from the site, the Project Applicant would be required to comply with the provisions of Chapter 15.34 of the City of San Bernardino Municipal Code. Mandatory compliance with the requirements of the Municipal Code would ensure the Project would not conflict with the City of San Bernardino's ordinances regarding tree removal. As such, a less than significant impact would occur.

The City of San Bernardino Municipal Code also contains hillside development management provisions to ensure that development does not adversely affect the natural and topographic character of existing hillsides and also preserves native plant materials and natural hydrology (Municipal Code, Title 19, Chapter 19.17). The Project site is relatively flat and located in a low-lying portion of the City. The Project site is not located on or near any hillside or ridgeline and is not located within the City's Hillside Management Overlay District. Accordingly, implementation of the Project has no potential to conflict with the City of San Bernardino's ordinances and policies related to hillside development.

Threshold 6: Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or state habitat conservation plan?

The Project site is not located within the boundaries of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impact would occur.

4.3.4 CUMULATIVE IMPACT ANALYSIS

This cumulative impact analysis for biological resources considers development of the proposed Project in conjunction with other development projects in the vicinity of the Project site and resulting from full General Plan buildout in the City of San Bernardino.

As indicated under the discussion and analysis of Threshold 1, the Project site does not contain any important, natural vegetation communities or habitat that supports any special-status wildlife or plant species. Accordingly, the Project has no potential to contribute to cumulatively significant impacts to sensitive species as a result of habitat loss.

The Project site also does not contain any special-status plant species; therefore, there is no potential for the Project to contribute to a significant cumulative impact to special-status plant species.

Regarding special-status wildlife species, no special-status wildlife species were observed on the Project site and the site does not contain suitable foraging or cover habitat for any special-status wildlife species. The Project site does, however, contain cavities that are suitable for nesting by the western burrowing owl. Although this species was not observed on-site during field surveys conducted in 2013, there is the potential that this species could occupy the Project site prior to the initiation of grading activities. The burrowing owl is fairly ubiquitous within the Project vicinity; as such, it is reasonable to conclude that impacts to habitat for this species are occurring throughout the San Bernardino area. As such, the proposed Project's potential impacts to burrowing owls are concluded to be cumulatively significant and mitigation would be required.

Adjacent to the Project site, the Santa Ana River contains critical habitat for three species, the Santa Ana sucker, SBKR, and Southwestern willow flycatcher and habitat for the least Bell's vireo. Because the Project would not interrupt the flooding regime in the Santa Ana River nor disrupt or prevent the movement of sediments, there is no potential for the Project to contribute to indirect, cumulative adverse effects on the Santa Ana sucker, which inhabits the river downstream. Cumulative indirect effects on species in the Santa Ana River corridor associated with artificial lighting would be reduced to less than significant levels by mandatory compliance with City of San Bernardino Development Code Section 19.20.030, which requires that exterior lighting fixtures be shielded and would ensure that exterior lighting proposed by the Project would not contribute substantial amounts of spill light or glare off-site within the Santa Ana River corridor. Although the Santa Ana River is critical habitat for Southwestern willow flycatcher, the bird is not known to occupy the segment of the river adjacent to the Project site. If present during the Project's construction process, noise levels from construction combined with noise emanating from other construction and operational activities in the area exceeding 65 dBA could adversely the ~~species~~ least Bell's vireo during its nesting seasons (March 1 through August 31), which is concluded to be a potentially significant cumulative impact.

The Project site does not contain habitat of wetlands or riparian areas. Therefore, the Project would not impact any wetlands or riparian areas and the Project does not have the potential to contribute to cumulatively significant wetland and riparian impacts.

As indicated above under the discussion and analysis of Threshold 4, the proposed Project would not significantly impact wildlife movement corridors because none exist on the Project site. The Project

would, however, remove vegetation from the site (i.e., trees and shrubs) that has the potential to support nesting migratory birds protected by the MBTA and California Fish and Game Code. Other projects within the San Bernardino area would similarly have the potential to impact protected nesting migratory birds and be subject to compliance with the MBTA. The Project's potential impact to nesting birds is significant and cumulatively considerable.

The proposed Project would not conflict with any local policies or ordinances protecting biological resources; accordingly, the Project has no potential to contribute to a cumulatively significant impact due to a conflict with such local policies or ordinances.

The Project site is not located within the boundaries of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the Project has no potential to contribute to a significant cumulative impact due to a conflict with an applicable conservation plan.

4.3.5 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold 1: Significant Direct and Cumulative Impact. No sensitive vegetation communities, special-status plant species, or special-status wildlife species are located on the Project site or its off-site improvement area. Although the western burrowing owl is not present on the Project site, the species could be impacted if it migrates onto the property prior to the commencement of ground-disturbing construction activities. The potential adverse effect to burrowing owl is a significant direct and cumulative impact. Additionally, if the ~~Southwestern willow flycatcher~~ least Bell's vireo is present in the off-site adjacent Santa Ana River corridor during construction activities that occur during its nesting season (March 1 through August 31), the species could be indirectly exposed to construction noise levels exceeding 65 dBA, which is a potentially significant direct and cumulative impact.

Threshold 2: No Impact. The Project site and its off-site improvement area do not contain riparian and/or other sensitive natural habitats; therefore, the Project would have no impact on riparian or other sensitive habitats as defined by the CDFW or USFWS.

Threshold 3: No Impact. No federally protected wetlands are located on the Project site or in its off-site improvement area; therefore, no impact to wetlands would occur.

Threshold 4: Significant Direct and Cumulative Impact. There is no potential for the Project to interfere with the movement of fish or impede the use of a native wildlife nursery site. However, the Project has the potential to directly and cumulatively impact nesting, migratory birds protected by the MBTA and California Fish and Game Code, if construction activities were to occur during the nesting season.

Threshold 5: No Impact. The Project would not conflict with any local policies or ordinances protecting biological resources.

Threshold 6: No Impact. The Project is not located within the boundaries of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impact will occur.

4.3.6 MITIGATION

MM 4.3-1 No sooner than 30 days prior to and no later than 14 days prior to grading activities, a qualified biologist shall conduct a survey of the Project's proposed impact footprint and make a determination regarding the presence or absence of the burrowing owl. A second survey shall be conducted within 24 hours prior to ground disturbing activities. The determination shall be documented in a report and shall be submitted, reviewed, and accepted by the City of San Bernardino Community Development Department prior to the issuance of a grading permit and subject to the following provisions:

a) In the event that the pre-construction survey identifies no burrowing owls in the impact area, a grading permit may be issued without restriction.

b) In the event that the pre-construction survey indicates the Project's proposed impact footprint is occupied by burrowing owl, then prior to the issuance of a grading permit and prior to the commencement of ground-disturbing activities on the property, a qualified biologist shall passively or actively relocate any burrowing owls. Passive relocation, including the required use of one-way doors to exclude owls from the site and the collapsing of burrows, will occur if the biologist determines that the proximity and availability of alternate habitat is suitable for successful passive relocation. Passive relocation shall follow CDFW relocation protocol and shall only occur between September 15 and February 1. If proximate alternate habitat is not present as determined by the biologist, active relocation shall follow CDFW relocation protocol. The biologist shall confirm in writing that the species has fledged the site or been relocated prior to the issuance of a grading permit.

MM 4.3-2 As a condition of approval for all grading permits, vegetation clearing and ground disturbance shall be prohibited during the migratory bird nesting season (February 1 through September 15), unless a migratory bird nesting survey is completed in accordance with the following requirements:

a) A migratory nesting bird survey of the Project's impact footprint shall be conducted by a qualified biologist within three (3) days prior to initiating vegetation clearing or ground disturbance.

b) A copy of the migratory nesting bird survey results report shall be provided to the City of San Bernardino Community Development Department. If the survey identifies the presence of active nests, then the qualified biologist shall provide the Community Development Department with a copy of maps showing the location of all nests and an appropriate buffer zone around each nest sufficient to protect the nest from direct and indirect impact. The size and location of all buffer zones, if required, shall be subject to review and approval by the Community Development Department and shall be no less than a 300-foot radius around the nest for non-raptors and a 500-foot radius around the nest for raptors. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved buffer zone shall be marked in the field with construction fencing, within which no vegetation

clearing or ground disturbance shall commence until the qualified biologist verifies that the nests are no longer occupied and the juvenile birds can survive independently from the nests.

~~MM 4.3-3 Applications for grading and building permits for activities that will occur within 300 feet of the Santa Ana River shall be accompanied by a letter from a qualified biologist confirming if the Southwestern willow flycatcher occupies habitat within 300 feet of proposed grading and construction activities. If the species is present, construction activities that generate noise levels greater than 65 dBA shall not occur within 300 feet of the Santa Ana River during the Southwestern willow flycatcher nesting season (March 1 through August 31).~~

MM 4.3-3: If construction activities begin or are scheduled to occur within 300 feet of riparian habitat located off-site and along the southeast boundary of the Project site during the least Bell's vireo (LBVI) nesting season (March 1 through August 31), a qualified biologist shall conduct a clearance survey of the habitat to ensure LBVI are not occupying this area. If LBVI is determined to be occupying this area, the qualified biologist shall confirm if the species is nesting. If LBVI is found to be nesting, the biologist shall develop a monitoring program in consultation with CDFW and USFWS to ensure that nesting activities are not interrupted. If nesting LBVI are present, the monitoring program shall be in place and implemented as a condition of the Project's grading and building permits.

4.3.7 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold 1: Less than Significant Impact with Mitigation. Implementation of Mitigation Measure MM 4.3-1 would ensure that pre-construction surveys are conducted for the western burrowing owl to determine the presence or absence of the species on the Project site prior to Project-related grading activities. If present, the mitigation requires avoidance and/or relocation of burrowing owls in conformance with CDFW protocols for the species. Implementation of Mitigation Measure MM 4.3-3 would ensure that noise levels during construction operations do not have an adverse indirect effect on the ~~Southwestern willow flycatcher~~ least Bell's vireo, should the species be present in adjacent off-site habitat during its nesting season. With implementation of the required mitigation, potential direct and cumulative impacts would be reduced to below a level of significance.

Threshold 4: Less than Significant Impact with Mitigation. Implementation of Mitigation Measure MM 4.3-2 would ensure that pre-construction surveys are conducted for nesting migratory birds to determine the presence or absence prior to Project-related grading activities. If present, the mitigation requires avoidance of migratory bird nests during the breeding season in conformance with accepted protocols and regulatory requirements. With implementation of the required mitigation, potential direct and cumulative impacts to nesting migratory birds would be reduced to below a level of significance.

4.4 CULTURAL RESOURCES

This Subsection 4.4 is based on a cultural resources investigation conducted by BCR Consulting. The cultural resources report, titled "Cultural Resources Assessment Home Lumber Property Project" and dated August 23, 2013, is included as *Technical Appendix D* to this EIR. Information used to support the analysis in this Subsection also was obtained from the Cultural Resources section (Section 5.4, pp. 5.4-1 – 38) of the certified EIR prepared for the City of San Bernardino General Plan (SCH No. 2004111132), and the subject property's Phase I Environmental Site Assessment report dated August 29, 2013 included as *Technical Appendix F1* to this EIR.

4.4.1 EXISTING CONDITIONS

A. General Prehistory Description

The Project site is located in the south-central portion of the City of San Bernardino, California. The local prehistoric setting has been organized into many chronological frameworks, although there is no definitive sequence for the region. The difficulties in establishing cultural chronologies for western San Bernardino County are a function of its enormous size and the small amount of archaeological excavations conducted there. Moreover, throughout prehistory many groups have occupied the area and their territories often overlap spatially and chronologically resulting in mixed artifact deposits. Due to dry climate and unpredictable geological processes, these artifacts rarely become integrated in-situ. Lacking an environment hospitable to the preservation of cultural midden, local chronologies have relied upon temporally diagnostic artifacts, such as projectile points, or upon the presence/absence of other temporal indicators, such as groundstone. Such methods are instructive, but can be limited by prehistoric occupants' concurrent use of different artifact styles (BCR Consulting 1, 3).

Recognizing the shortcomings of comparative temporal indicators, local prehistory is thought to be defined by four (4) cultural periods: Early Man Horizon, Milling Stone Horizon, Intermediate Horizon, and Late Prehistoric Period (City of San Bernardino 2005b 5.4-3). Each of these cultural periods is summarized below.

- Early Man Horizon. This period, pre-dating 6,000 B.C., is characterized by the presence of large projectile points and scrapers, suggesting reliance on hunting rather than gathering.

- Milling Stone Horizon. This period, from 6,000 B.C. to 1,000 B.C., is characterized by the presence of hand stones, milling stones, choppers and scraper planes; tools associated with seed gathering and shell fish processing with limited hunting activities; and evidence of a major shift in the exploitation of natural resources.

- Intermediate Horizon. This period, from 1,000 B.C. to A.D. 750, reflects the transitional period between the Milling Stone and Late Prehistoric Horizons. Little is known of this time period, but evidence suggests interactions with outside groups and a shift in material culture reflecting this contact.

- Late Prehistoric Period. This period, from A.D. 750 to European contact, is characterized by the presence of small projectile points; use of the bow and arrow; steatite containers and trade items; asphaltum; cremations; grave goods; mortars and pestles; and bedrock mortars.

B. General Ethnography Description

Although no previously recorded sites in the general vicinity of the Project site have established a local prehistoric ethnographic affiliation, the Project area is situated at an ethnographic nexus peripherally occupied by the Gabrielino and Serrano people. Each group consisted of semi-nomadic hunter-gatherers who spoke a variation of the Takic language subfamily (BCR Consulting 3). Brief, individual ethnographic summaries are provided below.

- Gabrielino. The Gabrielino name has been attributed by association with the Spanish mission of San Gabriel, and refers to a subset of people sharing speech and customs with other Cupan speakers (such as the Juaneño/Luiseño/Ajachemem) from the greater Takic branch of the Uto-Aztecan language family. Gabrielino villages occupied the watersheds of various rivers locally (including the Santa Ana) and intermittent streams. Chiefs were usually descended through the male line and often administered several villages. Gabrielino society was somewhat stratified and is thought to have contained three hierarchically ordered social classes which dictated ownership rights and social status and obligations. Plants utilized for food were heavily relied upon and included acorn-producing oaks, as well as seed-producing grasses and sage. Animal protein was commonly derived from rabbits and deer in inland regions, while coastal populations supplemented their diets with fish, shellfish, and marine mammals (BCR Consulting 3).

- Serrano. The generic term "Serrano" has been applied to four groups, each with distinct territories: the Kitanemuk, Tataviam, Vanyume, and Serrano. Only one group, in the San Bernardino Mountains and West-Central Mojave Desert, ethnically claims the term Serrano. The Vanyume, an obscure Takic population, was found along the Mojave River at the time of Spanish contact. The Kitanemuk lived to the north and west, while the Tataviam lived to the west. All may have used the western San Bernardino County area seasonally. Serrano villages consisted of small collections of willow-framed domed structures situated near reliable water sources. A lineage leader administered laws and ceremonies from a large ceremonial house centrally located in most villages. Local Serrano relied heavily on acorns and piñon nuts for subsistence, although roots, bulbs, shoots, and seeds supplemented these. When available, game animals commonly included deer, mountain sheep, antelope, rabbits, small rodents, and various birds –particularly quail (BCR Consulting 3-4).

Based on correspondence received by BCR Consulting during preparation of the cultural resource investigation for the Project, the Soboba Band of Luiseño Indians assert that the Project site is within their Traditional Tribal Use area (refer to *Technical Appendix A* to this EIR).

- Luiseño. Luiseño inhabited the coastal area of southern California. The Soboba Band occupied the land that is presently known as the cities of San Jacinto, Hemet, Valle Vista and Winchester. Prior to both Mexican and American settlement in the San Jacinto valley, the people of Soboba farmed land that was irrigated with surface water from the San Jacinto River, two of its tributary streams, Poppet and Indian Creeks, and from more than forty perennial springs. These water sources sustained gardens, animals and orchards.

C. General History Description

European settlement of California began with the founding of Mission San Diego de Alcala in 1769. The first known European exploration of the Project area was in 1772 by a party led by Captain Pedro Fages. The first documented Spanish settlement within San Bernardino valley was established in 1810. The site of this settlement was dedicated as the Rancho de San Bernardino of Mission San Gabriel. In 1819 a second Rancho de San Bernardino was established at a site known as the Guachama Rancheria, located a few miles east of the possible original settlement in what is now the City of Loma Linda. Two years later, in 1821, a branch of Mission San Gabriel was established within the present boundaries of the City of Redlands. From this branch mission, the development of agriculture within the valley began. Water was transported via a ten mile ditch from Mill Creek to irrigate olive trees and vineyards (BRC Consulting 4, City of San Bernardino 2005b 5.4-3).

In 1821, Mexico overthrew Spanish rule and the missions began to decline. By 1833, the Mexican government passed the Secularization Act, and the missions, reorganized as parish churches, lost their vast land holdings, and released their neophytes. After secularization, large land grants were made to individuals in the area (BRC Consulting 4).

The Project site is located within the boundaries of the historic Rancho San Bernardino, a mission rancho originally associated with the nearby Estancia (also known as the "Asistencia"), an outpost for Mission San Gabriel. Rancho San Bernardino became the property of the Lugo family and Diego Sepulveda in 1842 as part of the secularization process, securing Mexico's local hegemony after official independence from Spain. When the United States annexed California after the Mexican-American War, the Lugo family and Diego Sepulveda received the official U.S. land patent for the property, via a claim filed under the authority of Congress. Brigham Young's Mormon scouts subsequently bought Rancho San Bernardino from the Lugos and Sepulveda and erected a sawmill and irrigation system, splitting the land into a system of ranches and farms. The resulting economy soon necessitated a stage stop, and by 1855 the freight-hauling enterprise of Banning & Alexander was running a brisk service between San Bernardino and Los Angeles (BRC Consulting 4-5).

Although large tracts owned by the U.S. Government became available for homesteading during the 1860s, various pressures forced local Mormon pioneers to recede to Salt Lake City during this period. In the wake of the Mormon exodus, other settlers began to take advantage of new homestead opportunities. Agriculture (particularly citrus orchards) was central to the region's success, and by the early 20th century the City of San Bernardino's downtown took shape as the hub of economic activity. Spanish Colonial-style civic and commercial buildings predominated San Bernardino construction projects between the 1920s to the 1940s. While similar popular architectural styles were reflected in some residential neighborhoods, the gradual development of forms more typical of the California working class population became common. These included 1920s Craftsman and Spanish Colonial Revival style bungalows, and the simple Minimal Traditional Style during the 1930s (BRC Consulting 5).

Subsequent to World War II, southern California experienced an unprecedented land boom resulting from the local discharge of former military personnel. The railroad, U.S. Air Force (both civilian and military), and Kaiser Steel initially remained strong, and a revitalized construction industry formed due to new commercial, residential, and infrastructure developments. Although San Bernardino initially prospered during the post-war years, the eventual closures of Norton Air Force Base and

Kaiser Steel in addition to the relocation of many railroad jobs punctuated a general economic downturn for San Bernardino's working class that has persisted since the 1980s (BRC Consulting 5).

D. Prehistoric Resources

BRC Consulting conducted a pedestrian survey of the Project site on August 12, 2013. The pedestrian survey covered the entire Project site, with one BCR Consulting archaeologist walking parallel transects spaced approximately 15 meters apart. Ground disturbance at the Project site was high due to former use of the site as a lumber mill and routine, on-going weed abatement activities. No prehistoric archaeological resources were identified on the Project site during the pedestrian survey conducted by BCR consulting (BCR Consulting 6).

A literature records search also was conducted by BCR Consulting at the San Bernardino Archaeological Information Center. The record search included a review of all available cultural resource survey and excavation reports and site records for an area within a one-mile radius of the Project area. The results of this literature and records search indicate that no archaeological studies were previously conducted on the Project site and no cultural resources were previously identified within the Project site boundaries. The records search did indicate that 32 surveys have been conducted within a one-mile radius of the Project area, with only one (1) prehistoric archaeology resource being discovered (BCR Consulting 6). This indicates that archeological sensitivity of the Project site is low.

According to Figure 5.4-2, *Archaeological Sensitivities*, of the San Bernardino General Plan EIR, the Project site is not located within an "Area of Concern for Archaeological Resources" (City of San Bernardino 2005b 5.4-9). Areas of high sensitivity for prehistoric archaeology resources are primarily located in the northern and northwestern portions of the City, whereas the Project site is located in the south-central portion of the City.

E. Historical Resources

A majority of the Project site is vacant and undeveloped under conditions, although the Project site does contain several abandoned structures associated with the past use of the subject property as a lumber mill. These abandoned structures are of modern construction – likely built between the mid-1970s and late 1980s – and do not contain any distinctive features or important ties to history that would make them eligible for listing on the California Register of Historic Places (GHD 2013a 14-15, BCR Consulting 6).

According to Figure 5.4-2, *Archaeological Sensitivities*, of the San Bernardino General Plan EIR, the Project site is not located within the historical urban archaeology district, which encompasses much of the City's center (City of San Bernardino 2005b 5.4-9). No historic resources are located on the property.

F. Paleontology Resources

According to a paleontological resources assessment conducted for the subject property (refer to Appendix C from *Technical Appendix D* to this EIR), the Project site is located within an area of the City of San Bernardino that is underlain by young alluvial valley deposits dating to the Holocene Epoch as well as older alluvium deposits dating to the Pleistocene Epoch. Although the Holocene-era soils have low potential to contain fossil deposits, Pleistocene-age soils throughout southern

California have shown a high paleontologic sensitivity. The paleontologic sensitivity of Pleistocene-era deposits is dependent upon its lithology and depositional context; however, generally speaking, excavations within Pleistocene-era deposits at depths greater than 10 feet below the ground surface have the potential to contain significant, non-renewable paleontologic resources (Appendix B from *Technical Appendix D*). If Pleistocene-era deposits are located deeper than 10 feet below the surface of the site, fossil resources could be present.

4.4.2 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:

1. *Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Section 15064.5;*

2. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Section 15064.5;*

3. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or*

4. *Disturb any human remains, including those interred outside formal cemeteries.*

4.4.3 IMPACT ANALYSIS

Threshold 1: Would the Project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Section 15064.5?

No historic sites or historic resources are present on the Project site and the Project site and its off-site improvement area are not located within an area identified by the City of San Bernardino as having a high sensitivity for historic archaeological resources (BCR Consulting 6, City of San Bernardino 2005b 5.4-9). The Project site contains several abandoned structures associated with the lumber yard that formerly occupied the site; however, all existing structures on-site are of modern construction, do not contain any distinctive features, and are not associated with events or people that made significant contributions to the broad patterns of California's history and cultural heritage and, therefore, do not meet the definition of historical resources as defined by California Code of Regulations, Section 15064.5. Therefore, implementation of the proposed Project has no potential to result in a substantial adverse change to any designated historic resource, because no such resources exist in the Project's ground disturbance area.

Threshold 2: Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Section 15064.5?

BCR Consulting conducted a cultural resources inventory of the Project site in August 2013, which included a records search at the San Bernardino Archaeological Information Center and an intensive pedestrian survey of the site. According to the archival records search, no prehistoric archaeological resources were previously recorded on the Project site. No prehistoric archaeological resources were

observed on the Project site during the pedestrian survey of the site (BCR Consulting 6). Additionally, according to the City of San Bernardino General Plan, the subject property and off-site improvement area are not located within a sensitive area for archaeological resources (City of San Bernardino 2005b 5.4-9). Accordingly, implementation of the proposed Project would not result in a substantial adverse change in the significance of any known archaeological resources, as defined in California Code of Regulations Section 15064.5.

Although the Project would not affect any known archaeological resources, there is a remote potential for the Project's ground-disturbing construction activities to unearth previously undiscovered resources that may be present beneath the ground surface. Due to the past use of the subject property as a lumber mill and on-going weed abatement activities on the subject property, as well as the site's location within the floodplain of the Santa Ana River, the potential for subsurface deposits to be present at the Project site is considered low. Regardless, if significant resources as defined in California Code of Regulations, Section 15064.5 are unearthed during Project-related construction activities, they could be significantly impacted if not appropriately treated. The Project's potential to impact previously undiscovered prehistoric archaeological resources, which could result in an adverse change in the significance of the resources pursuant to California Code of Regulations, Section 15064.5, is a potentially significant impact for which mitigation would be required.

Threshold 3: Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

Although the Project site does not contain any known unique geologic features, and no paleontological resources or sites were observed by the Project archaeologist during field investigations (BCR Consulting 1, 6), the Project site and off-site improvement area may be underlain at depth (i.e., 10 feet or more beneath the existing ground surface) with Pleistocene-age alluvium soils, which are documented as having a high potential to contain significant non-renewable paleontologic resources, depending upon its lithology and depositional context (Appendix B to *Technical Appendix D*). It cannot be determined from available geologic mapping at what depths such Pleistocene-era sediments might be encountered, if present beneath the Project site; however, Pleistocene-era sediments have been encountered on other properties in the Project vicinity at depths of 10 feet below the ground surface. In the event that Pleistocene-age alluvium soils are present below the ground surface within the Project impact footprint and in the event that excavations associated with the Project disturb Pleistocene-age soils, the Project could result in impacts to paleontological resources that may exist below the ground surface if they are unearthed and not properly treated. The Project's potential to directly or indirectly destroy unique paleontological resources buried beneath the ground surface is therefore a potentially significant impact and mitigation would be required.

Threshold 4: 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 within the immediate site vicinity. Field surveys conducted on the Project site did not identify the presence of any human remains and no human remains are known to exist beneath the surface of the site (BCR

Consulting 6). Nevertheless, the remote potential exists that human remains may be unearthed during grading and excavation activities associated with Project construction.

If human remains are unearthed 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." According to Section 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, by telephone within 24 hours, the Native American Heritage Commission (NAHC). Pursuant to California Public Resources Code Section 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 means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants shall 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 Section 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 5097.98, any potential impacts to human remains, including human remains of Native American descent, would be less than significant and mitigation is not required.

4.4.4 CUMULATIVE IMPACT ANALYSIS

This cumulative impact analysis considers development of the proposed Project in conjunction with other development projects in the vicinity of the Project site resulting from full buildout of the City of San Bernardino General Plan as identified in Subsection 4.0.2 of this EIR.

Record searches and field surveys of the Project area indicate the absence of significant historical sites and resources on or in the vicinity of the Project site; therefore, the Project has no potential to contribute towards a significant cumulative impact to historical sites and resources.

No prehistoric archaeological resources were identified on the Project site during site investigations. A records search conducted by BCR Consulting indicated that no prehistoric resources were previously recorded on the Project site, and only one (1) prehistoric archaeological resource has been recorded within a one (1) mile radius of the Project site. The Project site does not contain any important, known archeological resources and is located within an area that has a low potential for such resources.. In the unlikely event that such resources are buried beneath the surface of the Project site and/or off-site improvement area which are unearthed and not properly treated, the Project has the potential to significantly impact archeological resources. Other projects within the traditional Tribal Use Area of the Soboba Tribe of Luiseño Indians would similarly have the potential to impact unknown, subsurface prehistoric archaeological resources during ground-disturbing activities. Therefore, the Project's potential to impact subsurface archaeological deposits is a cumulatively significant impact for which mitigation would be required.

The proposed Project has the potential to impact paleontological resources that may be buried beneath the ground surface of the Project site and/or off-site improvement area if Pleistocene soils are encountered below 10 feet in depth. Other development projects that are located on soils shown to have a high sensitivity for paleontological resources also would have the potential to directly or indirectly destroy resources that may be located below the surface. Accordingly, the Project's potential to impact paleontological resources is a significant cumulative impact.

Finally, due to mandatory compliance required of all ground-disturbing construction activities with the provisions of 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 other development projects within the City of San Bernardino and elsewhere in 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.

4.4.5 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold 1: No Impact. The Project would not impact a historic resource. No historic sites are present on the Project site or in its off-site improvement area; therefore, no historic sites could be altered or destroyed by construction or operation of the proposed Project.

Threshold 2: Significant Direct and Cumulative Impact. Implementation of the proposed Project has the potential, however unlikely, to unearth and adversely impact archaeological resources that may be buried beneath the ground surface during Project construction activities. Potential cumulative impacts may also result if similar impacts occur in association with ongoing growth and development within the traditional Tribal Use Area of the Soboba Tribe of Luiseño Indians.

Threshold 3: Significant Direct and Cumulative Impact. The Project site and off-site improvement area are located in an area that may be underlain by Pleistocene-age soils. These soils have a high paleontological sensitivity greater than 10 feet below the ground surface. The Project has the potential to significantly impact paleontological resources if fossils that may be buried beneath the surface of the Project site or off-site impact area are unearthed during construction. Significant cumulative impacts may also result if paleontological resources are unearthed and adversely impacted by other development projects in the area.

Threshold 4: Less-than-Significant Impact. In the unlikely event that human remains are discovered during Project grading or other ground disturbing activities, the Project would be required to comply with the applicable provisions of California Health and Safety Code §7050.5 and California Public Resources Code §5097 et. seq. Mandatory compliance with State law would ensure that human remains, if encountered, are appropriately treated and would preclude the potential for significant impacts to human remains.

4.4.6 MITIGATION

Archaeological Resources

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 grading and trenching operations are trained to recognize archaeological resources should such resources be unearthed during ground-disturbing construction activities. If a suspected archaeological resource is identified on the property, the construction supervisor shall be required by his contract to immediately halt and redirect grading operations in a 100-foot radius around the find and seek identification and evaluation of the suspected resource 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 significant, Mitigation Measure MM 4.4-2 shall apply.

MM 4.4-2 If a significant archaeological resource(s) is discovered on the property, ground disturbing activities shall be suspended 100 feet around 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 resource(s). A treatment plan shall be prepared and implemented by the archaeologist to protect the identified archaeological resource(s) 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.

Paleontological Resources

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 grading and trenching operations in older alluvium deposits dating to the Pleistocene age at depths of greater than 10 feet are trained to recognize paleontological resources (fossils) should such resources be unearthed during ground-disturbing construction activities. If a suspected paleontological resource is identified on the property, the construction supervisor shall be required by his contract to immediately halt and redirect grading operations in a 100-foot radius around the find and seek identification and evaluation of the suspected resource by a qualified paleontologist meeting the definition of a qualified vertebrate paleontologist given 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 resources shall be determined by the paleontologist. If the resource is significant, 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 given 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 contains evidence that the resources were curated by an established museum repository.

4.4.7 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold 2: Less-than-Significant Impact. Implementation of Mitigation Measures MM 4.4-1 and MM 4.4-2 would ensure that any significant archaeological resources uncovered on the Project site are properly treated and mitigated to a level of less than significant.

Threshold 3: Less-than-Significant Impact. Implementation of Mitigation Measures MM 4.4-3 and MM 4.4-4 would ensure that any significant paleontological resources uncovered on the Project site are properly treated and mitigated to a level of less than significant.

4.5 GREENHOUSE GAS EMISSIONS

The analysis in this subsection is based in part on a report prepared by Urban Crossroads, Inc. titled "Alliance California Gateway South Building 3 Greenhouse Gas Analysis," dated September 25, 2013, and included as *Technical Appendix E* to this EIR. The technical report and analysis in this subsection assess the proposed Project's potential to generate greenhouse gas emissions that could contribute to Global Climate Change and its associated environmental effects.

4.5.1 EXISTING CONDITIONS

A. Introduction to Global Climate Change

Global Climate Change (GCC) refers to change in average meteorological conditions on the Earth with respect to temperature, wind patterns, precipitation, and storms. Debate exists within the scientific community regarding the extent to which GCC is occurring naturally or as a result of human activity. Some data suggests that GCC has occurred naturally over the course of thousands or millions of years, as in the case of an ice age. However, other scientists believe that the climate shift taking place since approximately year 1900 is occurring at a quicker rate and magnitude than in the past as a result of human activity and industrialization (Urban Crossroads 2013c 8)

Scientific evidence suggests that GCC is the result of increased concentrations of greenhouse gases (GHGs) in the earth's atmosphere. These gases include carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4), and fluorinated gases. These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the Earth's atmosphere, but prevent radioactive heat from escaping, thus warming the Earth's atmosphere. These gases that trap heat in the atmosphere are referred to collectively in this EIR as GHGs, which are released into the atmosphere by both natural and anthropogenic (human) activity. Without the natural GHG effect, the Earth's average temperature would be approximately 61° Fahrenheit (F) cooler than it is currently (Urban Crossroads 2013c 10).

It is not possible for an individual project like the proposed Project to generate enough GHG emissions to make a discernible change in global climate. However, the proposed Project may participate in the potential for GCC through incremental contribution of GHG emissions when considered in combination with other worldwide sources of GHGs (Urban Crossroads 2013c 8).

B. Greenhouse Gases

Emissions of CO_2, N_2O, and CH_4 are the focus of evaluation in this subsection because these gasses are the primary contributors to GCC from 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 these gases (Urban Crossroads 2013c 10).

Greenhouse gases 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 reference gas for GWP, and thus has a GWP of 1. The atmospheric lifetime and GWP of selected GHGs are summarized in Table 4.6-1, *Global Warming Potentials (GWP) and Atmospheric Lifetime of Select GHGs*. As shown in the table below, GWP ranges from 1 for CO_2 to 23,900 for sulfur hexafluoride.

Table 4.5-1 GWP and Atmospheric Lifetime of Select GHGs

GAS	ATMOSPHERIC LIFETIME (YEARS)	GWP (100 YEAR TIME HORIZON)
Carbon Dioxide (CO_2)	50-200	1
Methane (CH_4)	12 ± 3	21
Nitrous Oxide (N_2O)	120	310
HFC-23	264	11,700
HFC-134a	14.6	1,300
HFC-152a	1.5	140
PFC: Tetrafluoromethane (CH_4)	50,000	6,500
PFC: Hexafluoroethane (C_2F_6)	10,000	9,200
Sulfur Hexafluoride (SF_6)	3,200	23,900

Source: EPA 2006 (www.epa.gov/nonco2/econ-inv/table.html.
Source: Urban Crossroads 2013c, Table 2-2.

Provided below is a description of the various gases that contribute to GCC. For more information about these gasses and their associated human health effects, refer to *Technical Appendix E*, pages 11-19 and the reference sources cited therein.

- Water Vapor (H_2O) is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. The feedback loop in which water is involved is critically important to projecting future climate change. 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 can be higher (in essence, the air is able to 'hold' more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. 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 more able to reflect incoming solar radiation, thereby allowing less energy to reach the Earth's surface and heat it up. There are no human health effects from water vapor itself; however, when some pollutants come in contact with water vapor, they can dissolve 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 manmade sources. Natural sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals and fungus; evaporation from oceans; and volcanic outgassing. Manmade sources include: the burning of coal, oil, natural gas, and wood. Since the industrial revolution began in the mid-1700s, the sort of human activity that increases CO_2 emissions has increased dramatically. As an example, prior to the industrial revolution, CO_2 concentrations were fairly stable at 280 parts per million (ppm). Today, they

are around 370 ppm, an increase of more than 30%. Exposure to CO_2 in high concentrations can cause human health effects, but outdoor levels are not high enough to adversely affect human health.

- Methane (CH_4) is an extremely effective absorber of radiation, though its atmospheric concentration is less than CO_2 and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs. Methane has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropocentric sources include fossil-fuel combustion and biomass burning. No human health effects are known to occur from atmospheric exposure to methane.

- Nitrous Oxide (N_2O) concentrations began to rise in the atmosphere at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb). Nitrous oxide is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. 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. It is used as an aerosol spray propellant, (e.g., in whipped cream bottles), in potato chip bags to keep chips fresh, and in rocket engines and in race cars. N_2O can be transported into the stratosphere, be deposited on the Earth's surface, and be converted to other compounds by chemical reaction. Also known as laughing gas, N_2O is a colorless greenhouse gas that can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, 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 nontoxic, nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source, but were first synthesized in 1928. They 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 was extremely successful, so much so that levels of the major CFCs are now remaining steady or declining. However, their long atmospheric lifetimes mean that 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. Out of all GHGs, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF_3), HFC-134a (CF_3CH_2F), and HFC-152a (CH_3CHF_2). Prior to 1990, the only significant emissions were of HFC-23. HFC-134a emissions are increasing due to its use as a refrigerant. The U.S. EPA estimates that concentrations of HFC-23 and HFC-134a are now about 10 parts per trillion (ppt) each; and that concentrations of HFC-152a are about 1 ppt. No human health effects are known to result from exposure to HFCs, which are manmade 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). The U.S. EPA estimates that concentrations of CF_4 in the atmosphere are over 70 ppt. No human health effects are known to result from exposure to PFCs.

- Sulfur Hexafluoride (SF_6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (23,900). The U.S. Environmental Protection Agency (EPA) indicates that concentrations in the 1990s were about 4 ppt. In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing. 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.

C. Greenhouse Gas Emissions Inventories

❑ Global

Worldwide anthropogenic (man-made) GHG emissions are tracked by the Intergovernmental Panel on Climate Change for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Man-made GHG emissions data for Annex I nations are available through Year 2011. For the Year 2011, the sum of these emissions totaled approximately 26,427 MMTCO2e, as shown in Table 4.6-2, *Top GHG Producer Countries and the European Union*. The GHG emissions in more recent years may differ from the inventories presented in Table 4.6-2; however, the data is representative of currently available inventory data (Urban Crossroads 2013c 8-9).

Table 4.5-2 Top GHG Producer Countries and the European Union

EMITTING COUNTRIES	GHG EMISSIONS ($MMTCO_2E$)
China	6,703
United States	6,608
European Union	8,338
Russian Federation	2,159
India	1,410
Japan	1,209
Total	**26,427**

Used http://unfccc.int data for Annex I countries. Consulted the http://www.eia.gov site to reference Non-Annex I countries such as China and India.
Source: Urban Crossroads 2013c, Table 2-1.

❑ United States

As noted in Table 4.6-2, the United States, as a single country, was the second highest producer of GHG emissions in 2011. The primary GHG emitted by human activities in the United States was CO_2, representing approximately 83% of the total GHGs. CO_2 from fossil fuel combustion, the

largest source of United States GHG emissions, accounted for approximately 78% of the United States' 2011 GHG emissions (Urban Crossroads 2013c 9).

❑ State of California

The California Air Resources Board (CARB) compiles GHG inventories for the State of California. Based upon the 2008 GHG inventory data (i.e., the latest year for which data are available for the 2000 – 2008 GHG inventory), California emitted 474 $MMTCO_2e$ including emissions resulting from imported electrical power in 2008. Based on the CARB inventory data and GHG inventories compiled by the World Resources Institute, California's total statewide GHG emissions rank second in the United States (Texas is number one) with emissions of 417 $MMTCO_2e$, excluding emissions related to imported power (Urban Crossroads 2013c 9).

Although California's rate of growth of GHG emissions is slowing, the state is still a substantial contributor to the United States' GHG emissions inventory total. Despite a population increase of 16% between 1990 and 2004, and based on a review of GHG inventories for those years, California had significantly slowed the rate of growth of GHG emissions. This is in part due to the implementation of energy efficiency programs as well as adoption of strict emission controls (Urban Crossroads 2013c 10).

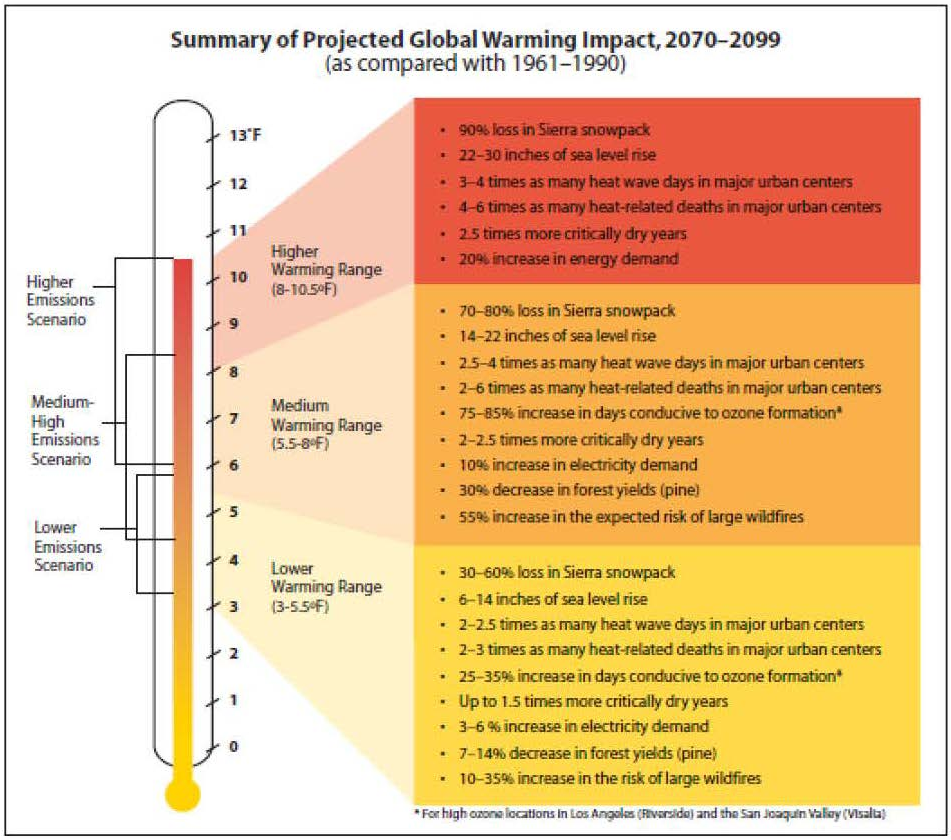
D. Potential Effects of Climate Change in California

The California Environmental Protection Agency (CalEPA) published a report titled "Scenarios of Climate Change in California: An Overview" (herein called the "Climate Scenarios report") in February 2006, that is generally instructive about effects of global warming 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 (3.0-5.5^{o}F); medium warming range (5.5-8.0^{o}F); and higher warming range (8.0-10.5^{o}F). The Climate Scenarios report then presents an analysis of future climate in California under each warming range, that while uncertain, present a picture of the GCC induced trends in California (Urban Crossroads 2013c 14).

In addition, most recently on August 5, 2009, the California Natural Resources Agency released a public review draft of its "California Climate Adaptation Strategy" report that 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. This report responds to the Governor's Executive Order S-13-2008 that called on state agencies to develop California's strategy to identify and prepare for expected climate impacts (Urban Crossroads 2013c 14).

According to the reports, substantial temperature increases arising from increased GHG emissions worldwide could result in a variety of impacts to the people, economy, and environment of California, with the severity of the effects depending upon actual future emissions of GHGs and associated warming. Figure 4.6-1, *Summary of Projected Global Warming Impact, 2070-2099*, presents the potential impacts of global warming.

Figure 4.5-1 Summary of Projected Global Warming Impact, 2070-2099



Source: Urban Crossroads 2013c, Figure 1.

Under the emissions scenarios of the Climate Scenarios and California Climate Adaption Strategy reports, the impacts of global warming in California have the potential to include, but are not limited to, the following areas. For more information, refer to *Technical Appendix E*, pages 14-19 and the reference sources cited therein.

- Human Health Effects. The potential human health effects related directly to GHG emissions (including CO_2, N_2O, and CH_4) from development projects still being debated in the scientific community. The contribution that these GHGs make to GCC have the potential to cause adverse effects to human health in various ways. Increases in the Earth's ambient temperatures would result in more intense heat waves, causing more heat-related deaths. Scientists also purport that higher ambient temperatures would increase disease survival rates and result in more widespread disease. Climate change also could cause shifts in weather patterns, potentially resulting in devastating droughts and food shortages in some areas (American Lung Association, 2004).
- Water Resource Effects. A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages. Additionally, if temperatures continue to increase, more precipitation could fall as

rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70% to 90%. The loss of snowpack could pose challenges to water managers, hamper hydropower generation, and adversely affect winter tourism. The State's water supplies are also at risk from rising sea levels. An influx of salt water could degrade California's estuaries, wetlands, and groundwater aquifers and be a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta – a major fresh water supply.

- Agriculture Effects. Increased temperatures could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. California farmers could face water shortages. Crops may grow faster and be more susceptible to pests and disease outbreaks due to higher atmospheric temperatures. Faster plant growth could worsen the quantity and quality of yield for some crops such as wine grapes, fruit, and nuts. Although higher CO_2 levels can stimulate plant production and increase plant water-use efficiency, there may still be a water shortage for the agricultural industry. In addition, continued global climate change could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants.
- Forest and Landscape Effects. GCC has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55%, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the state. Continued global climate change also has the potential to alter natural ecosystems and biological diversity, including a decrease in forest productivity, as a result of increasing temperatures.
- Sea Level Effects. Rising sea levels, more intense coastal storms, and warmer water temperatures could increasingly threaten the state's coastal regions. Under the higher warming range scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate low-lying coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. Under the lower warming range scenario, sea level could rise 12 to 14 inches.

E. Regulatory Setting

Below is an account of the regulatory programs, policies, laws, and regulations that are applicable to GHG emissions and GLC in California. For more information, refer to *Technical Appendix F*, pages 22-33 and the reference sources cited therein.

❑ 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 global climate change. 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 greenhouse gas emissions. As a result, the Climate Change Action Plan was developed

to address the reduction of GHGs in the United States. The Plan currently consists of more than 50 voluntary programs for member nations to adopt.

The Kyoto protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. Some have estimated that if the commitments outlined in the Kyoto protocol are met, global GHG emissions could be reduced an estimated 5% from 1990 levels during the first commitment period of 2008-2012. 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. In December 2009, international leaders from 192 nations met in Copenhagen to address the future of international climate change commitments post-Kyoto.

❑ Federal Regulation and the Clean Air Act

Coinciding with the 2009 meeting of international leaders in Copenhagen, on December 7, 2009, the U.S. Environmental Protection Agency (EPA) issued an Endangerment Finding under §202(a) of the Clean Air Act, 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 Clean Air Act. To date, the EPA has not promulgated regulations on GHG emissions, but it has begun to develop them.

Previously the EPA had not regulated GHGs under the Clean Air Act 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 Clean Air Act and directed the EPA to decide whether the gases endangered public health or welfare. The EPA had also not moved aggressively to regulate GHGs because it expected Congress to make progress on GHG legislation, primarily from the standpoint of a cap-and-trade system. However, proposals circulated in both the House of Representative and Senate have been controversial and it may be some time before the U.S. Congress adopts major climate change legislation. The EPA's Endangerment Finding paves the way for federal regulation of GHGs with or without Congress.

Although global climate change did not become an international concern until the 1980s, efforts to reduce energy consumption began in California in response to the oil crisis in the 1970s, resulting in the incidental reduction of greenhouse gas emissions. In order to manage the state's energy needs and promote energy efficiency, AB 1575 created the California Energy Commission (CEC) in 1975.

❑ Title 24 Energy Standards

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 were adopted in 2008 and became effective on January 1, 2010.

Part 11 of the Title 24 Building Standards Code 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.

❑ California Assembly Bill No. 1493 (AB 1493)

AB 1493 requires CARB to develop and adopt the nation's first greenhouse gas emission standards for automobiles. The Legislature declared in AB 1493 that global warming was a matter of increasing concern for public health and environment in California. Further, the legislature stated that technological solutions to reduce greenhouse gas emissions would stimulate the California economy and provide jobs.

To meet the requirements of AB 1493, CARB approved amendments 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 Sections 1900 (CCR 13 1900) and 1961 (CCR 13 1961) and adoption of §1961.1 (CCR 13 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.

In December 2004 a group of car dealerships, automobile manufacturers, and trade groups representing automobile manufacturers filed suit against CARB to prevent enforcement of CCR 13 1900 and CCR 13 1961 as amended by AB 1493 and CCR 13 1961.1 (*Central Valley Chrysler-Jeep et al. v. Catherine E. Witherspoon, in her official capacity as Executive Director of the California Air Resources Board, et al.*). The suit, heard in the U.S. District Court for the Eastern District of California, contended that California's implementation of regulations that in effect regulate vehicle fuel economy violates various federal laws, regulations, and policies. In January 2007, the judge hearing the case accepted a request from the State Attorney General's office that the trial be postponed until a decision is reached by the U.S. Supreme Court on a separate case addressing GHGs. In the Supreme Court Case, *Massachusetts vs. EPA*, the primary issue in question is whether the federal CAA provides authority for U.S. EPA to regulate CO_2 emissions. In April 2007, the U.S. Supreme Court ruled in Massachusetts' favor, holding that GHGs are air pollutants under the CAA. On December 11, 2007, the judge in the Central Valley Chrysler-Jeep case rejected each plaintiff's arguments and ruled in California's favor. On December 19, 2007, the U.S. EPA denied California's waiver request. California filed a petition with the Ninth Circuit Court of Appeals challenging U.S. EPA's denial on January 2, 2008.

The Obama administration subsequently directed the USEPA to re-examine their decision. On May 19, 2009, challenging parties, automakers, the State of California, and the federal government reached an agreement on a series of actions that would resolve these current and potential future

disputes over the standards through model year 2016. In summary, the USEPA and the U.S. Department of Transportation agreed to adopt a federal program to reduce GHGs and improve fuel economy, respectively, from passenger vehicles in order to achieve equivalent or greater greenhouse gas benefits as the AB 1493 regulations for the 2012–2016 model years. Manufacturers agreed to ultimately drop current and forego similar future legal challenges, including challenging a waiver grant, which occurred on June 30, 2009. The State of California committed to (1) revise its standards to allow manufacturers to demonstrate compliance with the fleet-average GHG emission standard by "pooling" California and specified State vehicle sales; (2) revise its standards for 2012–2016 model year vehicles so that compliance with USEPA-adopted GHG standards would also comply with California's standards; and (3) revise its standards, as necessary, to allow manufacturers to use emissions data from the federal Corporate Average Fuel Economy (CAFE) program to demonstrate compliance with the AB 1493 regulations. Both of these programs are aimed at light-duty auto and light-duty trucks.

CARB's on-road heavy-duty diesel vehicles regulations require diesel trucks and buses that operate in California to be upgraded to reduce emissions. Heavier trucks were required to be retrofitted with PM filters beginning January 1, 2012, and older trucks must be replaced starting January 1, 2015. CARB reports that by January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent. The heavy-duty vehicles regulation applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds.

❑ Executive Order S-3-05

Executive Order S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snow pack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 1990 level by 2020, and to 80% below the 1990 level by 2050. The Executive Order directed the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce greenhouse gas emissions to the target levels. The Secretary also is required to submit biannual reports to the Governor and state Legislature describing: (1) progress made toward reaching the emission targets; (2) impacts of global warming on California's resources; and (3) mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the Secretary of the CalEPA created a Climate Action Team (CAT) made up of members from various state agencies and commission. CAT released its first report in March 2006. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government and community actions, as well as through state incentive and regulatory programs.

❑ California Assembly Bill 32 (AB 32)

In September 2006, Governor Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. This reduction is to be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG

emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that CARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

In November 2007, CARB completed its estimates of 1990 GHG levels. Net emission 1990 levels were estimated at 427 MMTs (emission sources by sector were: transportation – 35%; electricity generation – 26%; industrial – 24%; residential – 7%; agriculture – 5%; and commercial – 3%). Accordingly, 427 MMTs of CO_2 equivalent was established as the emissions limit for 2020. For comparison, CARB's estimate for baseline GHG emissions was 473 MMT for 2000 and 532 MMT for 2010. "Business as usual" conditions (without the 30% reduction to be implemented by CARB regulations) for 2020 were projected to be 596 MMTs.

In December 2007, CARB approved a regulation for mandatory reporting and verification of GHG emissions for major sources. This regulation covered major stationary sources such as cement plans, oil refineries, electric generating facilities/providers, and co-generation facilities, which comprise 94% of the point source CO_2 emissions in the State.

On December 11, 2008, CARB adopted a scoping plan to reduce GHG emissions to 1990 levels. The Scoping Plan's recommendations for reducing GHG emissions to 1990 levels by 2020 include emission reduction measures, including a cap-and-trade program linked to Western Climate Initiative partner jurisdictions, green building strategies, recycling and waste-related measures, as well as Voluntary Early Actions and Reductions. Implementation of individual measures must begin no later than January 1, 2012, so that the emissions reduction target can be fully achieved by 2020.

Table 4.6-3, *Scoping Plan GHG Reduction Measures Toward 2020 Target*, shows the proposed reductions from regulations and programs outlined in the Scoping Plan. While local government operations were not accounted for in achieving the 2020 emissions reduction, local land use changes are estimated to result in a reduction of 5 $MMTCO_2e$, which is approximately 3% of the 2020 GHG emissions reduction goal. In recognition of the critical role local governments will play in successful implementation of AB 32, CARB is recommending GHG reduction goals of 15% of 2006 levels by 2020 to ensure that municipal and community-wide emissions match the state's reduction target. According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2% through land use planning, resulting in a potential GHG reduction of 2 MMTCO2e (or approximately 1.2% of the GHG reduction target).

❑ California Senate Bill No. 1368 (SB 1368)

In 2006, the State Legislature adopted Senate Bill 1368 (SB 1368), which was subsequently signed into law by the Governor. SB 1368 directs the California Public Utilities Commission (CPUC) to adopt a greenhouse gas 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 the emissions of a relatively clean, combined cycle natural gas power plant. Due to the carbon content of its fuel source, a coal-fired plant cannot meet this standard because such plants emit roughly twice as much carbon as natural gas, combined cycle plants. Accordingly, the new law will effectively prevent California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State.

Table 4.5-3 Scoping Plan GHG Reduction Measures Toward 2020 Target

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% 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**

MMTons CO_2e: million metric tons of CO_2e.
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% through land use planning, resulting in a potential GHG reduction of 2 million metric tons of CO_2e (or approximately 1.2% of the GHG reduction target). However, these reductions were not included in the Scoping Plan reductions to achieve the 2020 Target.
Source: Urban Crossroads 2013c, Table 2-3.

Thus, SB 1368 will lead to dramatically lower greenhouse gas emissions associated with California energy demand, as SB 1368 will effectively prohibit California utilities from purchasing power from out of state producers that cannot satisfy the EPS standard required by SB 1368.

❑ Senate Bill 97 (SB 97)

Pursuant to the direction of SB 97, OPR released preliminary draft CEQA Guideline amendments for greenhouse gas emissions on January 8, 2009, and submitted its final proposed guidelines to the Secretary for Natural Resources on April 13, 2009. The Natural Resources Agency adopted the Guideline amendments and they became effective on March 18, 2010.

Of note, the new guidelines state that a lead agency shall have discretion to determine whether to use a quantitative model or methodology, or in the alternative, rely on a qualitative analysis or performance based standards. CEQA Guideline § 15064.4(a) state that "[a] lead agency shall have discretion to determine, in the context of a particular project, whether to: (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use… ; or (2) Rely on a qualitative analysis or performance based standards."

CEQA emphasizes 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]). Section 15064.4(b) of the CEQA Guidelines provides direction for lead agencies for assessing the significance of impacts of greenhouse gas emissions. The CEQA Guideline amendments do not identify a threshold of significance for greenhouse gas emissions, nor do they prescribe assessment methodologies or specific mitigation measures. Instead, they call for a "good-faith effort, based on available information, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project." The amendments encourage lead agencies to consider many factors in performing a CEQA analysis and preserve lead agencies' discretion to make their own determinations based upon substantial evidence.

❑ Executive Order S-01-07

On January 18, 2007, California Governor Schwarzenegger, through Executive Order S-01-07, mandated a statewide goal to reduce the carbon intensity of California's transportation fuel by at least 10% by 2020. The order also requires that a California specific Low Carbon Fuel Standard be established for transportation fuels.

❑ Senate Bills 1078 and 107 and Executive Order S-14-08

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20% of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008 Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Energy Standard to 33% renewable power by 2020.

❑ Senate Bill 375 (SB 375)

SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. 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. If MPOs did not meet the GHG reduction targets, transportation projects are not eligible for funding programmed after January 1, 2012.

❑ CARB's Preliminary Draft Staff Proposal for Interim Significance Thresholds

Separate from its Scoping Plan approved in December of 2008, CARB issued a Staff Proposal in October 2008, as its first step toward developing recommended statewide interim thresholds of significance for GHGs that may be adopted by local agencies for their own use. CARB staff's objective in this proposal is to develop a threshold of significance that will result in the vast majority (approximately 90% statewide) of GHG emissions from new industrial projects being subject to CEQA's requirement to impose feasible mitigation. The proposal does not attempt to address every type of project that may be subject to CEQA, but instead focuses on common project types that, collectively, are responsible for substantial GHG emissions – specifically, industrial, residential, and commercial projects. CARB is developing these thresholds in these sectors to advance climate objectives, streamline project review, and encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the state. These draft thresholds are under revision in response to comments. There is currently no timetable for finalized thresholds at this time.

As currently proposed by CARB, the threshold consists of a quantitative threshold of 7,000 metric tons (MT) of CO_2e per year for operational emissions (excluding transportation), and performance standards for construction and transportation emissions. These performance standards have not yet been developed. CARB's proposal was not final at the time that the NOP for this EIR was released for public review (October 2013) and thus cannot be applied to the Project. Further, CARB's proposal sets forth draft thresholds for industrial projects that have high operational stationary GHG emissions, such as manufacturing plants, or uses that utilize combustion engines. Mobile source emissions are not addressed. The GHG emissions that would be emitted by the Project evaluated in this EIR would be mostly from mobile sources, and as such, the CARB proposal is not germane to the proposed Project.

❑ South Coast Air Quality Management District Recommendations for Significance Thresholds

In April 2008, the South Coast Air Quality Management District (SCAQMD), in order to provide guidance to local lead agencies on determining the significance of GHG emissions identified in CEQA documents, convened a "GHG CEQA Significance Threshold Working Group." The goal of the working group is to develop and reach consensus on an acceptable CEQA significance threshold for GHG emissions that would be utilized on an interim basis until CARB (or some other state agency) develops statewide guidance on assessing the significance of GHG emissions under CEQA.

Initially, SCAQMD staff presented the working group with a significance threshold that could be applied to various types of projects—residential; non-residential; industrial; etc. However, final thresholds were never discussed or adopted for land use projects. Notwithstanding, in December

2008, staff presented the SCAQMD Governing Board with a significance threshold for "industrial projects" where the SCAQMD is the lead agency. This threshold utilizes a tiered approach to determine a project's significance, with 10,000 metric tons of MTCO2e as a screening numerical threshold for industrial projects. The City could apply this threshold; however, based on documentation in the rulemaking for the threshold the "industrial" project types the threshold is intended for is for permitted equipment e.g., boilers, refineries, etc. and not traditional industrial projects within the context of land development, thus this threshold would not be applicable to the Project. The working group last convened in 2010 and it is unclear if the SCAQMD will re-initiate the working group or if the process has been abandoned altogether.

- **City of San Bernardino**

The City of San Bernardino does not have any regulations in place applicable to GHG impacts of development projects such as the proposed Project.

4.5.2 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 which, if exceeded, would constitute a finding of significance. As discussed above in Subsection 4.6.1, while Project-related GHG emissions can be estimated, the direct impacts of such 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 would has no potential to result in a direct impact to global warming; 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 way.

The CEQA Guidelines indicate that a project would result in a significant impact on climate change if a project were to:

1. *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or*
2. *Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.*

Because AB 32 is the primary plan, policy or regulation adopted in the State of California to reduce GHG emissions, the proposed Project would have a cumulative considerable significant impact on GCC if the Project would impede compliance with the GHG emissions reduction mandate established by AB 32, which requires that California's GHG emissions limit be reduced to 1990 levels by 2020. As noted in the AB 32 Scoping Plan, a reduction of 28.5 percent below the "business as usual" scenario is required to meet the goals of AB 32. Therefore, should the proposed Project reduce its GHG emissions by 28.5 percent or greater, impacts would be less than cumulative

considerable. For information purposes, and because the City of San Bernardino does not have an adopted significance threshold for GHG emissions, the analysis below also includes a numeric calculation of the Project's GHG emissions and compares that numeric value to the SCAQMD's draft significance threshold of 10,000 metric tons of MTCO2e for "industrial projects," which is not adopted but was proposed by SCAQMD staff as a screening numerical threshold for stationary source industrial projects where the SCAQMD serves as lead agency. The application of a draft screening threshold for stationary sources of GHG emissions to a development like the proposed Project that would generate GHG emissions primarily from mobile sources presents a highly conservative comparison of emission levels.

4.5.3 IMPACT ANALYSIS

A. Methodology for Estimating Project-Related Greenhouse Gas Emissions

CEQA Guidelines §15064.4(b)(1) states that a lead agency may use a model or methodology to quantify greenhouse gas emissions associated with a project. On July 26, 2013, the SCAQMD released the California Emissions Estimator Model (CalEEMod™) Emissions Inventory Model™. The purpose of this model is to estimate air quality and GHG emissions from direct and indirect sources and quantify applicable air quality and GHG reductions achieved from mitigation measures. As such, the February 2013 CalEEMod™ was used for estimating Project-related GHG emissions. The CalEEMod™ model includes GHG emissions from the following source categories: construction, area, energy, mobile, waste, water (Urban Crossroads 2013c 29).

A full life-cycle analysis (LCA) is not included in the Project's Greenhouse Gas Analysis (*Technical Appendix E*) due to the lack of consensus guidance on LCA methodology. Life-cycle analysis (i.e., assessing economy-wide GHG emissions from the processes in manufacturing and transporting all raw materials used in the project development and infrastructure) depends on emission factors or econometric factors that are not well established for all processes. At this time a LCA would be extremely speculative and thus has not been prepared (Urban Crossroads 2013c 29).

❑ Methodology for Estimating Project-Related Construction Emissions

Construction activities associated with the proposed Project would result in emissions of CO_2, CH_4, and N_2O from the following construction activities:

- Site Preparation
- Grading
- Paving
- Building Construction
- Architectural Coatings (Painting)
- Construction Workers Commuting

Based on information about the Project's anticipated construction schedule and equipment as supplied by the Project Applicant was input into the CalEEMod™ model and defaults for all other assumptions were utilized. Please refer to Appendix B of *Technical Appendix E* to this EIR for more details on the construction emissions estimate methodology. Refer also to the specific detailed modeling inputs/outputs contained in Appendix A of *Technical Appendix E*. A detailed summary of

construction equipment assumptions (pieces of equipment in use by phase) that were used as model inputs is provided on Table 4.5-4, *Construction Equipment Assumptions*.

In accordance with SCAQMD recommendations, the Project's construction phase GHG emissions were quantified and amortized over the life of the Project. To amortize the emissions over the life of the Project per the recommended SCAQMD methodology, the total GHG emissions associated with the Project's proposed construction activities was calculated, divided by the project life span default

Table 4.5-4 Construction Equipment Assumptions (pieces of equipment)

Operation	Scraper	Grader	Rubber Tired Dozer	Tractor/Loader/Backhoe	Excavator	Pavers	Paving Equipment	Rollers	Forklift	Cranes	Air Compressor	Generator Set	Welder	Water Truck
Site Preparation	3	1	2	4										2
Grading	6	2	2	2	2									2
Paving						2	2	2						1
Building Construction									5	2		2	2	1
Architectural Coating											2			

Source: Urban Crossroads 2013c, Table 3-2.

(i.e., 30 years), and then adding that number to the annual operational phase GHG emissions. As such, construction emissions were amortized over a 30-year period and added to the annual operational phase GHG emissions (Urban Crossroads 2013c 31).

❑ Methodology for Estimating Project-Related Operational Emissions

Operational activities associated with the proposed Project would result in emissions of CO_2, CH_4, and N_2O from the following primary sources, each of which is discussed below: 1) Building Energy Use; 2) Water Supply, Treatment and Distribution; 3) Solid Waste; and 4) Vehicles.

- *Building Energy Use*

GHGs are emitted from buildings as a result of activities for which electricity and natural gas are typically used as energy sources. Combustion of any type of fuel emits CO_2 and other GHGs directly into the atmosphere; these emissions are considered direct emissions associated with a building. GHGs are also emitted during the generation of electricity from fossil fuels; these emissions are considered to be indirect emissions. Unless otherwise noted, CalEEMod™ default parameters were used (Urban Crossroads 2013c 31).

- *Water Supply, Treatment and Distribution*

Indirect GHG emissions result from the production of electricity used to convey, treat and distribute water and wastewater. The amount of electricity required to convey, treat and distribute water depends on the volume of water as well as the sources of the water. The Project's water demand was estimated to be approximately 8,091,941 gallons of water per year which includes 7,036,470 gallons

per year of domestic (indoor) water use and 1,055,471 gallons per year of irrigation (outdoor) water use (Urban Crossroads 2013c 31).

- *Solid Waste*

The Project would result in the generation and disposal of solid waste. A large percentage of this waste will be diverted from landfills by a variety of means, through adherence to mandatory requirements for reducing the amount of waste generated, recycling, and/or composting. Waste not diverted would be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material. Unless otherwise noted, CalEEMod™ model default parameters were used (Urban Crossroads 2013c 31).

- *Vehicles*

GHG emissions would also result from mobile sources associated with the Project, including daily operation of motor vehicles by visitors, employees, and customers. Trip characteristics available from the Project's traffic report contained as *Technical Appendix I1* to this EIR were utilized in the GHG analysis. It should be noted that the Project's traffic study presents the total Project vehicle trips in terms of Passenger Car Equivalents (PCEs) in an effort to recognize and acknowledge the effects of heavy vehicles at the study area intersections. The PCE trips were not used for the purposes of quantifying GHG emissions; rather, to be more representative of actual emissions, the actual number of passenger cars (including light trucks) and heavy trucks were used in the analysis. The vehicle fleet mix, in terms of actual vehicles, as derived from the traffic study for the Project is comprised of approximately 79.57% passenger cars (1,603 vehicles) and approximately 20.43% total trucks (411 vehicles) (Urban Crossroads 2013c 33).

A technical deficiency inherent in calculating the projected mobile source vehicle emissions associated with any project is related to the estimation of trip length and vehicle miles traveled (VMT). VMT for a given project is calculated by the total number of vehicle trips a project would generate multiplied by average trip length. This method of estimating VMT for use in calculating vehicle emissions can result in the over-estimation and double-counting of emissions because for a distribution warehouse building such as the proposed Project with no identified tenant, the land use could attract (divert) existing vehicle trips that are already on the circulation system as opposed to generating new trips if the tenant moves to this location from another building. Under such circumstances, the proposed Project would merely redistribute existing mobile emissions. Accordingly, the use of models that measure overall emissions can overstate emission levels without acknowledging that some level of emissions associated with a project under study would still occur in the region regardless of whether the project is built. As such, the estimation of GHG emissions associated with the proposed Project and disclosed herein assumes a VMT value that very likely overestimates the actual impact of the Project (Urban Crossroads 2013c pp. 33-35).

In the last several years, the SCAQMD has provided numerous comments on the trip length for warehouse/distribution and industrial land use projects. The SCAQMD asserts that the model-default trip length in CalEEMod™ and the URBan EMISsions (URBEMIS) 2007 model (version 9.2.4) would underestimate emissions. The SCAQMD asserts that for warehouse/distribution center and industrial land use projects, most of the heavy-duty trucks would be hauling consumer goods, often from the Ports of Long Beach and Los Angeles and/or to destinations outside of California. The SCAQMD states that for this reason, the model default trip length (approximately 12.6 miles) would

not be representative of activities at like facilities. The SCAQMD generally recommends the use of a 40-mile one-way trip length (Urban Crossroads 2013c 34).

SCAG maintains a regional transportation model. In its most recent (2008) transportation validation for the 2003 Regional Model, SCAG indicates the average internal truck trip length for the SCAG region (which includes the proposed Project site) is 5.92 miles for Light Duty Trucks, 13.06 miles for Medium Duty Trucks, and 24.11 miles for Heavy Duty Trucks (Urban Crossroads 2013c 34).

For analysis of the proposed Project, for passenger car trips, a one-way trip length of 13.3 miles based on CalEEMod™ model defaults which relies on data provided by SCAG for trip length. For heavy duty trucks, an average trip length was derived from distances from the Project site to the far edges of the South Coast Air Basin (SCAB) based on the Project's traffic pattern shown in *Technical Appendix I1*. It is appropriate to stop the VMT calculation at the boundary of the SCAB because any activity beyond that boundary would be speculative at best (the SCAB encompasses 6,745 square miles) and because the selected approach is consistent with professional industry practice. Further, the applicable regional emissions thresholds are relative to the air basin in which emissions occur – in other words, there are different emission thresholds for different air basins and it would be speculative to analyze trips outside of the SCAB because the ultimate destinations of those trips are unknown and different thresholds would apply in other air basins. (Urban Crossroads 2013c 35).

- Project site to the Port of Los Angeles/Long Beach: 74 miles;
- Project site to Rail Yard: 5 miles; and
- Project site to I-10 East to the end of the SCAB: 40 miles.

Assuming that 55% of all delivery trips will travel to and from the Project and the Port of Los Angeles/Long Beach, and the remainder as distribution trips to all other locations, the average truck trip length is calculated as 55.19 miles. For analysis purposes, as a conservative measure, the average truck trip length was rounded to 60 miles. An overall weighted-average trip length for the Project was calculated using the percentage of trips associated with passenger cars (including light duty trucks) versus heavy trucks, the passenger car trip length of 13.3 miles and truck trip length of 60 miles was utilized. The resulting weighted average trip length of 22.84 miles was entered into the CalEEMod™ model calculations (Urban Crossroads 2013c 35).

Threshold 1: ***Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?***

Threshold 2: ***Would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?***

A summary of the proposed Project's projected annual operational GHG emissions, including the amortized construction emissions, is provided in Table 4.6-5, *Total Annual Project Greenhouse Gas Emissions.* This represents the "business as usual (BAU) scenario," which does not take into account applicable regulatory developments since publication of the CARB Scoping Plan in 2006 (discussed above) and design features of the Project that would reduce GHG emissions from direct and indirect sources. The operational GHG emissions for the Project's BAU scenario, including the amortized

construction emissions, are estimated to be 11,708.55 MT of MTCO2e per year. The primary source of emissions would occur from mobile sources (vehicles traveling to and from the Project site).

As indicated in §15064(b) of the State CEQA Guidelines, the determination of significance of greenhouse gases is not "ironclad;" rather, the "determination of whether a project may have a significant effect on the environment calls for a "careful judgment" by the City "based to the extent possible on scientific and factual data." The City of San Bernardino has not adopted a numeric threshold of significance for emissions of GHGs.

Table 4.5-5 Total Annual Project Greenhouse Gas Emissions (BAU)

EMISSION SOURCE	EMISSIONS (METRIC TONS PER YEAR)			
	CO_2	CH_4	N_2O	Total CO_2E
Annual construction-related emissions amortized over 30 years	47.23	0.0072	--	47.38
Area	0.03	9.00e-5	--	0.03
Energy	1,252.08	0.05	0.01	1,257.33
Mobile Sources	9,589.03	0.72	--	9,604.12
Waste	228/85	13.52	--	512.87
Water Usage	31.81	0.23	5.69e-3	334.21
Total CO_2e (All Sources)	**11,708.55**			

Source: Urban Crossroads 2013c, Table 3-3.

The SCAQMD's draft screening threshold of 10,000 MT of MTCO2e for "industrial projects" applies to stationary sources (such as manufacturing plants or uses that utilize combustion engines) and not mobile sources, and is not used as a significance threshold by the City of San Bernardino. Nevertheless, comparison of the GHG emissions from the Project's area sources (construction, area, energy, waste, and water usage) indicates that the Project's emissions from such sources would be well below the draft SCAQMD screening threshold for stationary sources. With regard to GHG emissions from mobile sources, as discussed above, the estimation of the Project's mobile source GHG emissions is highly speculative, because the methodology to quantify mobile source GHG emissions assumes that all of the vehicle trips to and from the Project site would be new, rather than redistributed vehicle trips from other areas. No methods or models exist to estimate the Project's net contribution to regional or global vehicle miles traveled. Because the estimation of the Project's contribution to mobile source GHG emissions is highly speculative, and based on the absence of applicable numerical thresholds for mobile source GHG emissions, use of a quantitative threshold of significance is not meaningful. Regardless, for information disclosure purposes it is acknowledged that the Project's <u>total</u> emissions of 11,708.55 MT of MTCO2e per year (stationary and mobile source emissions combined) under a BAU scenario would be higher than the SCAQMD's draft numerical screening threshold of 10,000 MT of MTCO2e for "industrial project" stationary sources. As previously noted, the SCAQMD's screening threshold is not adopted by the SCAQMD, applies to stationary sources and not mobile sources, and is not used as a significance threshold by the City of San Bernardino. Accordingly, a qualitative analysis set forth below is used to determine significance of the Project's GHG emissions, based on consistency with regional and state GHG plans. Specifically, compliance with the CARB Scoping Plan and the State of California's Climate Action Team Report (2006) is used. The analysis below sets out the factual basis for the City's determination regarding the effect of Project-related GHG emissions.

❑ Consistency with the CARB Scoping Plan

AB 32 requires California to reduce its GHG emissions to 1990 levels by the Year 2020, which correlates to an approximate reduction of 28.5% below BAU. CARB identified reduction measures to achieve this goal as set forth in the CARB Scoping Plan. Thus, projects that are consistent with the CARB Scoping Plan are also consistent with AB 32's mandate to reduce GHG emissions.

The total amount of Project-related GHG emissions when accounting for applicable regulatory developments since 2006, Project design features, and the mitigation measures set forth in Subsection 4.1, *Air Quality*, of this EIR would reduce GHG emissions from direct and indirect sources combined to a total of 8,297.48 MTCO2e. This results in a 29.13% reduction from BAU; thus, with implementation of the Project's design features and regulatory developments, the Project's GHG reduction would exceed the AB 32 reduction target of 28.5% and a less than significant GHG impact would result. Refer to Table 4.6-6, *Summary of GHG Emissions BAU vs. Project*, for a comparison.

Table 4.5-6 Summary of GHG Emissions BAU vs. Project

EMISSION SOURCE	EMISSIONS (METRIC TONS PER YEAR) Total CO_2E	
	BAU	Project
Annual construction-related emissions amortized over 30 years	47.38	47.38
Area	0.03	0.03
Energy	1,257.33	895.36
Mobile Sources	9,604.12	6,907.39
Waste	512.87	256.44
Water Usage	334.21	238.26
Total	11,708.55	8,297.48
Percentage Improvement over BAU	29.13%	

Source: Urban Crossroads 2013c, Table 3-5.

Additionally, even though the SCAQMD's draft screening threshold for "industrial projects" stationary sources is not applicable in this case, the Project's GHG emissions level for area and mobile source emissions combined would be well below the SCAQMD's draft 10,000 MTCO2e screening threshold.

CARB's Scoping Plan also identifies strategies to reduce California's GHG emissions in support of AB32. Many of the strategies identified in the Scoping Plan are not applicable at the project level, such as long-term technological improvements to reduce emissions from vehicles. Some measures are applicable and supported by the proposed Project, such as energy efficiency features required by CalGreen. Refer to *Technical Appendix E* pages 39-42 and Table 4.5-7, *Scoping Plan Consistency Summary*, for additional information. As shown the Project is consistent with the strategies that are applicable. Therefore, the proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases, and a significant impact would not occur.

Because the proposed Project would be consistent with both the CARB Scoping Plan and the 2006 CAT Report, Project-related GHG emissions would not be substantial and would not directly or indirectly result in a significant impact on the environment. Therefore, the proposed Project would

result in a less than significant impact to the environment as a result of Project-related GHG emissions.

Table 4.5-7 Scoping Plan Consistency Summary

Action	Supporting Measures	Consistency
Cap-and-Trade Program	--	**Not Applicable.** These programs involve capping emissions from electricity generation, industrial facilities, and broad scoped fuels. Caps do not directly affect light industrial projects.
Light-Duty Vehicle Standards	T-1	**Not Applicable.** This is a statewide measure establishing vehicle emissions standards.
Energy Efficiency	E-1 E-2 CR-1 CR-2	**Consistent.** The project will include a variety of building, water, and solid waste efficiencies consistent with 2011 CALGREEN requirements. Additionally, the Project will be required to comply with MM 4.2-8 and MM 4.2-9 that will further enhance energy efficiency.
Renewables Portfolio Standard	E-3	**Not Applicable.** Establishes the minimum statewide renewable energy mix.
Low Carbon Fuel Standard	T-2	**Not Applicable.** Establishes reduced carbon intensity of transportation fuels.
Regional Transportation-Related Greenhouse Gas Targets	T-3	**Consistent.** The project will include features that reduce greenhouse gas emissions, assisting the region in meeting emissions targets through the incorporation of MM 4.2-7 which will reduce VMT.
Vehicle Efficiency Measures	T-4	**Not Applicable.** Identifies measures such as minimum tire-fuel efficiency, lower friction oil, and reduction in air conditioning use.
Goods Movement	T-5 T-6	**Not applicable.** Identifies measures to improve goods movement efficiencies such as advanced combustion strategies, friction reduction, waste heat recovery, and electrification of accessories. While these measures are yet to be implemented and will be voluntary, the proposed Project would not interfere with their implementation.
Million Solar Roofs Program	E-4	**Not Applicable.** Sets goal for use of solar systems throughout the state. While the project currently does not include solar energy generation, the building could support solar panels in the future.
Medium- & Heavy-Duty Vehicles	T-7	**Consistent.** MD and HD trucks and trailers working from the proposed warehouses will be subject to aerodynamic and hybridization requirements as established by ARB; no feature of

Table 4.5.7 Scoping Plan Consistency Summary (cont.)

Action	Supporting Measures	Consistency
	T-8	the project would interfere with implementation of these requirements and programs.
Industrial Emissions	I-1	**Not Applicable.** These measures are applicable to large industrial facilities (> 500,000 MTCOE2/YR) and other intensive uses such as refineries.
	I-2	
	I-3	
	I-4	
	I-5	
High Speed Rail	T-9	**Not Applicable.** Supports increased mobility choice.
Green Building Strategy	GB-1	**Consistent.** The project will include a variety of building, water, and solid waste efficiencies consistent with 2011 CALGREEN requirements.
High Global Warming Potential Gases	H-1	**Not Applicable.** The proposed warehouses are not substantial sources of high GWP emissions and will comply with any future changes in air conditioning, fire protection suppressant, and other requirements.
	H-2	
	H-3	
	H-4	
	H-5	
	H-6	
	H-7	
Recycling and Waste	RW-1	**Consistent.** The project will be required recycle a minimum of 50 percent from construction activities and warehouse operations per State and County requirements.
	RW-2	
	RW-3	
Sustainable Forests	F-1	**Consistent.** The project will increase carbon sequestration by increasing on-site trees per the project landscaping plan.
Water	W-1	**Consistent.** The project will include use of low-flow fixtures and efficient landscaping per State requirements.
	W-2	
	W-3	
	W-4	
	W-5	
	W-6	
Agriculture	A-1	**Not Applicable.** The project is not an agricultural use.

4.5.4 CUMULATIVE IMPACT ANALYSIS

Global Climate Change occurs as the result of global emissions of GHGs. An individual project like the proposed Project does not have the potential to result in 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]).

Accordingly, the Project-specific impact analysis provided in EIR Subsection 4.6.3 reflects a detailed cumulative impact analysis of the Project's GHG emissions. The analysis concludes that the proposed Project would comply with all applicable GHG-reduction strategies set forth by the CARB Scoping Plan and 2006 CAT Report, and thus the proposed Project's GHG emissions would not be cumulatively considerable. A cumulatively considerable impact would only result if the Project would conflict with CARB's Scoping Plan, which identifies strategies to reduce California's GHG

emissions in support of AB32. Many of the strategies identified in the Scoping Plan are not applicable at the project level, such as long-term technological improvements to reduce emissions from vehicles. Some measures are applicable and supported by the proposed Project, such as energy efficiency features required by CalGreen. Refer to *Technical Appendix E* pages 39-42 and Table 4.5-7, *Scoping Plan Consistency Summary*, for additional information. As shown, the Project is consistent with the applicable strategies. Therefore, the proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases, and the Project's contribution to GCC would be less than cumulatively considerable.

4.5.5 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Thresholds 1 and 2: Less than Significant Impact. The proposed Project would have a less than significant direct impact on global climate change and the Project's contribution of greenhouse gas emissions would be less than cumulatively considerable. The Project complies with all applicable CARB Scoping Plan and 2006 CAT Report GHG reduction measures. There are no other applicable plans, policies, or regulations that have been adopted for the purpose of reducing the Project's emissions of greenhouse gases.

4.5.6 MITIGATION MEASURES

Impacts would be less than significant; therefore, mitigation measures are not required.

4.6 HAZARDS AND HAZARDOUS MATERIALS

The information and analysis presented in this subsection is based in part on two site-specific technical studies which were prepared to determine the presence or absence of hazardous materials on the Project site. The first report, prepared by GHD Inc., is titled "Phase I Environmental Site Assessment, Orange Show Property" (dated August 29, 2013), and the second report, prepared by Leighton Consulting, Inc., is titled "Limited Phase II Environmental Site Assessment, 595 East Orange Show Road" (November 1, 2013). These reports are included as *Technical Appendices F1*and *F2* to this EIR, respectively.

This subsection also is based on information contained in the Safety Chapter of the City of San Bernardino General Plan (Chapter 10, pp. 10-1 – 10-48), dated November 2005 (San Bernardino 2005a), and the Hazards & Hazardous Materials section (Section 5.6, pp. 5.6-1 – 5.6-34) of the certified EIR prepared for the General Plan (SCH No. 2004111132), dated September 2005 (San Bernardino 2005b).

4.6.1 EXISTING CONDITIONS

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, Section 66261.3. The characteristics of hazardous waste are Ignitability (66261.21), Corrosivity (66261.22), Reactivity (66261.23), and Toxicity (66261.24). Certain wastes are called "Listed Wastes" and are found in the California Code of Regulations, Title 22, Sections 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).

B. Historical Review, Regulatory Records Review, and Field Reconnaissance

❑ Historical Review

GHD Inc. conducted a review of various sources of information to determine the historical use of the Project site, including a review of USGS topographic maps, historical aerial photographs, and a search of the EDR-Sanborn® collection of maps. Please refer to *Technical Appendix F1* of this EIR for a detailed description of the results of this research. Based on this review, GHD Inc. concluded that the site was historically used as agricultural land as early as 1930, with other agricultural parcels in the Project vicinity. The property appears to alternate between active agriculture activities and fallow land between the late 1930s and the 1970s. The site was also used as a green waste operation (Greenwaste San Bernardino) during a portion of this time period; green waste (trimmings, prunings,

etc.) were spread and dried on the site for use as fuel for power plants. In the 1970s, the south-central portion of the Project site was developed as a lumber mill. The lumber mill operated on-site until approximately 2009 (GHD 2013 11-15). The structures associated with the now-vacant lumber mill are still present on the site (refer to Figure 2-4, *Aerial Photograph*).

❑ Regulatory Records Review

A database search for sites listed on various federal and state databases within one (1) mile of the Project site was obtained by GHD Inc. from EDR Environmental Information. A detailed description of the results of this review is provided in *Technical Appendix F1* to this EIR. The Project site was not identified in any federal or state databases, indicating the site is not known by the federal or state government to pose any concerns to the environment.

GHD Inc. identified five (5) sites in the Project site's vicinity that were identified through the search of state, federal, and local environmental records (GHD 2013 12-15):

- Newark Superfund Groundwater Plume: Although not mapped by EDR, maps provided by the City of San Bernardino Municipal Water Department show the Newark Superfund Groundwater Plume (contaminated groundwater) approximately one (1) mile north of the Project site. The plume is associated with former agricultural operations in the Project vicinity (leaching of fertilizers into the groundwater table), as well as contaminants that may have percolated into the groundwater table from operations at the former Norton Air Force Base (currently San Bernardino International Airport).
- Norton Air Force Base Landfill #2: The former site of the Norton Air Force Base (currently the San Bernardino International Airport) is located approximately one (1) mile to the northeast of the Project site. During its operation as an active military base, waste management practices on the Base included drum burial, hazardous waste disposal in unlined pits, storage of leaking drums, and leakage of underground storage tanks. These practices resulted in substantial soil and groundwater contamination. A remediation plan for the Base was adopted in 1989.
- Crafton-Redlands Area: The Crafton-Redlands Superfund plume covers an approximately 19-square mile area within the Cities of Redlands and Loma Linda and contains groundwater contaminated by chemicals associated with agriculture, commercial, industrial, and aerospace operations.
- Historical Automobile Service Station: Located at 1254, 1264, and 1274 South Waterman Avenue, to the west of the Project site, these facilities may have contributed to local groundwater contamination.
- Valley Gas/Auto Repair: This site is located at 1195 South Waterman Avenue, to the northwest of the Project site, contains a leaking underground storage tank, which has affected soil beneath the property.

❑ Field Reconnaissance

An inspection of the proposed Project site and surrounding area was conducted by GHD Inc. on July 24, 2013 (GHD 2013 17). Appendix A to the Phase I Environmental Site Assessment (*Technical Appendix F1*) contains photographs of the Project site. During the field survey conducted in 2013,

GHD observed a variety of on-site features and installments that are potentially relevant to hazardous materials (GHD 2013 17-19):

- Although not present under existing conditions, two (2) 1,000-gallon above ground storage tanks (ASTs), used to store gasoline and diesel fuel, were utilized on-site during operation of the lumber mill. A concrete slab surrounded by bollards was observed in the southern portion of the Project site at the former location of the ASTs. Oil stained soil was observed just south of the former location of the ASTs.
- Although not present under existing conditions, two (2) 10,000-gallon underground storage tanks (USTs), used to store gasoline and diesel fuel, were utilized on-site during operation of the lumber mill. The USTs were removed from the property in 1988.
- Twenty-two (22) electrical transformers were observed throughout the property. Nine (9) of the transformers were pole mounted (on three separate poles) and the remaining were pad mounted. There is the potential for the transformers to contain di-electric oil that may contain Polychlorinated biphenyls (PCBs). The manufacture of PCBs was banned in 1977 and the use of PCBs was banned in 1979; however, utilities were not required to take down existing transformers that already contained PCBs.
- A rail spur is located in the southern portion of the Project site. The rail spur connects to the BNSF railroad located along the Project site's southwestern boundary.
- Five (5) active groundwater supply wells and two (2) out-of-service wells are located on the Project site during the visit. All groundwater wells on the Project site are owned and operated by the City of Riverside. The relocation of active wells and the removal of out-of-service wells as necessary to accommodate development of the Project will be conducted by the City of Riverside by separate action. Relocation of the wells is not a part of the Project evaluated in this EIR.
- One (1) septic system associated with the former lumber mill operation is thought to be located in the southern portion of the site.
- One (1) oil-water separator associated with the former lumber mill operation is located in the southern portion of the site. The oil-water separator is thought to drain into the above-mentioned septic system.
- Transite panels were observed in the southern portion of the site, in a covered storage area associated with the former lumber mill operation. Transite is a composite construction material that has the potential to contain asbestos.
- Illegal waste dumping, including household trash, tires, roofing materials, and waste was observed. It was unclear during the site visit if the waste dumping was located on the Project site or adjacent to the property. There is the potential for illegal waste dumping to contain asbestos containing materials (ACMs) and lead based paint).

C. Airport Hazards

The Project site is located approximately 0.75 mile southwest of the San Bernardino International Airport. There is no adopted land use compatibility plan for the San Bernardino International

Airport. The Project site also is approximately 0.5-mile north of a private helipad (located north of and adjacent to Carnegie Drive).

D. Wildland Fire Hazards

❑ Fire Hazard Potential

According to Figure S-9 of the City of San Bernardino General Plan, neither the Project site nor the surrounding area is identified as being located within an "Extreme Fire Hazard Area" or "Moderate Fire Hazard Area" (San Bernardino 2006a, 10-43). Areas subject to wildland fire hazards occur predominately along the northern border of the City of San Bernardino and the City's sphere of influence. The nearest land to the proposed Project site identified as being subject to wildland fire hazards occurs approximately 5.3 miles northwest of the Project site.

❑ City of San Bernardino Fire Department

Fire service to the Project area is provided by the San Bernardino Fire Department (SBFD). The SBFD operates twelve fire engine companies, two aerial truck companies, one heavy rescue, five 4-wheel drive brush engines, one hazardous material response rig and one medic squad housed in twelve stations in the City. The proposed Project site is located approximately 1.1 roadway miles north of existing SBFD Station No. 11, located at 450 East Vanderbilt Way. Secondary fire protection services could be provided by existing SBFD Station No. 10, located 1.6 roadway miles northwest of the Project site at 502 South Arrowhead Avenue.

E. Applicable Environmental Regulations

Various government organizations share responsibility for the safe disposal of contaminants, toxic wastes, and the clean-up of hazardous substance spills. On a federal level, The National Priority List (NPL) is the Environmental Protection Agency's (EPA's) database of uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund program. Superfund is the federal government's program to clean-up the nation's uncontrolled hazardous waste sites. The Superfund clean-up process begins with site discovery or notification to EPA of possible releases of hazardous substances. Once discovered, sites are entered into the Comprehensive Environmental Response, Compensation, and Liability Information System. The EPA then evaluates the potential for a release of hazardous substances from the site through established steps in the Superfund cleanup process. State and regional agencies have asked local governments to participate in the establishment of disposal sites, uniform handling practices, and regulations to ensure adequate toxic substance waste disposal and spill clean-up.

In California, the Department of Toxic Substances Control (DTSC) is charged with the protection of Californians from exposure to hazardous wastes. DTSC operates programs to deal with improper hazardous waste management and to prevent releases of hazardous waste by ensuring that those who generate, handle, transport, store, and dispose of wastes do so properly. DTSC also takes enforcement actions against those who fail to manage hazardous wastes appropriately. DTSC regulates hazardous waste in California primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code.

Most local hazardous waste programs are managed through the San Bernardino County Fire Department, which manages operation of hazardous waste disposal facilities, the collection of

household hazardous waste, and inspections of hazardous waste generators/handlers. Businesses that transport or dispose of wastes are required to use a licensed hazardous waste hauler to collect and transport their waste.

4.6.2 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to hazards and hazardous materials if the Project or any Project-related component would:

1. *Create significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials;*

2. *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;*

3. *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;*

4. *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;*

5. *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;*

6. *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;*

7. *Impair implementation of or physically interfere with an emergency response plan or emergency evacuation plan; or*

8. *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.*

4.6.3 IMPACT ANALYSIS

Threshold 1:	***Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?***
Threshold 2:	***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 materials into the environment?***

❑ **Impacts Analysis for Existing Site Conditions**

As previously described under Subsection 4.6.1B, the Project site contains multiple areas where hazardous materials or substances may be present (primarily associated with the abandoned lumber

mill). Implementation of the Project would require the demolition of the former lumber mill facility and, therefore, has the potential to expose construction workers and nearby sensitive receptors to a substantial safety hazard during clearing of the site and during the Project's construction process.

Leighton Consulting, Inc. conducted subsurface soil testing and laboratory testing for soils located at the former locations of the on-site ASTs and USTs as part of a Phase II Environmental Site Assessment (refer to *Technical Appendix F2*). Soil samples were collected at depths of five (5), 10, 15, and 20 feet below the existing ground surface, with four (4) samples collected at each depth (20 samples collected total). Hydrocarbons and volatile organic compounds (VOCs) were not detected above laboratory detection limits in the 20 soils samples that were collected. Lead was detected at a concentration of 2.97 milligrams per kilogram (mg/kg); however, this concentration is substantially below the California Human Health Screening Level for commercial and industrial uses (320 mg/kg) and the United States Environmental Protection Agency Region 9 screening level of industrial uses (800 mg/kg) (Leighton Consulting 2013 6, 8). Accordingly, no remediation is required and the former AST and UST locations on-site do not pose a significant hazard to the public or the environment.

Subsurface soil testing also was conducted at the observed oil stained area south of the former AST location. Soil samples were collected at 0.5, 2.5, and five (5) feet below the existing ground surface. Hydrocarbons were detected in the stained soil at the following concentrations: 33,000 mg/kg (at 0.5 feet below ground surface), 193 mg/kg (at 2.5 feet below ground surface), and 75.1 mg/kg (at five feet below ground surface). Per the requirements of the Regional Water Quality Control Board (RWQCB), the maximum screening levels for soil located 20 to 150 feet above groundwater is 10,000 mg/kg (Leighton Consulting 2013 6, 9). Borings conducted as part of the site-specific geotechnical investigation (refer to *Technical Appendix L*) encountered groundwater at depths of 38-40 feet below the site's ground surface (Southern California Geotechnical 2013 8). Accordingly, the oil stained soils present on the Project site contain hydrocarbon concentrations that exceed allowable RWQCB screening limits and are evaluated as a significant hazard to the public and the environment. Mitigation is required.

Leighton Consulting collected wipe samples and soil samples from two (2) indoor electrical transformer pads located within the abandoned lumber mill facility to test for the presence or absence of PCBs. In addition, soil samples were collected beneath three (3) randomly selected pole mounted transformers on-site. PCBs were not detected in samples collected from any of the electrical transformers on-site (Leighton Consulting 2013 7, 9). Accordingly, electrical transformers on-site are determined to be free of PCBs, and removal of the transformers from the site as necessary to accommodate Project development would not create a substantial hazard to the public and/or the environment.

Soil samples were collected along the on-site rail spur to test for the presence or absence of hydrocarbons and metals. Four (4) soil samples were collected at depths of 0.5 and 2.5 feet below the existing ground surface (two samples collected at each depth). Total petroleum hydrocarbons were not detected in any of the collected soil samples. Polyaromatic hydrocarbons and metals were detected in soil samples collected along the on-site rail spur; however, detected levels did not exceed the California Human Health Screening Level for commercial and industrial uses or United States Environmental Protection Agency Region 9 screening level of industrial uses (Leighton Consulting 2013 7, 9). Accordingly, on-site soils in and around the on-site rail spur are not evaluated as

hazardous, and would not pose a risk to nearby sensitive receptors, on-site construction workers, and/or the environment during Project construction.

As previously discussed, active and out-of-service groundwater wells owned by the City of Riverside are located on the portion of the Project site proposed for redevelopment. The re-location of active wells and the removal of out-of-service wells will be conducted by the City of Riverside by separate action and as such is not evaluated in this EIR. Regardless, all activities related to groundwater wells would be required to comply with State well standards. With mandatory adherence to State well standards, it is highly unlikely and not reasonably foreseeable that the Project would create any substantial hazard to people or the environment associated with groundwater wells.

An oil-water separator and a septic system is located on the property. The oil-water separator drains to the on-site septic system. Oily water was observed in the oil-water separator and may also be present in the septic system. Soil samples were collected next to the septic tank at depths of five (5), 10, 15, and 20 feet below ground surface, as well as at depths of 2.5 and 5 feet below ground surface next to the oil-water separator. Hydrocarbons and VOCs were not detected in the soil samples collected in the septic tank leach field. Hydrocarbons were detected in soils collected next to the oil-water separator at concentrations of 10 mg/kg (carbon range C_{11} to C_{22}) and 205 mg/kg (carbon range C_{23} to C_{35}), respectively, at depths of 2.5 feet below the ground surface. No hydrocarbons were detected in soil samples collected next to the oil-water separator at depths of five (5) feet below the ground surface. Detected levels of hydrocarbons in soils around the oil-water separator do not exceed the RWQCB screening level (10,000 mg/kg) (Leighton Consulting 2013 6, 9). Therefore, soils around the oil-water separator are not determined to be a substantial safety hazard to nearby sensitive receptors, on-site construction workers, and/or the environment. Furthermore, the existing septic system and oil-water separator would be required to be removed, handled, and disposed in accordance with all applicable local and State regulations. Accordingly, implementation of the Project would not expose the public or the environment to significant hazards associated with the removal and disposal of the on-site septic system and oil-water separator. Impacts would be less-than-significant.

As part of the Project, all existing wooden structures on-site associated with the former lumber mill operation would be demolished and the debris would be removed from the site. The lumber mill was constructed sometime during the 1970s. The use of asbestos containing materials (ACM, a known carcinogen) and lead paint (a known toxic) was common in building construction prior to 1978. Transite panels, a composite building material with the potential to contain asbestos, was observed on-site in the abandoned lumber mill facility. Additionally, an illegal waste dump, which may contain ACMs and/or lead based paint, was observed in the eastern portion of the Project site (although it was unclear if the waste dumping was located on the Project site or adjacent to the site).

Asbestos is a carcinogen and is categorized as a hazardous air pollutant by the federal Environmental Protection Agency (EPA). Federal asbestos requirements are found in National Emission Standards for Hazardous Air Pollutants (NESHAP) within the Code of Federal Regulations (CFR) Title 40, Part 61, Subpart M, and are enforced in the Project area by the SCAQMD. In conformance with the NESHAP, SCAQMD Rule 1403 establishes survey requirements, notification, and work practice requirements to prevent asbestos emissions from emanating during building renovation and demolition activities. Assuming that ACMs are present in the existing construction debris and/or structures located on the property, then Rule 1403 requires notification of the SCAQMD prior to

commencing any demolition or renovation activities. 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. Mandatory compliance with the provisions of Rule 1403 would ensure that construction-related grading, clearing and demolition activities do not expose construction workers or nearby sensitive receptors to significant health risks associated with ACMs. Because the Project would be required to comply with AQMD Rule 1403 during demolition activities, impacts due to asbestos would be less than significant.

The construction debris also could contain lead based paint (LBP). Title 17, California Code of Regulations (CCR), Division 1, Chapter 8: Accreditation, Certification and Work Practices for Lead-Based Paint and Lead Hazards, defines and regulates lead-based paint. Any detectable amount of lead is regulated. During clearing of the existing on-site construction debris and demolition of the existing buildings, there is a potential for exposing construction workers to health hazards associated with lead. The Project would be required to comply with Title 17, California Code of Regulations (CCR), Division 1, Chapter 8, which includes requirements such as employer provided training, air monitoring, protective clothing, respirators, and hand washing facilities. Mandatory compliance with these mandatory requirements would ensure that construction workers are not exposed to significant LBP health hazards during demolition, and would reduce impacts to a level below significant.

In conclusion, the Project site contains a small area of oil-stained soil that contains concentrations of hydrocarbons in excess of the RWQCB's standards. This existing source of contamination is determined to be a potentially significant hazard to the public and the environment, and mitigation is required. All other existing structures, equipment, and site conditions are determined to pose a less-than-significant hazard risk to the public and the environment. Removal of these existing structures, equipment, and site conditions from the Project site would not require remediation beyond standard regulatory requirements that would apply to all construction projects.

❑ Temporary Construction Related Activities

Heavy equipment (e.g., dozers, excavators, tractors) would be operated on a portion of the subject property and its off-site improvement area during construction of the Project. This heavy equipment would likely be fueled and maintained by petroleum-based substances such as diesel fuel, gasoline, oil, and hydraulic fluid, which is 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 located on the Project site during construction. 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 Environmental Protection Agency (EPA), California Department of Toxic Substances Control (DTSC), South Coast Air Quality Management District (SCAQMD), Santa Ana Regional Water Quality Control Board (RWQCB).

❑ Long-term Operation

As discussed in EIR Section 3.0, the future tenants that would occupy buildings on the Project site are not yet identified. Future uses on-site are assumed to be any of those uses permitted by the City of San Bernardino's "Industrial Light" zoning designation. For purposes of analysis within this EIR, it is anticipated that the Project would be utilized as an industrial warehouse/distribution center. Uses permitted in the Industrial Light zoning designation include a wide variety of industrial and manufacturing services and commercial uses. A complete list of permitted and conditionally permitted uses can be found in Chapter 19.08 of the City of San Bernardino's Municipal Code (San Bernardino 2013, II-19.08-3).

Based on the list of permitted uses contained in the City's Industrial Light zone, it is possible that hazardous materials could be used during the course of a future tenant's daily operations. State and Federal Community-Right-to-Know laws allow the public access to information about the amounts and types of chemicals in use at local businesses. Laws also are in place that require businesses to plan and prepare for possible chemical emergencies. Any business that occupies a building on the Project site and that handles hazardous materials (as defined in Section 25500 of California Health and Safety Code, Division 20, Chapter 6.95) will require a permit from the San Bernardino County Fire Department Hazardous Materials Division in order to register the business as a hazardous materials handler. Such businesses also are required to comply with California's Hazardous Materials Release Response Plans and Inventory Law, which requires immediate reporting to the County of San Bernardino Fire Department and the State Office of Emergency Services regarding any release or threatened release of a hazardous material, regardless of the amount handled by the business. In addition, any business handling at any one time, greater than 500 pounds of solid, 55 gallons of liquid, or 200 cubic feet of gaseous hazardous material, is required, under Assembly Bill 2185 (AB 2185), to file a Hazardous Materials Business Emergency Plan (HMBEP). A HMBEP is a written set of procedures and information created to help minimize the effects and extent of a release or threatened release of a hazardous material. The intent of the HMBEP is to satisfy federal and state Community Right-To-Know laws and to provide detailed information for use by emergency responders.

If businesses that use or store hazardous materials occupy the Project, the business owners and operators 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. 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. In addition, the Project would be required to comply with City of San Bernardino Municipal Code §19.20.12, which establishes development and performance standards, as well as reporting and permitting requirements for the use, handling, storage, and transportation of hazardous materials.

With mandatory regulatory compliance, along with mandatory compliance with the City of San Bernardino Municipal Code, potential hazardous materials impacts associated with long-term operation of the Project are regarded as less than significant and mitigation is not required.

Threshold 3: 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 facility to the Project site is Norton Space and Aeronautics Academy, located approximately 0.35-mile north of the Project site. Accordingly, the proposed Project has no potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school and mitigation is not required.

Threshold 4: 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?

According to the Phase I ESA conducted for the Project site (refer to *Appendix F1*) and a review of the State of California Department of Toxic Substances Control EnviroStor database, the Project site is not located on or included on any list of hazardous materials sites complied pursuant to California Government Code Section 65962.5. Therefore, no impact would occur.

Threshold 5: 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?

The Project site is located approximately 0.75 mile southwest of the San Bernardino International Airport (formerly Norton Air Force Base). No airport land use compatibility plan has been prepared for the San Bernardino International Airport. As concluded in the General Plan EIR, buildout of the General Plan would expose residents and workers to less-than-significant safety hazards associated with operation of the San Bernardino International Airport (City of San Bernardino 2005b 5.6-23). The proposed Project would redevelop a portion of the subject property in conformance its General Plan land use designation, and proposed site improvements also would comply with the applicable "Industrial Light" development standards of the City of San Bernardino Municipal Code. Accordingly, there is no component of the Project that would expose future workers on-site to any new or more severe effect related to safety hazards from operation of the San Bernardino International Airport beyond those already disclosed in the General Plan EIR. Impacts would be less than significant.

Threshold 6: For a project within the vicinity of a private airstrip or heliport, would the Project result in a safety hazard for people residing or working in the Project area?

There are no private airfields or airstrips in the vicinity of the Project site. There is a private heliport located approximately 0.5-mile to the south of the Project site. The warehouse building proposed by the Project would have a height of less than 45 feet and would not interfere with flight operations at the nearby helipad. 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 not have the potential to affect operations at any nearby private airstrip or heliport and would not create a safety hazard for future workers on-site. Impacts would be less than significant.

Threshold 7: Would the Project impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan?

The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route (City of San Bernardino 2005a Ch. 10), so there is no potential for the Project to adversely affect an emergency response or evacuation plan. During construction and at Project buildout, the proposed Project would be required to maintain adequate emergency access for emergency vehicles. As part of the City's discretionary review process, the City of San Bernardino reviewed the Project to ensure that appropriate emergency ingress and egress would be available to-and-from the proposed warehouse building for public safety, and determined that the development as proposed would not substantially impede emergency response times in the local area. Accordingly, implementation of the proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan, and no impacts would occur.

Threshold 8: 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?

Pursuant to Figure S-9, *Fire Hazard Areas*, of the City of San Bernardino General Plan, the proposed Project is not located within a high wildfire hazard area (San Bernardino 2006a 10-43). The closest wildland fire hazard area is located approximately five (5) miles north of the Project site. The Project site is buffered from this wildland fire hazard area by substantial urban development, including residential, commercial, and industrial uses. The Project site is bordered on the southeast by the Santa Ana River, which contains unmaintained, natural vegetation. Vegetation in the River corridor can be flammable during periods of dry weather; however, the River corridor does not contain a substantial vegetative fuel load and is surrounded by urban development. Also, the Project proposes a solid wall between the warehouse building and the River. As such, the Santa Ana River is not determined to be a significant wildland fire hazard. Furthermore, the proposed industrial warehouse structure would be set back from the Santa Ana River at an adequate distance to ensure fire safety. Accordingly, the proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires.

4.6.4 CUMULATIVE IMPACT ANALYSIS

As discussed above under Thresholds 1 and 2, implementation of the proposed Project would involve the construction of uses in conformance with the City of San Bernardino's "Industrial Light" zoning designation. Although the end users are not presently known, if businesses that use or store hazardous materials occupy the Project, the business owners and operators would be required to comply with all applicable federal, state, and local regulations to ensure proper use, storage, and disposal of hazardous substances. Such uses also would be subject to additional review and permitting requirements by the SBFD. Similarly, any other developments in the area proposing the construction of uses with the potential for use, storage, or transport of hazardous materials also would be required to comply with applicable federal, state, and local regulations, and such uses would be subject to additional review and permits from their applicable fire department. Although there is on-site contamination present, compliance with mitigation measures would ensure isolation of any impacts to the Project site and would not have the ability to impact the surrounding area. Therefore, the potential for release of toxic substances or hazardous materials into the environment, either

through accidents or due to routine transport, use, or disposal of such materials, would be reduced to a less-than-significant cumulative level. Accordingly, the Project's potential to contribute to a cumulatively significant hazardous materials impact would be less than significant.

The Project site is not located within one-quarter mile of an elementary school, therefore the Project would not cumulatively contribute to a significant hazards/hazardous materials impact on any public or private schools.

Based on a site-specific ESA conducted for the site, it was concluded that the Project site is not located on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. If hazardous materials happened to be encountered beneath the surface of the site during grading or construction, the materials would be handled and disposed of in accordance with regulatory requirements. Therefore, the Project would not contribute to a cumulatively significant hazardous materials impact associated with a listed hazardous materials site.

As discussed above under Threshold 5, although the Project site is located in close proximity to the San Bernardino International Airport, the airport does not have a land use compatibility plan at this time and the City of San Bernardino General Plan EIR does not identify the Project site as being subject to hazards associated with operations. Therefore, Project implementation would not result in any cumulatively significant impacts related to airport safety.

The proposed Project site is not located within close proximity of any private airstrips, and would not interfere with operations at a nearby private helipad. Therefore, the Project has no potential to result in cumulatively significant impacts associated with such facilities.

The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route; therefore, there is no potential for the Project to contribute to any cumulative impacts regarding emergency management planning.

As discussed above under the analysis of Threshold 8, the Project site is not located within or in close proximity to areas identified as being subject to wildland fire hazards by the City of San Bernardino General Plan. Furthermore, as the surrounding area develops, 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 overtime, and cumulatively significant impacts associated with wildland fire hazards would not occur.

4.6.5 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Thresholds 1 and 2: Significant Direct Impact. During Project operation and with mandatory compliance to federal, state and local regulations, the proposed Project would not create a significant hazard to the public or the environment due to routine transport, use, disposal, or upset of hazardous materials. Under existing conditions, the site contains an area of oil-stained soil that exceeds applicable RWQCB screening thresholds, which is considered a potentially significant impact.

Threshold 3: No Impact. The Project site is not located within one-quarter mile of any existing or planned school. Accordingly, the Project would not expose any nearby school to potential impacts related to hazardous materials.

Threshold 4: No Impact. The Project site is not listed on any list of hazardous materials compiled pursuant to Government Code Section 65962.5.

Threshold 5: Less-than-Significant Impact. The Project site is not located within any airport land use compatibility plan. Although the Project site is located approximately 0.75 mile to the southwest of the San Bernardino International Airport, operation of the Project site with "Industrial Light" uses was determined by the City of San Bernardino General Plan to not pose a substantial safety hazard to future on-site workers or airport operations. Impacts would be less than significant.

Threshold 6: Less-than-Significant Impact. The Project site is not located in the vicinity of a private airstrip, but is located within approximately 0.50 mile of a private heliport. No component of the Project would interfere with flight operations at the nearby helipad. Impacts would be less than significant.

Threshold 7: No Impact. The Project would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. No emergency facilities exist on the Project site, and the site does not serve as an emergency evacuation route.

Threshold 8: Less-than-Significant Impact. The Project would not expose people or structures to a significant wildfire risk. The Project site is not located in close proximity to wildlands or areas with high fire hazards. The Project would develop a mostly vacant site, thereby reducing the risk for wildfire on the property. The Project is subject to review and approval by the SBFD to ensure that features have been incorporated within the development to address potential fire hazards. As such, a less than significant impact due to wildland fire hazards would occur.

4.6.6 MITIGATION

MM 4.6-1 Prior to the initiation of ground-disturbing construction activities, stained soil located in the southern portion of the Project site shall be remediated and properly disposed of in accordance with federal, state, and City of San Bernardino requirements.

4.6.7 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Thresholds 1 and 2: Less-than-Significant Impact: The application of Mitigation Measure MM 4.6-1 would require that the oil-stained soils observed on the Project site under existing conditions would be safely removed from the site and disposed at a facility certified to receive hazardous materials prior to the initiation of ground-disturbing construction activities on-site, thereby ensuring that the stained soils would not pose a hazard to the public or the environment.

4.7 HYDROLOGY & WATER QUALITY

The analysis in this subsection is based on a report prepared by Thienes Engineering, titled, "Preliminary Hydrology Calculations for Alliance California Gateway South Building 3," dated September 26, 2013, and included as *Technical Appendix G1* to this EIR.

With respect to water quality, the Project site is located within the jurisdiction of the Santa Ana Regional Water Quality Control Board (RWQCB). Water quality information for this subsection was obtained from the Santa Ana RWQCB's *Santa Ana River Basin Water Quality Control Plan* (updated June 2011) and the *Integrated Regional Water Management Plan* (IRWMP) for the Santa Ana River Watershed (also referred to as "One Water One Watershed," dated November 16, 2010), prepared by the Santa Ana Watershed Project Authority (SAWPA). These documents are herein incorporated by reference and are available for public review at the physical locations and website addresses given in Section 7.0, *References*. Information in this subsection also relies on a report prepared by Thienes Engineering, titled, "Preliminary Water Quality Management Plan (WQMP) for Alliance California Gateway South Building 3," dated September 26, 2013, and included as *Technical Appendix G2* to this EIR.

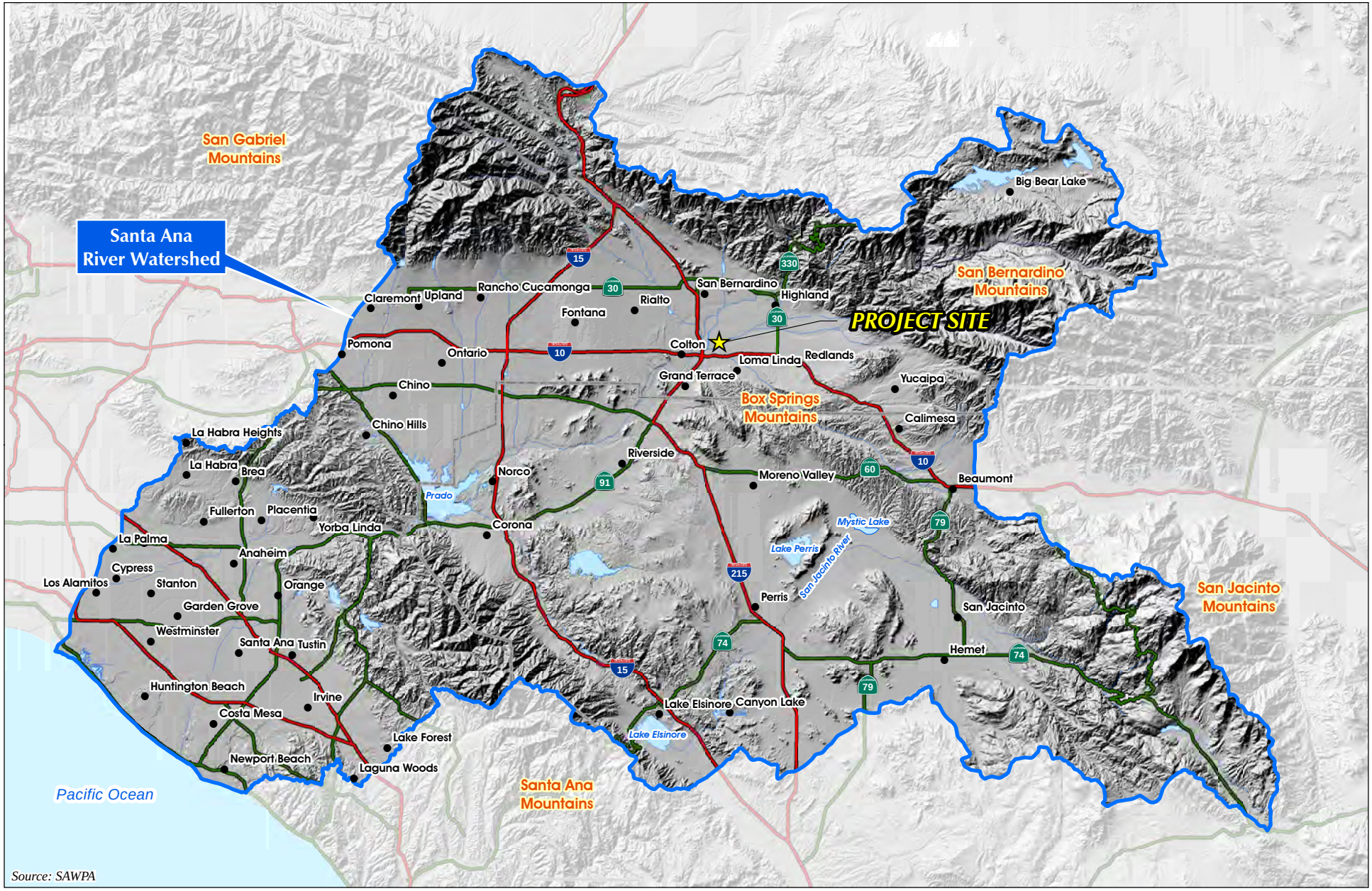
4.7.1 EXISTING CONDITIONS

A. Regional Hydrology

The Project site is located in the Santa Ana River watershed, which drains a 2,650 square-mile area and is the principal surface flow water body within the region (SAWPA 2010 Ch. 3). The Santa Ana River drains the area in the vicinity of the Project site. The Santa Ana River rises in Santa Ana Canyon in the southern San Bernardino Mountains approximately 15 miles east of the site, runs southwesterly across San Bernardino, Riverside, and Orange Counties, where it discharges into the Pacific Ocean at the City of Huntington Beach. The total length of the Santa Ana River and its major tributaries is approximately 700 miles (SAWPA 2010 Ch. 3). The Project site's location within the Santa Ana River Watershed is depicted on Figure 4.7-1, *Santa Ana River Watershed Map*.

B. Site Hydrology

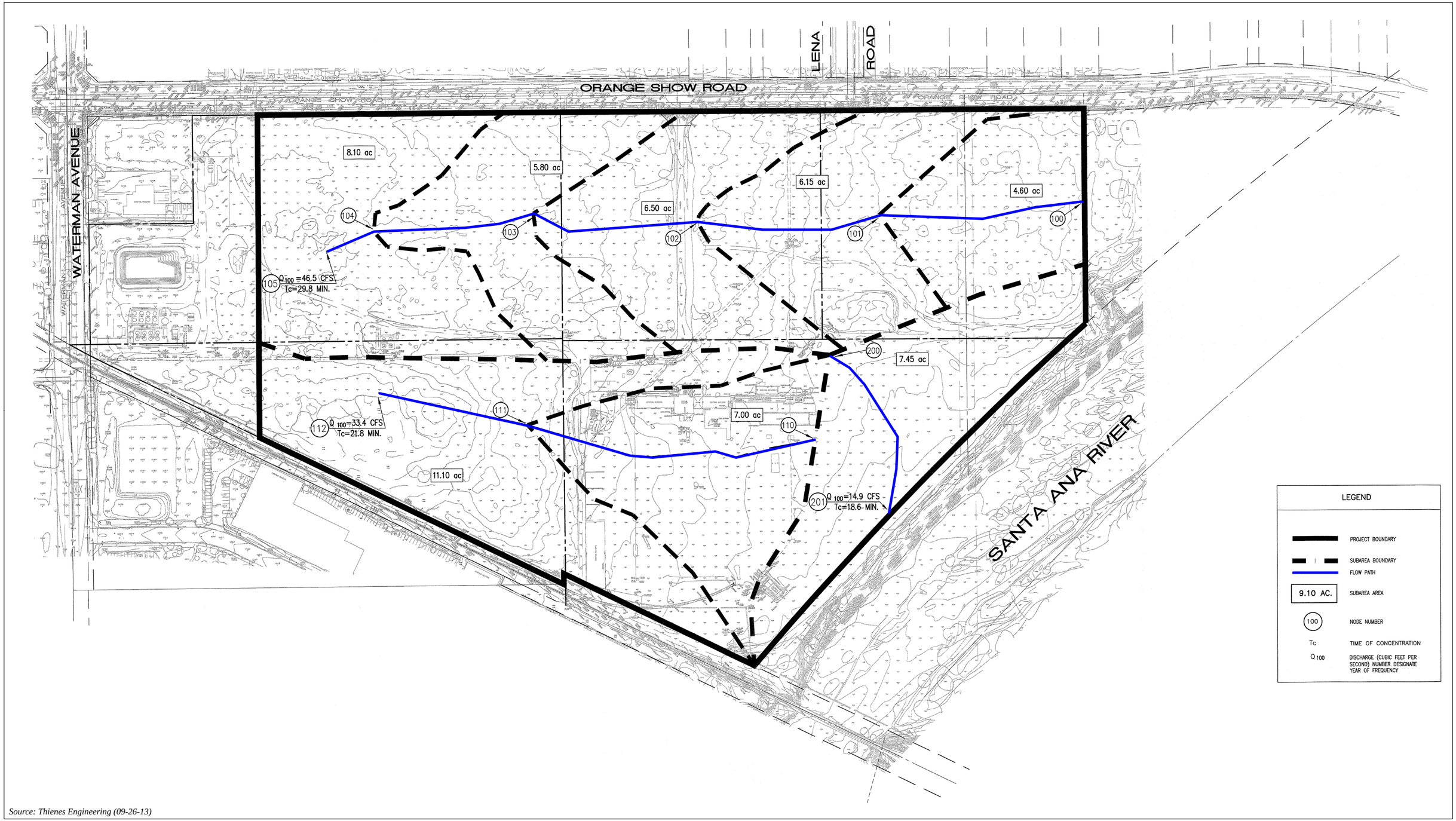
Under existing conditions, there are two primary drainage patterns on the Project site. The primary drainage pattern conveys a majority of the site's runoff from east to west across the subject property as sheet flow toward Waterman Avenue. From Waterman Avenue, stormwater runoff flows south in surface gutters along Waterman Avenue, where it is captured by catch basins, transferred to storm drain pipes and conveyed to the Santa Ana River. The second, smaller on-site tributary conveys flows that originate within an approximately 7.0-acre area in the southeastern portion of the site and drain south to the Santa Ana River. Figure 4.7-2, *Existing Conditions Hydrology Map*, illustrates the drainage pattern of the Project site under existing conditions. Under existing conditions peak stormwater runoff volumes on the Project site during the 100-year storm event are projected to be 94.8 cubic feet per second (cfs) (Thienes Engineering 2013a 5).



Source: SAWPA

0 2.5 5 10 Miles

FIGURE 4.7-1
SANTA ANA RIVER WATERSHED MAP



Source: Thienes Engineering (09-26-13)

NOT TO SCALE

FIGURE 4.7-2
EXISTING CONDITIONS HYDROLOGY MAP

C. IVDA Drainage Plan

The Project site is located within the boundary of the Inland Valley Development Agency (IVDA) Master Drainage Plan. The Drainage Plan was prepared by IVDA to identify master-planned drainage and flood control facilities that are needed to safely convey stormwater runoff generated within the IVDA redevelopment area, which generally comprises 14,000 acres of land surrounding the San Bernardino International Airport, during a 100-year storm upon full buildout. The Drainage Plan identifies a public storm drain line entering Orange Show Road from Lena Road to the north, and traversing west along Orange Show until it discharges into the Twin Creek Channel. The storm drain line planned by IVDA within Orange Show Road has not been constructed under existing conditions and there is no timeline for its implementation. As described in EIR Subsection 3.3.1, the Project proposes to install an approximately 500-foot long segment of this storm drain.

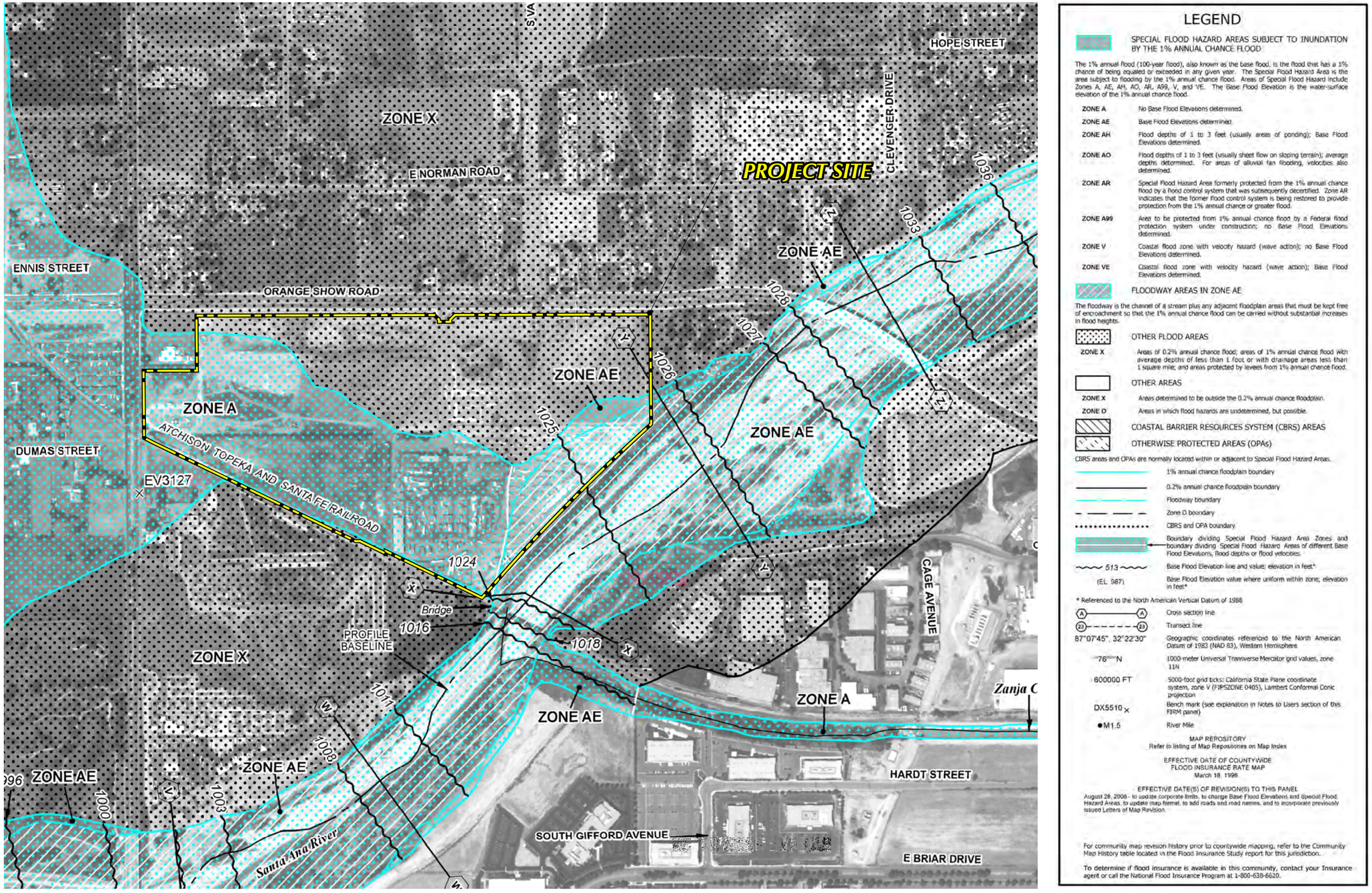
D. Flooding and Dam Inundation

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel No. 06071C8684H, dated August 28, 2008, the entire Project is located within a designated Special Flood Hazard Zone. Approximately one-third of the Project site is located within the 100-year floodplain (Flood Zone AE), while the remainder of the Project site is located is located within Flood Zone X (Shaded). Flood Zone X (Shaded) is generally correlated with areas of moderate flood hazard (greater than 0.2% annual chance), usually consisting of the area between the limits of the 100-year and 500-year floods. Flood Zone X (Shaded) also is used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than one square mile. The FEMA FIRM for the Project area is depicted on Figure 4.7-3, *FEMA Flood Insurance Map Panel No. 06071C8684H.*

The Project site is in the general vicinity of the Seven Oaks Dam, which is located approximately 10 miles east of the Project site at the base of the San Bernardino Mountains. Figure 4.7-4, *Seven Oaks Dam Inundation Area*, depicts areas within the City of San Bernardino subject to dam inundation hazards associated with the failure of the Seven Oaks Dam. As shown on Figure 4.7-4, the Project site, including a majority of the central and eastern portions of the City, are located within an area subject to inundation in the event of failure of the Seven Oaks Dam.

E. Water Quality

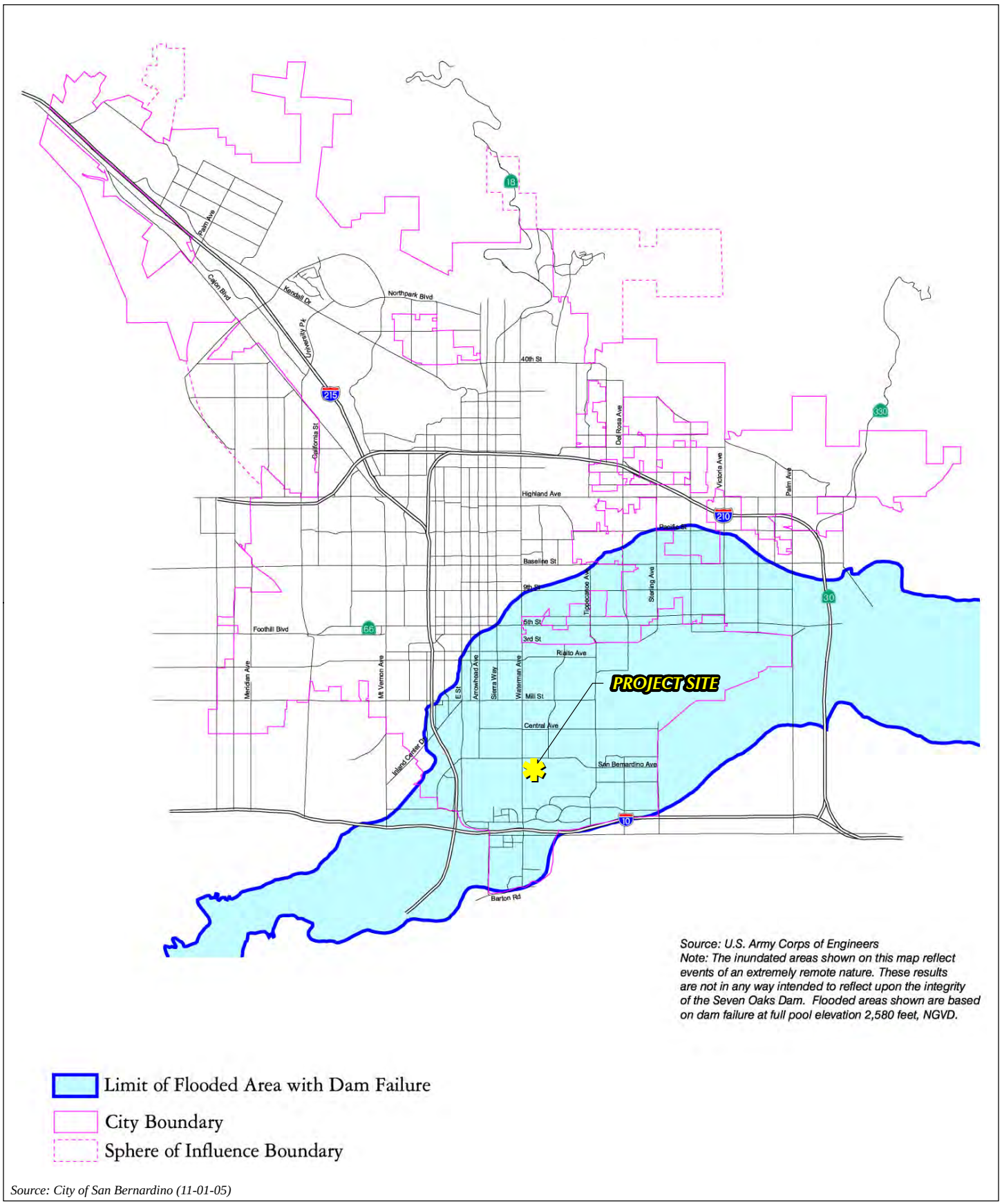
The California Porter-Cologne Water Quality Control Act (Section 13000 ("Water Quality") et seq., of the California Water Code), and the Federal Water Pollution Control Act Amendment of 1972 (also referred to as the Clean Water Act (CWA)) require that comprehensive water quality control plans be developed for all waters within the State of California. In order to accomplish this, the California State Water Resources Control Board divided the state into planning regions and the present system of nine Regional Water Quality Control Boards (RWQCBs). The Project site and vicinity are located in the Santa Ana River watershed, which is within the purview of the Santa Ana RWQCB. The Santa Ana RWQCB's Santa Ana River Basin Water Quality Control Plan is the governing water quality plan for the region, which sets forth goals and objectives for protecting water quality within the region (Santa Ana RWQCB 2011).



Source: FEMA (08-28-08)

NOT TO SCALE

FIGURE 4.7-3
FEMA FLOOD INSURANCE MAP PANEL NO. 06071C8684H



Source: City of San Bernardino (11-01-05)

NOT TO SCALE

FIGURE 4.7-4
SEVEN OAKS DAM INUNDATION AREA

The Santa Ana River (Reach 5) receives stormwater drainage flows generated within the Project site and the surrounding area. Water from the Santa Ana River (Reach 5) flows to downstream reaches of the Santa Ana River (Reaches 1-4), Prado Dam, and, ultimately, the Pacific Ocean. The Santa Ana River is classified as an impaired water body, and has been placed on the CWA's Section 303(d) list of impaired waters because of excessive concentrations of four (4) pollutants ("Pollutants of Concern"), including: pathogens (Reaches 3 and 4), copper (Reach 3), lead (Reach 3), and indicator bacteria (Reach 2) (Thienes 2013b 3-3). The Prado Dam and the Pacific Ocean are not classified as impaired water bodies and do not have any Section 303(d) listed impairments (Thienes 2013b 3-3).

F. 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 larger 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 percent of the total recharge to the ground-water system (City of San Bernardino 2005b 5.7-13). The City has established percolation basins in several locations in the northern portion of the City to capture mountain runoff and facilitate further recharge to the Sub-basin (City of San Bernardino 2005b 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, 5.15-1).

Although a majority of the Bunker Hill sub-basin is suitable for potable water extraction, a portion of the Sub-basin is affected by plumes of contaminated groundwater from former the Norton Air Force Base (now the San Bernardino International Airport). The contaminated groundwater plume exceeds acceptable State levels for several chemicals as well as nitrates. Approximately two-thirds of the Project site is underlain by the contaminated groundwater plume associated with Norton Air Force Base (County of San Bernardino "Stormwater Facility Mapping Tool").

The Project site contains five (5) groundwater extraction and treatment wells owned by the City of Riverside, two (2) of which are located on the portion of the subject property proposed for development by the Project. The wells located within the Project development footprint are in the process of being re-located to the southern portion of the under a separate action by the City of Riverside. The Project site does not contain any SBMWD groundwater wells. Relocation of the wells is not a part of the Project evaluated in this EIR.

G. Applicable Policies and Regulations

❑ Federal Policies and Regulations

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."

The CWA requires all states to conduct water quality assessments of their water resources and identify water bodies that do not meet water quality standards. The Environmental Protection Agency (EPA) publishes recommended water quality criteria. States are not required to adopt the exact criteria, but state standards must be approved by the EPA and provide the same level of protection as EPA's standards. 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 (Santa Ana RWQCB 2011) 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 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 Stormwater Pollution Prevention Plan (SWPPP) and obtain authorization to discharge stormwater under an NPDES construction stormwater permit.

❑ State Policies and Regulations

The California Water Code (including the Porter-Cologne Water Quality Control Act (Division 7)) is the principal state law regulating water quality in California. The Porter-Cologne Water Quality Control Act establishes a comprehensive program to protect water quality and the beneficial uses of water, and applies to both surface and groundwater. As mentioned above, the State Water Resources Control Board adopts statewide water quality control plans and its nine RWQCBs are required to develop and adopt regional water quality control plans ("basin plans") that conform to state water quality policy. As mentioned above, the Project site is located in the Santa Ana region. As such, the Santa Ana RWQCB's Santa Ana River Basin Water Quality Control Plan is applicable to the Project site; it designates beneficial uses of water bodies to be protected and establishes water quality objectives.

❑ Local Policies and Regulations

Chapter 8.80 (Storm Water Drainage System) of the City of San Bernardino Municipal Code requires the City to participate as a "Co-permittee" under the NPDES permit program to accomplish the requirements of the CWA. Pursuant to this chapter, the City is required to participate in the improvement of water quality and comply with Federal requirements for the control of urban pollutants to stormwater runoff.

4.7.2 BASIS FOR DETERMINING SIGNIFICANCE

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

1. *Violate any water quality standards or waste discharge requirements;*

2. *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);*

3. *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;*

4. *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;*

5. *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;*

6. *Otherwise substantially degrade water quality;*

7. *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;*

8. *Place within a 100-year flood hazard area structures which would impede or redirect flood flows;*

9. *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*

10. *Expose people or property to inundation by seiche, tsunami, or mudflow.*

4.7.3 IMPACT ANALYSIS

Threshold 1: Would the Project violate any water quality standards or waste discharge requirements?

❑ Construction-Related Water Quality Impacts

Construction of the proposed Project would involve demolition, clearing, grading, paving, utility installation, building construction, and landscaping activities, which would result in the generation of potential water quality pollutants such as silt, debris, chemicals, paints, and other solvents with the potential to adversely affect water quality. As such, short-term water quality impacts have the potential to occur during construction of the Project in the absence of any protective or avoidance measures.

Pursuant to the requirements of the Santa Ana RWQCB and the City of San Bernardino, the Project would be required to obtain a NPDES Municipal Stormwater Permit for construction activities. The NPDES permit is required for all projects that include construction activities, such as clearing, grading, and/or excavation that disturb at least one (1) acre of total land area. In addition, the Project would be required to comply with the Santa Ana RWQCB's *Santa Ana River Basin Water Quality Control Program*. Compliance with the NPDES permit and the *Santa Ana River Basin Water Quality Control Program* involves the preparation and implementation of a SWPPP for construction-related activities. The SWPPP would specify the Best Management Practices (BMPs) that the Project would be required to implement during construction activities to ensure that all potential pollutants of concern (including sediment) are prevented, minimized, and/or otherwise appropriately treated prior to being discharged from the subject property. Mandatory compliance with the SWPPP would ensure that the Project does violate any water quality standards or waste discharge requirements during construction activities. Therefore, water quality impacts associated with construction activities would be less than significant and no mitigation measures would be required.

❑ Post Development Water Quality Impacts

Storm water pollutants commonly associated with the land uses proposed by the Project (i.e., light industrial warehouse) include pathogens (bacterial/virus), phosphorous, nitrogen, sediment, metals, oils and grease, trash/debris, pesticides/herbicides, and organic compounds. Based on current receiving water impairments (pursuant to the CWA's Section 303(d) list), the Project's pollutants of concern are pathogens (bacterial/virus), nitrogen, and metals.

To meet the requirements of the City's NPDES permit, the Project would be required to prepare and implement a Water Quality Management Plan (WQMP), which is a site-specific post-construction water quality management program designed to address the pollutants of concern of a development project via Best Management Practices (BMPs). Implementation of the WQMP ensures the on-going protection of the watershed basin. The Project's WQMP has been prepared by Thienes Engineering and is included as *Appendix G2* to this EIR. As identified in *Appendix G2*, the proposed Project is designed to include structural BMPs (i.e., infiltration basin and storm drain filter inserts), which provide a high removal efficiency for the Project's pollutants of concern (i.e., pathogens, nitrogen, and metals). In addition, the Project's WQMP includes programmatic BMPs (including but not limited to: educational materials for property owners, irrigation system and landscape management/maintenance, and common area litter control) to minimize, prevent, and/or otherwise appropriately treat water-borne storm water runoff flows before they are discharged from the site. Mandatory compliance with the WQMP would ensure that the Project does not violate any water quality standards or waste discharge requirements during long-term operation. Therefore, water quality impacts associated with post-development activities would be less than significant and no mitigation measures would be required.

Threshold 2: ***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 preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?***

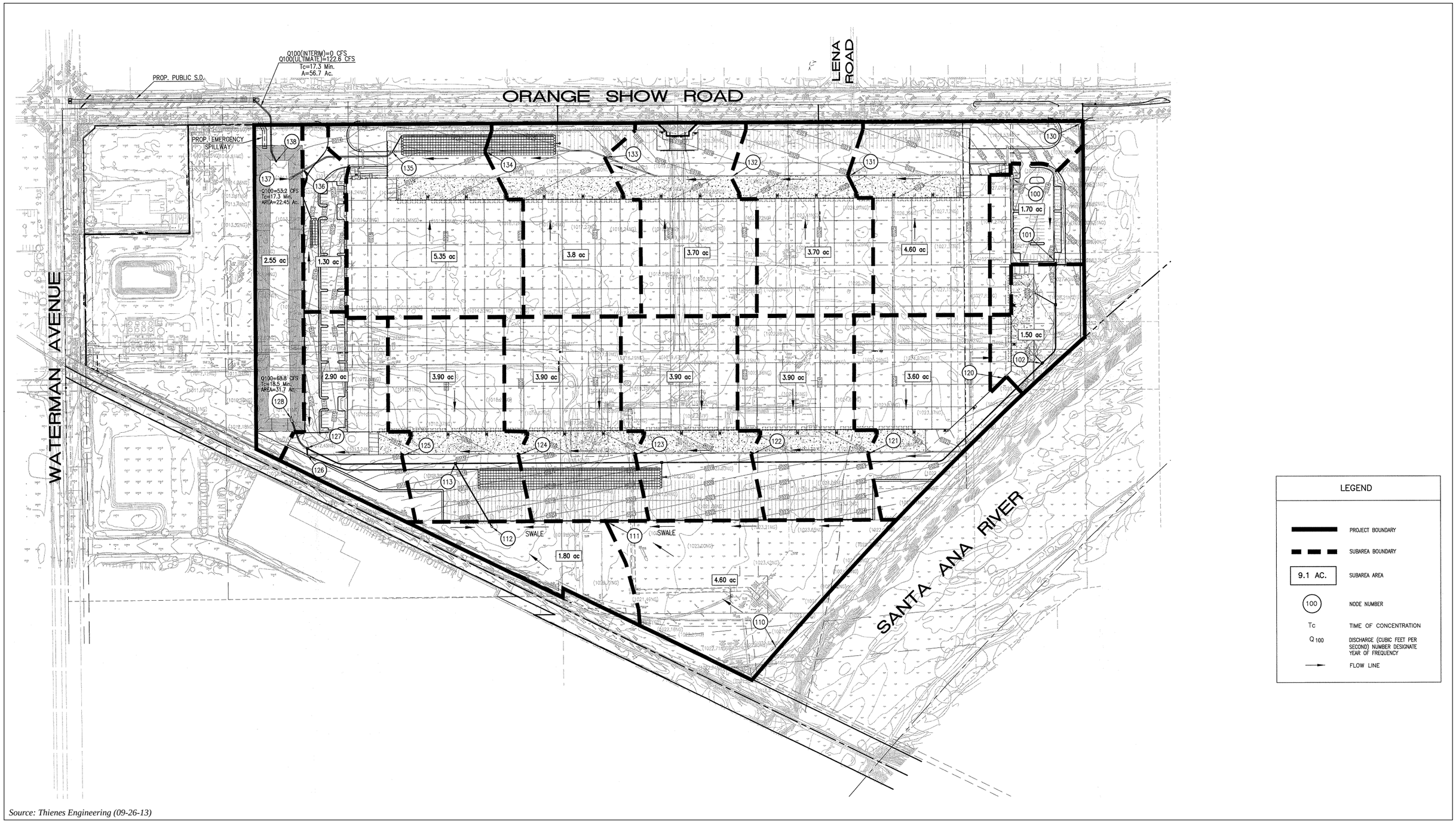
No potable groundwater wells are proposed as part of the Project. The proposed Project would be served with potable water by the SBMWD. The SBMWD relies on groundwater from the Upper Santa Ana Valley Groundwater Basin, specifically from the Bunker Hill sub-basin, as a primary source. The SBMWD has indicated its ability to serve the proposed Project in light of past, present, and future commitments (refer to *Technical Appendix J*). Therefore, implementation of the proposed Project would not deplete groundwater supplies and a significant impact would not occur.

Development of the Project would increase impervious surface coverage on the site, which would in turn reduce the amount of infiltration of runoff into Bunker Hill sub-basin of the larger Upper Santa Ana Valley Groundwater Basin. However, and as noted in the City's General Plan EIR, the long-term buildout of the City in accordance with the General Plan would result in minimal, non-significant impacts to groundwater recharge (City of San Bernardino 2005b 5.7-19). A majority of the groundwater recharge in the Bunker Hill sub-basin occurs within the Santa Ana River and percolation basins established by the City of San Bernardino along its northern boundary. The Project would not physically impact any of these major groundwater recharge features within the City and is not anticipated to adversely affect local groundwater levels. In addition, a majority of the Project site is thought to be underlain by a contaminated groundwater plume from former Norton Air Force Base (now the San Bernardino International Airport), and, therefore, does not serve as a substantial source of potable water under existing conditions. Furthermore, the Project proposes one (1) infiltration basin and two (2) underground infiltration chambers equipped with dry wells to maximize the percolation of on-site stormwater runoff into the groundwater basin.

The relocation of two (2) existing City of Riverside groundwater wells located on the Project site is being processed independently of this Project as a separate action by the City of Riverside. No analysis of well relocation is required because the relocation is not a part of the proposed Project. Because the wells would no longer be located on the Project site, the proposed Project has no potential to interfere with operation of the wells. Based on the foregoing analysis, buildout of the Project would not 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. Impacts would be less than significant and mitigation would not be required.

Threshold 3: ***Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?***

With buildout of the Project, the existing ground contours of the Project site would be altered, resulting in changes to the site's existing drainage patters. The post-development drainage characteristics of the Project site are illustrated on Figure 4.7-5, *Proposed Conditions Hydrology Map*.



Source: Thienes Engineering (09-26-13)

NOT TO SCALE

FIGURE 4.7-5
PROPOSED CONDITIONS HYDROLOGY MAP

Under post-development conditions, all on-site stormwater flows would be directed to the underground infiltration chambers proposed north and south of the proposed warehouse building and the infiltration basin proposed west of the proposed warehouse building. Under near-term conditions (prior to buildout of the IVDA Master Drainage Plan), no stormwater flows would be discharged from the site; all stormwater would percolate into the ground via the underground infiltration chambers and the surface infiltration basin. Under long-term conditions, and upon buildout of the IVDA Master Drainage Plan, stormwater runoff generated on-site during peak storm events would be directed to the planned storm drain beneath Orange Show Road that the IVDA plans to discharge directly into the Twin Creek Channel.

In both the pre- and post-development conditions (long-term), all stormwater runoff from the Project site would ultimately discharge into the Santa Ana River. Under existing conditions, a majority of the stormwater runoff from the Project site is discharged into the Santa Ana River via public storm drains within Waterman Avenue and a small portion of runoff from the Project site is discharged directly into the Santa Ana River. Under post-development conditions (long-term) and after IVDA fully implements its Master Drainage Plan, all stormwater runoff from the Project site would be discharged into the IVDA drainage system, which is designed to outlet to Twin Creek Channel.

Although a small portion of the subject property that drains directly to the Santa Ana River under existing conditions would no longer discharge directly into the Santa Ana River upon buildout of the Project, this change is not considered a substantial alteration to the drainage pattern and would not result in substantial erosion or siltation on- or off-site. Additionally, all runoff from the Project site would be treated by BMPs designed to remove sediment from stormwater runoff (i.e., infiltration basin, underground infiltration chamber). With buildout of the proposed Project, there would be no significant alteration of the site's existing drainage pattern and there would not be any significant increases in the rates of erosion or siltation either on- or off-site. Impacts would be less than significant and no mitigation would be required.

Under near-term conditions, prior to buildout of the IVDA Master Drainage Plan, no stormwater runoff would be discharged from the developed portions of the site into the Santa Ana River (directly or indirectly). All stormwater collected from the developed portions of the site would percolate into the ground via one of three infiltration facilities provided on-site. Although the Project would alter the drainage characteristics of the site, this change would not result in substantial erosion or siltation on- or off-site because there is no potential for storm water carrying sediment to leave the developed portions of the site. Buildout of the Project would not substantially increase the rate or amount of erosion or siltation off-site and impacts would be less than significant.

Threshold 4: ***Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate of surface runoff in a manner which would result in flooding on or off site?***

Under existing conditions, peak stormwater runoff flows on the subject property are 94.8 cfs during the 100-year storm event.

Under near-term development conditions and prior to buildout of the IVDA Master Drainage Plan, no stormwater runoff would be discharged from the site; peak runoff volumes during the 100-year

storm event would be zero (0 cfs). All stormwater runoff generated on-site would be diverted to one of two proposed underground infiltration chambers or a proposed surface infiltration basin. These infiltration facilities have been sized to safely accommodate the entire volume of stormwater that is anticipated on-site during a 100-year storm event, and on-site flooding is not expected to occur (Thienes Engineering 2013a 6). Because no stormwater runoff would leave the site, there is no potential for the Project to contribute stormwater runoff that could result in flooding, or an increased risk of flooding, to downstream properties. Accordingly, near-term Project flooding impacts associated with alterations to the drainage characteristics of the site would be less than significant.

Under long-term development conditions and upon full buildout of the IVDA Master Drainage Plan, the Project would discharge approximately 122.6 cfs of stormwater runoff from the site during the 100-year storm event, an increase of 27.8 cfs as compared to existing conditions (Thienes Engineering 2013a 6). Stormwater runoff discharged from the site would be conveyed to the Twin Creek Channel via a public storm drain line installed beneath Orange Show Road, and ultimately discharged into the Santa Ana River (the Twin Creek Channel confluences with the Santa Ana River approximately 0.5-mile south of Orange Show Road). Under long-term development conditions, the Project would not be required to provide detention basins to attenuate peak on-site runoff flow volumes to pre-development levels due to the proximity of the subject property to the Santa Ana River. Detention basins would delay the ultimate discharge of stormwater flows into the Santa Ana River during peak storm events. Which is not desirable. If detention were proposed, stormwater flows would be discharged into the Santa Ana River closer to its peak flow rate, thereby potentially exposing areas on the Project site and properties downstream to an increased risk of flooding. Accordingly, the design of the proposed Project would minimize the risk of on- and off-site flooding during long-term development conditions, and alterations to the drainage characteristics of the Project site (i.e., drainage pattern and flow rate) are less than significant.

Threshold 5: Would the Project create or contribute runoff which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

As described above under Thresholds 3 and 4, under near-term development conditions (prior to buildout of the IVDA Master Drainage Plan), no stormwater runoff would be discharged from the Project site. Accordingly, under near-term development conditions the Project would not contribute any runoff to the existing stormwater drainage system and would, therefore, have no potential to exceed the capacity of the existing stormwater drainage system. Impacts to the existing drainage system would be less than significant and no mitigation would be required.

Under long-term development conditions, the general Project area is subject to the IVDA Master Drainage Plan, which provides for the planned installation of a master-planned storm drain system to capture and convey stormwater runoff flows to the Santa Ana River (ultimately). The planned storm drain system is sized to adequately capture and convey stormwater runoff generated during peak storm events (100-year storm) based on land uses anticipated by the City of San Bernardino General Plan. The land uses proposed by the Project are consistent with those planned by the General Plan; therefore, the stormwater runoff flows generated by the Project are also consistent with those assumed by the IVDA Master Drainage Plan. Because the storm drain improvements provided by the IVDA Master Drainage Plan would have sufficient capacity to convey stormwater runoff

generated by the Project, the Project would not create or contribute runoff which would exceed the capacity of any planned stormwater drainage system, and impacts would be less than significant.

As discussed under the analysis of Threshold 1, the proposed Project would be required to comply with a future SWPPP and the Project's WQMP (*Technical Appendix G2*), which would identify BMPs to be incorporated into the Project to ensure that near-term construction activities and long-term post-development activities of the proposed Project would not result in substantial amounts of polluted runoff. Therefore, with mandatory compliance with the Project's SWPPP and WQMP, the proposed Project would not create or contribute substantial additional sources of polluted runoff, and impacts would be less than significant. No mitigation would be required.

Threshold 6: Would the Project otherwise substantially degrade water quality?

There are no conditions associated with the proposed Project that could result in the substantial degradation of water quality beyond what is described above in the responses to Thresholds 1, 3, and/or 5. Accordingly, a no additional impacts would not occur and mitigation is not required.

Threshold 7: Would the Project place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

The proposed Project consists of a light industrial warehouse building. Residential uses are not proposed as part of the Project. Therefore, there is no potential for the Project to place housing within a 100-year flood hazard area. No impact would occur as a result of implementation of the proposed Project.

Threshold 8: Would the Project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Approximately one-third of the Project site is located within the 100-year floodplain (Zone AE) of the Santa Ana River, as mapped by FEMA on FIRM Panel No. 06065C0683G (refer to Figure 4.7-3).

The Project's proposed grading plan, included as part of Tentative Parcel Map No. 19487 (SUB13-07), has been designed such that the building pad of the proposed warehouse building would be raised above the base flood elevation of the 100-year floodplain. Thus, as a result of the proposed Project, some flood flows would be redirected around the proposed structure and would be concentrated within other portions of the Project site, particularly within proposed parking areas. However, the Project's conceptual grading plan also has been designed such that elevations within the areas proposed for parking would be lower than occurs under existing conditions, thereby accommodating flood flows on site. As a result, the Project would not result in increased flood hazards to off-site properties. Although the Project would result in the redirection of flood flows on site (i.e., away from proposed structures), this proposed redirection of flows would not result in a significant adverse impact to the environment.

In order to ensure that no structure would be placed in the FEMA floodplain, the Project necessitates a floodplain map revision. The Project is required to secure a Conditional Letter of Map Revision (CLOMR) and Permanent Letter of Map Revision (LOMR) from FEMA, without which a significant impact would occur. To obtain a CLOMR, the Project Applicant must prepare detailed construction

drawings and flood hazard analyses as well as a standard application package (including project information forms, exhibits, etc.) for review by FEMA. If the proposed Project meets the minimum floodplain management criteria of the National Flood Insurance Program (NFIP), then FEMA will issue a CLOMR, which would allow full construction activities to occur on-site and upon issuance of the appropriate permits by the City of San Bernardino. Upon completion of construction activities, but prior to occupancy of any structure in the mapped floodplain, the Project Applicant must provide FEMA with detailed "as-built" drawings and flood hazard analyses, as well as a standard application package, to demonstrate that the Project was constructed in accordance with preliminary plans reviewed and approved by FEMA as part of the CLOMR process. If FEMA determines that the Project is consistent with the original CLOMR approval and meets the minimum floodplain management criteria of the NFIP, then a LOMR is issued and the FIRM is officially revised to remove the affected areas of the subject property from the floodplain. Mitigation Measure MM 4.7-1 is imposed to ensure that the LOMR is in place at the time of need. With issuance of a LOMR from FEMA, impacts would be reduced to below a level of significance.

Threshold 9: 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?

According to the City of San Bernardino General Plan, the Project site is located within the inundation area of the Seven Oaks Dam, which is located approximately 10 miles to the east (City of San Bernardino 2005a 10-15). Accordingly, the Project site has the potential to be exposed to flooding as a result of the failure of the Seven Oaks Dam, but this hazard risk would be no different than the risk posed to nearby properties. Furthermore, the City of San Bernardino General Plan EIR concluded that development of industrial land uses within area subject to inundation by the Seven Oaks Dam – like those proposed by the Project – would not expose people or structures to a significant risk of loss, injury, or death involving flooding due to the failure of the Seven Oaks Dam because failure of the Dam was highly unlikely (the Dam is designed to withstand a catastrophic seismic event measuring up to 8.0 on the Richter scale), and industrial land uses would not introduce a substantial number of people within the potential inundation area (City of San Bernardino 2005b 5.7-21). The proposed Project is consistent with the Land Use Designations of the City of San Bernardino General Plan and would, therefore, not increase hazards associated with dam inundation above the levels previously assumed and evaluated in the City of San Bernardino General Plan EIR. Accordingly, consistent with the conclusion drawn by the City of San Bernardino General Plan EIR, the Project would expose people of structures to less-than-significant risks of loss, injury, or death involving flooding associated with the failure of the Seven Oaks Dam.

Threshold 10: Would the Project expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?

The Pacific Ocean is located more than 50 miles from the Project site; consequently, there is no potential for the Project to be impacted by a tsunami. The Project site is not located near any steep hillsides and there are no steep hillsides present on the subject property; therefore, there is no potential for the site to be adversely affected by mudflow. The site is also not subject to flooding hazards associated with a seiche. The nearest large bodies of surface water to the site are Lake Gregory and Lake Arrowhead, located approximately 11.2 and 12.7 miles northeast of the Project site, respectively. Due to the distance of Lake Gregory and Lake Arrowhead from the Project site

and the topographic characteristics of the area, a seiche in in these bodies of water would have no impact on the Project site. Although the Santa Ana River borders the Project site, it is not an enclosed or semi-enclosed basin that would be conducive to reverberation and creation of a seiche. Accordingly, implementation of the Project would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow. No impact would occur.

4.7.4 CUMULATIVE IMPACT ANALYSIS

The analysis of potential cumulative impacts to hydrology and water quality is divided into six general topics of discussion by combining the Thresholds of Significance (listed above in Subsection 4.7.2) into groupings of like topics, as follows: 1) water quality; 2) groundwater supply and recharge; 3) erosion and siltation; 4) flood hazards; 5) stormwater drainage system capacity; and 6) other hazards.

❑ Water Quality (Thresholds 1 and 6)

The Project site is located within the Santa Ana River watershed and stormwater runoff from the Project area is ultimately discharged into the Santa Ana River (Reach 5). Although Reach 5 of the Santa Ana River is not designated as an impaired water body pursuant to the CWA's Section 303(d) list, Reach 5 flows into lower reaches of the River (i.e., Reaches 2-4) that experience excessive concentrations of pollutants and are designated as impaired.

During construction, the proposed Project and any cumulative project under construction within the Santa Ana River watershed would have the potential to cause short-term water quality impacts, including erosion and sedimentation. Pursuant to the requirements of the State Water Resources Control Board and the Santa Ana RWQCB, all construction projects that disturb one or more acres of land area are required to obtain a NPDES permit and obtain coverage for construction activities. In order to obtain coverage, an effective site-specific SWPPP is required to be developed and implemented for all development projects. The SWPPP must identify potential on-site pollutants and identify and implement an effective combination of erosion control and sediment control measures to reduce or eliminate discharge of pollutants to surface water from stormwater and non-stormwater discharges. In addition, the Project and all cumulative developments would be required to comply with the Santa Ana RWQCB's *Santa Ana River Basin Water Quality Control Program*. With compliance to these mandatory regulatory requirements, the Project's contribution to water quality impairments during Project construction would not be cumulatively considerable and no mitigation would be required.

As discussed in detail under the analysis of Threshold 1, a Project-specific WQMP has been prepared to identify pollutants of concern within the Project's watershed and to identify specific BMPs to address those pollutants. The Project's WQMP identifies the need for one (1) infiltration basin and two (2) underground infiltration chambers, which would ensure that runoff from the site does not contribute substantial amounts of pollutants of concern to receiving waters. Other developments within the watershed would similarly be required to prepare site-specific WQMPs and to incorporate BMPs into site design as necessary to ensure that runoff does not contribute to existing water quality violations. With implementation of the Project as designed, including the infiltration basin and underground infiltration chambers, and mandatory compliance to the Project's WQMP (*Technical*

Appendix G2), the Project's contribution to water quality degradation would not be cumulatively considerable and no mitigation would be required.

There are no other components of the proposed Project that have the potential to substantially degrade water quality; as such, the proposed Project would have no potential to cumulatively contribute to water quality impacts beyond what is discussed and evaluated above.

❑ Groundwater Supply and Recharge (Threshold 2)

As discussed under the analysis of Threshold 2, above, the proposed Project would be served with potable water by SBMWD, which relies on groundwater from the Bunker Hill sub-basin as a primary source. The SBMWD has indicated an ability to serve the proposed Project in light of its past, present, and anticipated future commitments (refer to *Technical Appendix G2*). Thus, the proposed Project would not result in a substantial depletion of groundwater supplies, and would therefore have no potential to cumulatively contribute to adverse impacts associated with groundwater supplies.

Although the proposed Project would increase the amount of impervious surfaces on site, the Project incorporates one (1) infiltration basin and two (2) underground infiltration chambers that would allow some runoff from the site to infiltrate into the groundwater basin. Additionally, and as previously noted, the City's General Plan EIR evaluated potential impacts to the groundwater basins beneath the City and concluded that, with buildout of the General Plan, the incremental increase in impervious surfaces within the City would not substantially affect local groundwater levels (City of San Bernardino 2005b 5.7-19). Furthermore, groundwater beneath a large portion of the Project site is thought to be contaminated due to former operations at the nearby Norton Air Force Base (now the San Bernardino International Airport), indicating that the Project site is not a source of substantial potable water.

Based on these factors, the proposed Project would not result in cumulatively considerable impacts associated with depletion of groundwater supplies or substantial interference with groundwater recharge.

❑ Erosion and Siltation (Threshold 3)

As discussed under the analysis of Threshold 3, the Project's proposed drainage plan would generally maintain the existing drainage patterns of the local area, and all drainage would continue to be ultimately discharged into the Santa Ana River as occurs under existing conditions. Additionally, all site runoff would be treated by the Project's proposed on-site infiltration basin and underground infiltration chambers, which are effective BMPs for removing sediment from stormwater runoff. Accordingly, due to the design of the proposed Project, there is no potential for the Project to make a cumulatively considerable impact associated with substantial alterations to the existing drainage pattern of the site or area which could result in substantial erosion or siltation on- or off-site.

❑ Flood Hazards (Thresholds 4, 7, 8, 9)

As discussed under the analysis of Threshold 4, the Project would not substantially increase the risk of flooding on-site or to off-site, downstream properties under near- or long-term development conditions. Accordingly, because the Project would not result in any potential for increase in flood

potential either on or off site, the Project has no potential to contribute to a cumulatively considerable impact associated with flooding.

As discussed under Threshold 7, the Project does not involve the construction of residential uses, nor would the Project increase flood hazards on off-site properties such that residential structures could be impacted by floods. Accordingly, the Project has no potential to contribute to the flooding of residential properties.

As more fully described under the analysis of Threshold 8, the proposed Project would place a light industrial warehouse building within an identified 100-year flood hazard area of the Santa Ana River, and this structure has the potential to interfere with flood flows. The proposed grading plan for the Project is designed such that the building pad of the proposed warehouse building would be raised above the base flood elevation of the 100-year floodplain to ensure the structure is not subject to flood hazards, while adjacent parking areas would be lowered in elevation both to facilitate site grading and to provide additional capacity on-site for the redirected flood flows. Regardless, other local development projects may occur within the 100-year floodplain of the Santa Ana River; therefore, the Project would contribute to a cumulatively considerable impact associated with the redirection of flood flows within a designated 100-year floodplain and mitigation would be required.

As discussed under the analysis of Threshold 9, the Project site is located within a dam inundation area for the Seven Oaks Dam and is subject to flooding in the event of failure of the Dam. The flooding risk at the Project site would be no different than other areas within the dam inundation area (primarily the eastern and central portions of the City of San Bernardino, refer to Figure 4.7-4). The City's General Plan EIR determined that failure of the Seven Oaks Dam was highly unlikely and, therefore, concluded that flooding risks associated with failure of the Seven Oaks Dam were less than significant (City of San Bernardino 2005b 5.7-21). Cumulative impacts would be less than significant.

❑ Stormwater Drainage System Capacity (Threshold 5)

As discussed under the analysis of Threshold 5, under near-term post-development conditions (before buildout of the IVDA Master Drainage Plan), no stormwater runoff would be discharged from the site. Because no stormwater runoff would leave the Project site under near-term post-development conditions, the Project has no potential to contribute to an exceedance of capacity in the existing public storm drain system. A cumulatively significant impact to existing storm drain facilities would therefore not occur.

Under long-term post-development conditions and upon buildout of the IVDA Master Drainage Plan, stormwater runoff from the Project site would be conveyed to Twin Creek Channel directly via a storm drain within Orange Show Road. The planned storm drain system is sized to adequately capture and convey stormwater runoff generated during peak storm events (100-year storm) based on land uses anticipated by the City of San Bernardino General Plan. The land uses proposed by the Project are consistent with those planned by the General Plan; therefore, the stormwater runoff flows generated by the Project also are consistent with those assumed by the IVDA Master Drainage Plan. Because implementation of the Project would not result in stormwater runoff flows that were not already anticipated by the IVDA Master Drainage Plan, the Project has no potential to contribute runoff that could exceed the capacity of the planned storm drain system. A cumulatively significant impact to planned storm drain facilities would therefore not occur.

❑ Other Hazards (Threshold 10)

The proposed Project site is not subject to hazards associated with seiches, tsunamis, or mudflows. There are no components of the proposed Project that would increase the potential for seiches, tsunamis, or mudflows. Accordingly, the Project has no potential to make a cumulatively considerable contribution to these types of impacts.

4.7.5 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold 1: Less-than-Significant Impact. The proposed Project would not violate any water quality standards or waste discharge requirements on a direct or cumulative basis. The Project is required to prepare a SWPPP to address construction-related water quality issues, and would be required to comply with a site-specific WQMP and its associated BMPs.

Threshold 2: Less-than-Significant Impact. The Project proposes no potable water wells, would not adversely affect potable water wells, and would not substantially impact the availability of potable groundwater in the Project area.

Threshold 3: Less-than-Significant Impact. The proposed Project would generally maintain the existing drainage pattern of the site and would not result in substantial erosion or siltation on- or off-site.

Threshold 4: Less-than-Significant Impact. There would be no significant increases in flood hazard with implementation of the Project. The proposed Project would not result in a substantial increase in the rate of surface runoff in a manner which would result in increased flood hazards on- or off-site.

Threshold 5: Less-than-Significant Impact. The proposed Project would not create or contribute runoff which would exceed the capacity of existing or planned stormwater drainage systems, nor would the Project provide substantial additional sources of polluted runoff.

Threshold 6: No Impact. There are no other components of the proposed Project with a potential to substantially degrade water quality.

Threshold 7: No Impact. The proposed Project does not involve the construction of residential housing and therefore would not place housing in a flood area.

Threshold 8: Significant Direct and Cumulative Impact. The Project would construct a light industrial warehouse building within the 100-year floodplain of the Santa Ana River, as designated by FEMA.

Threshold 9: Less-than-Significant Impact. The Project site is located within an area subject to inundation in the event of the failure of the Seven Oaks Dam, as is most of the central and eastern portions of the City of San Bernardino. However, the Seven Oaks Dam is designed to withstand a catastrophic seismic event and failure of the Dam is determined to be highly unlikely. Flood hazard risks posed to the Project site due to the failure of the Seven Oaks Dam would be less than significant.

Threshold 10: No Impact. The Project site is not subject to hazards associated with seiches, tsunamis, or mudflow.

4.7.6 MITIGATION

MM 4.7-1 Prior to the issuance of an occupancy permit, the Project Proponent shall provide evidence to the City of San Bernardino that an application for a Final Letter of Map Revision (LOMR) has been submitted to FEMA to permanently remove the development area from the FEMA 100-year floodplain, and shall demonstrate to the satisfaction of the City of San Bernardino that the finished floor height of the warehouse building structure is above the 100-year floodplain elevation as mapped by FEMA.

4.7.7 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold 8: Less-than-Significant Impact. Implementation of Mitigation Measure MM 4.7-1 would ensure that a LOMR is in place at the time of need. The LOMR ensures the improvements have been implemented to protect the proposed Project from floodwaters associated with a 100-year storm. With issuance of a LOMR from FEMA, impacts would be reduced to below a level of significance.

4.8 MINERAL RESOURCES

The analysis in this subsection is based on information provided in three (3) publications from the California Department of Conservation: 1) "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;" 2) "Open File Report 94-08: Mineral Land Classification of A Part of Southwestern San Bernardino County: The San Bernardino Valley Area, California;" and 3) "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". References to these reports are provided in Section 7.0, *References*, of this EIR. This subsection is also based on information contained in the Land Use Element of the City of San Bernardino General Plan (City of San Bernardino 2005a 2-1 through 2-51), the Mineral Resources section of the certified Final EIR prepared for the General Plan (City of San Bernardino 2005b 5.9-1 through 5.9-10), and the City of San Bernardino Development Code (City of San Bernardino 2013).

4.8.1 EXISTING CONDITIONS

A. Mineral Resources Zones

The California Surface Mining and Reclamation Act of 1975 (SMARA) requires the state geologist to classify areas identified by the California Office of Planning and Research into Mineral Resource Zones. The primary purpose of mineral land classification is to assure that mineral potential and its significance is recognized and considered before land use decisions that preclude mining are made. These classifications are based on geological factors without regard to existing land use and ownership. The SMARA requires the State Geologist to classify land according to the presence, absence or likely occurrence of significant mineral deposits in certain areas of the State subject to urban expansion or land uses incompatible with mining. The State classification system is broken out into four general zones, as shown below in Table 4.8-1, Mineral Resources Zones.

The California Department of Conservation 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 reprinted 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).

Table 4.8-1 Mineral Resources Zones

ZONE	SIGNIFICANCE
MRZ-1	Areas where the available geologic information indicates no significant mineral deposits or a minimal likelihood of significant mineral deposits
MRZ-2	MRZ-2a: Areas where the available geologic information indicates that there are significant mineral deposits.
	MRZ-2b: Areas where the available geologic information indicates that there is a likelihood of significant mineral deposits.
MRZ-3	MRZ-3a: Areas where the available geologic information indicates that mineral deposits exist, however, the significance of the deposit is undetermined.
	MRZ-3b: Areas where the available geologic information indicates that mineral deposits are likely to exist, however, the significance of the deposit is undetermined.
MRZ-4	Areas where there is not enough information available to determine the presence or absence of mineral deposits

Source: "Guidelines for Classification and Designation of Mineral Lands," California Surface Mining and Reclamation Policies and Procedures, http://www.conservation.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf.

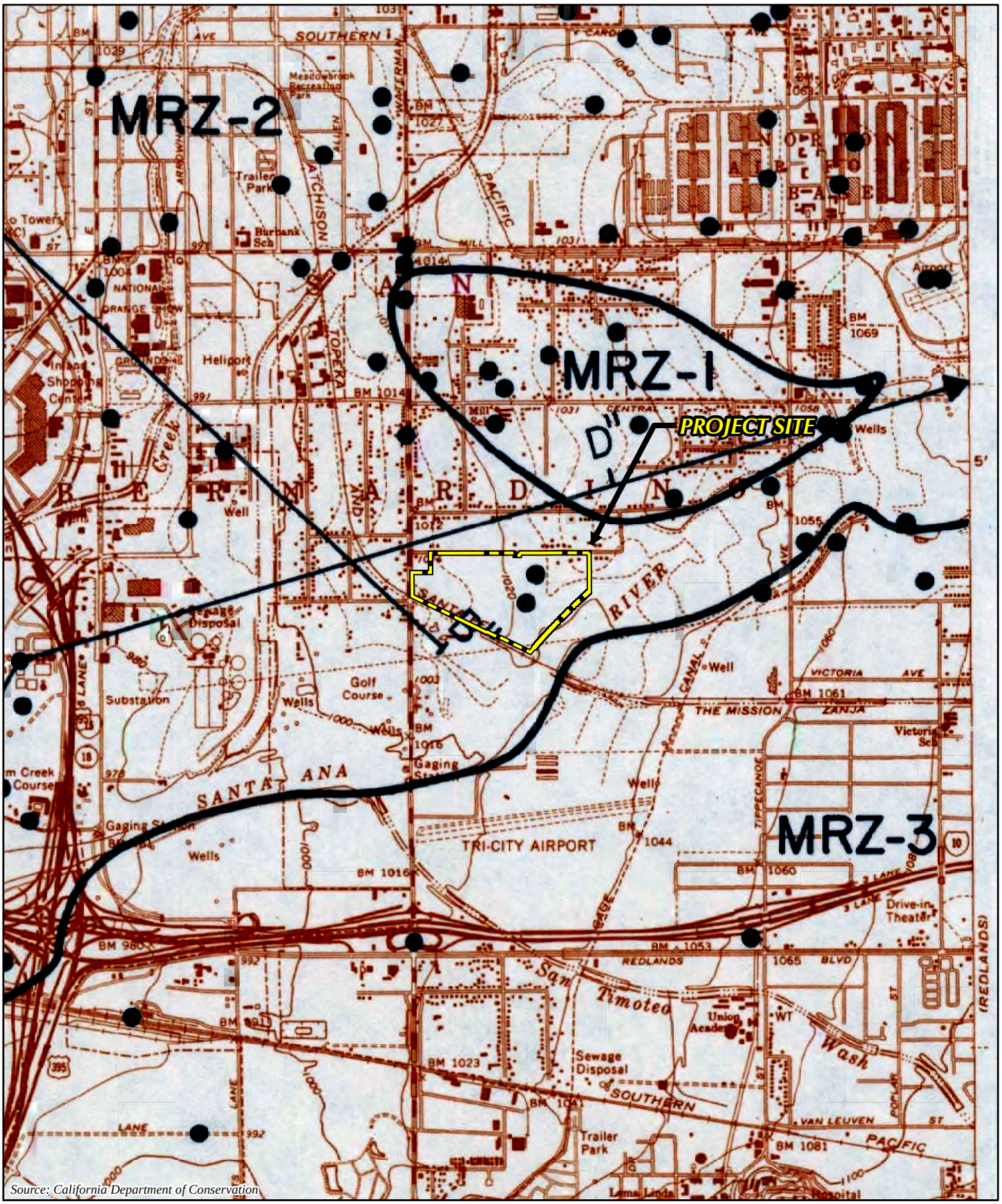
As shown on Figure 4.8-1, *Mineral Land Classification Map – San Bernardino South Quadrangle*, SR 143, Part VII mapped the Project site as a MRZ-2 resource area for Portland cement concrete-grade (PCC) aggregate. The conclusions of SR 143, Part VII, as they pertain to the potential for the Project site to contain, or likely contain, significant PCC aggregate deposits, were re-affirmed by OFR 94-08 and SR 206 (Department of Conservation 1995, Department of Conservation 2008 Plate 2). MRZ-2 areas are known to contain significant mineral deposits or have a high likelihood of containing significant deposits.

❑ Portland Cement Concrete-Grade Aggregates

PCC-grade aggregate deposits include sand, gravel, and crushed stone that meet the restrictive physical and chemical specifications for Portland cement. These restrictive specifications make PCC-grade aggregate deposits valuable. Lower-grade aggregate deposits, suitable for applications such as asphaltic concrete, road base, subbase, and fill, are abundant throughout the San Bernardino region and are not classified as a significant mineral resource (California Department of Conservation 2008 vii).

Mining within the boundaries of the Project site for PCC-grade aggregates has not been documented or known to have occurred. Furthermore, no mining activities have been known to occur in the areas in the immediate vicinity of the Project site. According to SR 206, there are nine (9) surface mines producing PCC-grade aggregate in the San Bernardino Production-Consumption Region, which encompasses southwestern San Bernardino County (including the City of San Bernardino) and part of central-eastern Riverside County. The mines within the San Bernardino Production-Consumption Region producing PCC-grade aggregates at the time SR 206 was published in 2008 are listed in Table 4.8-2, below.

Including the mining operations listed in Table 4.8-2, SR 206 identified approximately 10,741.8 acres of land within the San Bernardino Production-Consumption Region that could contain



0 500 1,000 2,000 Feet

FIGURE 4.8-1
MINERAL LAND CLASSIFICATION MAP - SAN BERNARDINO QUADRANGLE

Table 4.8-2 PCC-Grade Aggregate Mines in San Bernardino Production-Consumption Region

MINE OPERATOR	MINE NAME	LOCATION
Cemex	Lytle Creek Quarry	City of Rialto
	Redlands Pit	Cities of Redlands & Highland
Pacific Aggregates, Inc.	Nichols Canyon Mine	Lake Elsinore
Robertson's Ready Mix Concrete, Inc.	4th Street Rock Crusher	City of San Bernardino
	Old Webster Quarry	City of Highland
	Banning Pit	City of Banning
	Cabazon Pit	Riverside County (Cabazon)
	Mid-Valley Landfill Pit	City of Rialto
Vulcan Materials Co.	Cajon Creek Pit	City of San Bernardino

Source: California Department of Conservation, 2008, "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."

important PCC-grade aggregate deposits encompassing an estimated 5.986 billion tons of PCC-grade aggregate resources. Of this vast potential resource base, there are known reserves of 287 million tons of PCC-grade aggregates within the San Bernardino Production-Consumption Region, which is estimated to be depleted by the Year 2024 if no new or expanded mines come into operation before that time (California Department of Conservation 2008 13-15, 24).

B. City of San Bernardino Land Use Regulations

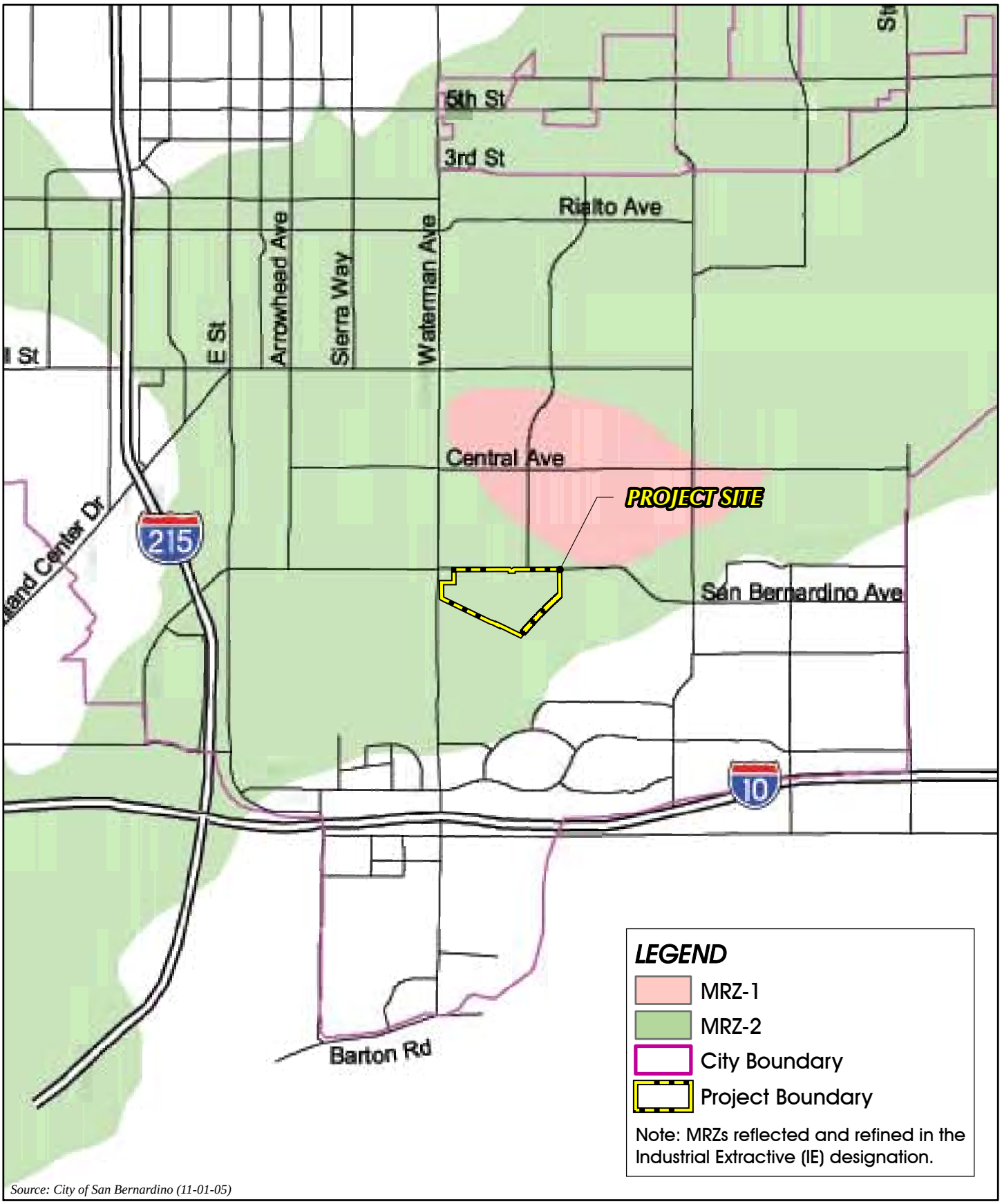
❑ City of San Bernardino General Plan

The City of San Bernardino General Plan includes a map of the mineral resource zones within the City (refer to Figure 4.8-2, *City of San Bernardino General Plan Mineral Resource Zones*). The mineral resource zones mapped on Figure 4.8-2 correspond with the mineral resource zone locations identified by the California Department of Conservation in SR 143, Part VII, OFR 94-08 and SR 206.

Pursuant to the General Plan, mining land uses are only permitted within the "Industrial Extractive (IE)" land use designation, subject to approval of a Mineral Reclamation Plan in accordance with SMARA (City of San Bernardino 2005a 2-19). Areas designated by the General Plan for Industrial Extractive land uses are almost exclusively located in the northwest portion of the City (City of San Bernardino 2005a 2-13). The Project site is designated by the Municipal Code for "Industrial Light (IL)" land uses, which is not planned by the General Plan for mining land uses (City of San Bernardino 2005a 2-19).

❑ City of San Bernardino Development Code

The City of San Bernardino Development Code establishes development regulations to implement the planned vision of the General Plan. Pursuant to Section 19.08.020 of the Development Code (Table 08.01), mineral extractive land uses are conditionally permitted in the "Industrial Extractive (IE)" zone, and mineral processing land uses are conditionally permitted in the "Industrial Extractive (IE)" and "Industrial High (IH)" zones (City of San Bernardino 2013 II-19.08-3-4). Neither mineral extractive land uses nor mineral processing land uses are permitted within the "Industrial Light (IL)" zone, which is applied to the Project site (City of San Bernardino 2013 II-19.08-3-4).



Source: City of San Bernardino (11-01-05)

0 600 1,200 2,400 Feet

FIGURE 4.8-2
CITY OF SAN BERNARDINO GENERAL PLAN MINERAL RESOURCE ZONES

4.8.2 BASIS FOR DETERMINING SIGNIFICANCE

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

1. *Result in the loss of availability of known mineral resource that would be of value to the region and the residents of the state?*

2. *Result in the loss of locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

4.8.3 IMPACT ANALYSIS

Threshold 1: Result in the loss of availability of known mineral resource that would be of value to the region and the residents of the state?

As previously discussed, the Project site is located within an area designated by the California Department of Conservation as MRZ-2 – defined as an area mapped as containing significant mineral deposits – for PCC-grade aggregate minerals. As such, the development of a 49.58-acre portion of the property as proposed by the Project would hinder access to the potential mineral resources contained beneath the Project site.

It is important to note that the mineral resource zone classifications assigned by the California Department of Conservation 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 Department of Conservation where mining activities were not suitable because of incompatible surrounding land uses. The Project site is assigned a General Plan Foundation land use designation of "Industrial," which only allows for resource extraction in areas further defined by the General Plan as "Industrial Extractive." The Project site is further defined as "Industrial Light," which is described by the General Plan as an area for a "[v]ariety 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 use" (City of San Bernardino 2005a 2-13, 2-19). Thus, mineral extraction activities are not designated to occur on the Project site by the General Plan. The zoning designation applied to the subject property also prohibits mining land uses (i.e., Industrial Light) (City of San Bernardino 2013 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. Furthermore, 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 (City of San Bernardino 2005b 5.9-8). There are no components of the proposed Project that would result in new or more severe impacts associated with the loss of mineral resources beyond the levels that were previously evaluated and disclosed as part of the City's General Plan EIR. Impacts would be less than significant.

Threshold 2: Result in the loss of locally important mineral resources recovery site delineated on a local general plan, specific plan, or other land use plan?

Although the City of San Bernardino General Plan identifies the Project site within an important mineral resource zone, the General Plan does not identify the Project site as an important mineral resource recovery site (City of San Bernardino 2005a 12-15). Furthermore, neither the City General Plan nor Development Code designate the Project site for Industrial Extractive (IE) land uses, which is the only land use category within the City where mining activities are permitted (City of San Bernardino 2005a 2-19, City of San Bernardino 2013 II-19.08-4). Accordingly, the Project site is not delineated on any local plan as a locally important mineral resources recovery site. Impacts would be less than significant.

4.8.4 CUMULATIVE IMPACT ANALYSIS

Known PCC-grade aggregate reserves within the San Bernardino Production-Consumption Region are expected to last until the Year 2024. To supplement known reserves, SR 206 identified over 10,741.8 of land within the San Bernardino Production-Consumption Region with the potential to contain significant PCC-grade aggregate deposits (California Department of Conservation 2008 13-15, 24). Development of the proposed Project would reduce the availability of land within the San Bernardino Production-Consumption with potential PCC-grade aggregate deposits by approximately 0.46-percent (49.58 acres), on a property that the City of San Bernardino General Plan and Development Code already preclude from mining.

Impacts to mineral resources resulting from development the Project site in accordance with its General Plan land use designation were previously addressed in the City of San Bernardino's General Plan EIR (SCH No. 2004111132). The General Plan EIR did not identify any significant cumulative environmental effects associated with mineral resources that would result from implementation of the General Plan (City of San Bernardino 2005b 5.9-8). With implementation of the Project, no new or more severe impact to mineral resources would occur beyond those identified in the City's General Plan EIR. As such, cumulative impacts associated with the Project would be less than significant.

4.8.5 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

<u>Issue 1: Less-than-Significant Impact.</u> The Project would not result in the loss of availability of a known mineral resource that would be of value to the region or state because the City of San Bernardino General Plan and Development Code preclude mining activities on the property.

<u>Issue 2: Less-than-Significant Impact.</u> The Project would not result in the loss of locally important mineral resources recovery site delineated on a local general plan, specific plan, or other land use plan.

4.8.6 MITIGATION MEASURES

As concluded in the foregoing analysis, implementation of the proposed Project would result in less than significant impacts to mineral resources; accordingly, mitigation is not required.

4.9 NOISE

The following analysis is based on a technical noise study prepared by Urban Crossroads, Inc. entitled "Alliance California Gateway South Building 3, Noise Impact Analysis, City of San Bernardino, California," dated November 7, 2013, and included as *Technical Appendix H* to this EIR. The report considers potential noise impacts associated with construction and operation of the proposed Project.

4.9.1 EXISTING CONDITIONS

A. Study Area Description

The Project site is located within the south-central portion of the City of San Bernardino, immediately south of Orange Show Road, approximately 450 feet east of Waterman Avenue, and approximately 0.6 mile west of Tippecanoe Road. A portion of the site's southeastern boundary abuts the Santa Ana River, while the southwestern border of the site abuts the BNSF railroad. As previously described in EIR Section 2.0, *Environmental Setting*, properties surrounding the Project site are planned by the City of San Bernardino General Plan for industrial development. Property in this portion of the City was once rural in nature, but is transitioning into an important industrial and commercial center for the City. Over the past six (6) years, several large-scale industrial and warehouse buildings have been developed in the general vicinity of the Project site. Although the Project site is located within an area mostly developed with commercial and industrial land uses, the study area includes several non-conforming residential homes. Three (3) residential homes are located north of the Project site, fronting Orange Show Road, and one (1) residential home is located east of the Project site.

B. Noise Fundamentals

❑ 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. Because the range of sound that the human ear can detect is so large, the scale used to measure sound intensity is based on multiples of 10, the logarithmic scale. The unit of measure in which a sound intensity is described is the decibel (dB). Each interval of 10 dB indicates a sound energy 10 times greater than before, which is perceived by the human ear as being roughly twice as loud. 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 is adjusted to reflect only those frequencies which are audible to the human ear. (Urban Crossroads, 2013d, p. 4)

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 (Urban Crossroads, 2013d, p. 4). Environmental noise descriptors are generally based on averages, rather than instantaneous noise levels. The most commonly used figure is the equivalent continuous noise level (Leq.). Leq. represents a steady sound level containing the same total energy as a time-varying level over a given measurement interval. Leq. may represent any desired length of time; however, one hour is the most commonly used in environmental work.

Peak hour noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour levels may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24 hour noise level, is utilized.

The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of five (5) dB to sound levels in the evening from 7 p.m. to 10 p.m., and the addition of 10 dB to sound levels at night between 10 p.m. and 7 a.m. These additions are made to account for the noise sensitive time periods during the evening and nighttime hours when sound appears louder. CNEL does not represent the actual sound level heard at any particular time, but rather represents the total sound exposure.

❑ Effects of Noise

Approximately 10% of the human population has a very low tolerance for noise and will object to any noise not of their own making. Consequently, even in the quietest environment, some complaints will occur. Another 25% of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. 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 1.0 dBA cannot be perceived by the human ear except in carefully controlled laboratory experiments, a change of 3.0 dBA may be perceptible, and a change of 5 dBA is often necessary before any noticeable change in community response (i.e. complaints) would be expected. Harmful effects of noise can include speech interference, sleep disruption, loss of hearing, disruptions to performance and learning processes, and loss of sleep expected (Urban Crossroads, 2013d, p. 8).

❑ Traffic Noise Prediction

According to the *Highway Traffic Noise Analysis and Abatement Policy and Guidance* provided by the Federal Highway Administration, the level of traffic noise depends on three primary factors: (1) the volume of the traffic, (2) the speed of the traffic, and (3) the vehicle mix within the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and a greater number of trucks. A doubling of the traffic volume, assuming that the speed and vehicle mix do not change, results in a noise level increase of 3 dBA. The vehicle mix on a given roadway may also have an effect on community noise levels. As the number of medium and heavy trucks increases and becomes a larger percentage of the vehicle mix, adjacent noise level impacts will increase. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires on the roadway (Urban Crossroads, 2013d, p. 6).

❑ Ground Absorption of Noise

To account for the ground-effect attenuation (absorption) of noise, two types of site conditions are commonly used in traffic noise models: soft site and hard site conditions. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. 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, 2013d, p. 6).

❑ Noise Control and Noise Barrier Attenuation

Noise control is the process of obtaining an acceptable noise environment for a particular observation point or receptor by controlling the noise source, transmission path, receptor, or all three. This concept is known as the source-path-receptor concept. In general, noise control measures can be applied to any and all of these three elements (Urban Crossroads, 2013d, p. 7).

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 view of the noise source (Urban Crossroads, 2013d, p. 7).

❑ Land Use Compatibility

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are considered to be more sensitive to noise intrusion than are commercial or industrial activities. Ambient noise levels can also affect the perceived desirability or livability of a development. For these reasons, land use compatibility with the noise environment is an important consideration in the planning and design process (Urban Crossroads, 2013d, p. 7).

C. Existing Noise Standards (Policies and Regulations)

Local noise guidelines are often based on the broader guidelines established by state and federal agencies. Following is a description of the existing noise regulatory setting for the proposed Project. Because a majority of the Project's traffic distribution (and associated vehicular noise) would route through the City of San Bernardino, the noise criteria for the City of San Bernardino is presented below.

To ensure that residents are protected from excessive noise through careful land planning (Goal 14.1), the City of San Bernardino General Plan Noise Element provides guidelines to evaluate the Land Use Compatibility for Community Noise Exposure (Figure N-1). These guidelines are based on the Governor's Office of Planning and Research and are used to assess the community noise exposure on land uses. According to the Land Use Compatibility for Community Noise Exposure guidelines, noise sensitive land uses such as single family residences are normally acceptable with exterior noise levels below 60 dBA CNEL and conditionally acceptable with noise levels below 70 dBA CNEL. For office and commercial land uses, exterior noise levels below 70 dBA CNEL are considered normally acceptable and noise levels of less than 80 are considered conditionally acceptable. Industrial, and manufacturing land uses are considered normally acceptable with noise levels below 75 dBA CNEL and conditionally acceptable with noise levels of less than 80 dBA CNEL. A copy of the City of San Bernardino General Plan Noise Element is provided as Appendix 3.1 to the Project's Noise Impact Analysis (see *Technical Appendix* H) (Urban Crossroads, 2013d, p. 10).

The City of San Bernardino General Plan Noise Element identifies a maximum allowable exterior noise level of 65 dBA CNEL and an interior noise level limit of 45 dBA CNEL for new residential developments. While the City of San Bernardino specifically identifies an exterior noise level limit for noise sensitive residential land uses such as hotels, hospitals, schools and parks, the City of San Bernardino does not maintain exterior noise standards for non-noise sensitive land uses such as office, retail, manufacturing, utilities, agriculture, and industrial.

The City of San Bernardino does not identify specific maximum exterior noise level limits. The policies contained in the Noise Control Ordinance are designed to protect residents from the negative effects of "spillover" or nuisance noise. To analyze noise impacts originating from a designated fixed location or private property such as the Project site, stationary source noise such as idling trucks, delivery truck activities, parking, backup alarms and the refrigerated containers or reefers are typically evaluated against the policies adopted in the City's Noise Control Ordinance (Chapter 8.54). (8) However, 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). Regarding construction activities, Section 8.54.070 of the City's Noise Control Ordinance states that *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.*

D. Existing Noise Conditions

Urban Crossroads, Inc. recorded 24-hour noise readings in six (6) locations around the Project site on Monday October 21, 2013, using Piccolo sound level meters. More information about the meters is found in *Technical Appendix H*. The meters were positioned at the nearest noise-sensitive receptor locations to assess the existing ambient hourly noise levels surrounding the Project site. Figure 4.9-1, *Noise Measurement Locations*, shows the location of noise level measurement locations in relation to the Project site (locations L1 through L6). The results of the noise level measurements are presented in Table 4.9-1, *Long-Term Ambient Noise Level Measurements*, and are summarized below. Table 4.9-1 identifies the hourly daytime (7 a.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.) noise levels at each noise level measurement location. Refer to *Technical Appendix H* Appendix 5.2 for noise measure worksheets. A summary of the existing noise levels at each of the six (6) locations were noise levels were collected is described below.

- Located north of Orange Show Road in a business center, location LT-1 represents the off-site noise levels at the northwest corner of the Project site. Based on the noise level measurements, the existing daytime hourly ambient noise levels ranged from 63.1 to 69.5 dBA Leq resulting in an energy (logarithmic) average daytime noise level of 67.2 dBA Leq. During the nighttime hours, the measured ambient noise levels ranged from 57.9 to 69.2 dBA Leq producing an energy (logarithmic) average nighttime noise level of 64.8 dBA Leq. A review of the 24-hour CNEL indicates that the overall exterior noise level is 71.8 dBA CNEL which is considered "conditionally acceptable" for office building, businesses, and commercial land uses by the City of San Bernardino Land Use Compatibility for Community Noise Exposure (General Plan Noise Element Figure N-1).

LEGEND:

LT-6 = LONG-TERM NOISE LEVEL MEASUREMENT LOCATION

N

Source: Urban Crossroads (11-07-13)

NOT TO SCALE

FIGURE 4.9-1
NOISE MEASUREMENT LOCATIONS

Table 4.9-1 Long-Term Ambient Noise Level Measurements

Observer Location[1]	Date	Description	Hourly Noise Level (Leq dBA)[2]	
			Daytime (7am to 10pm)	Nighttime (10pm to 7am)
LT-1	10/21/2013	Located north of Orange Show Road in the nearby business center.	67.2	64.8
LT-2	10/21/2013	Located in the center median island north of Orange Show road opposite the nearby homes.	73.8	69.7
LT-3[3]	10/20/2013	East of the project site near the adjacent residential homes.	56.9	57.4
LT-4	10/21/2013	Located east of the loading dock area near the Sana Ana River.	51.3	55.3
LT-5	10/21/2013	Located southwest of the project site in the Park Center Circle business center.	50.6	52.3
LT-6	10/21/2013	East of the project site near the railroad track adjacent to the Valley Business Park.	62.6	61.0

[1] See Exhibit 5-A for the location of the monitoring sites.
[2] Energy (logarithmic) average hourly levels. The long-term measurements printouts are included in Appendix 5.1.
[3] Due to a noise meter error, the noise level measurement at observation location LT-3 lasted only 8 hours.
Source: Urban Crossroads 2013d, Table 5-1.

- Location LT-2 represents the adjacent residential homes located north of the Project site across Orange Show Road. Due to access restrictions, a noise level meter was not able to be placed on the residential project. Instead, the noise level meter was placed in the center median island. The noise level measurements show an overall 24-hour exterior noise level of 77.2 dBA CNEL which is considered "clearly unacceptable" for residential use by the Land Use Compatibility for Community Noise Exposure (General Plan Noise Element Figure N-1). The hourly noise levels measured at Location LT-2 ranged from 68.5 to 75.9 dBA Leq during the daytime hours and from 62.8 to 74.5 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 73.8 dBA Leq with an average nighttime noise level of 69.7 dBA Leq.

- Location LT-3 represents the area east of the Project site near the adjacent non-conforming residential land use. The daytime hourly noise levels ranged from 55.8 to 60.3 dBA Leq with an observed hourly nighttime noise level of 57.4 dBA Leq.

- To represent the existing ambient noise levels near the Santa Ana River, noise level measurement location LT-4 was placed at the eastern corner of the Project site. At this location, the 24-hour noise level was measured at 61.4 dBA CNEL. The existing daytime hourly noise levels were measured at 45.2 to 56.8 dBA Leq with the nighttime hours ranging from 49.1 to 60.7 dBA Leq. The energy (logarithmic) average daytime noise level was calculated at 51.3 dBA Leq with an average nighttime noise level of 55.3 dBA Leq.

- Located southwest of the Project site in the Park Center Circle business center, location LT-5 represents the off-site noise levels at the southwest corner of the Project site. Based on the noise level measurements, the existing daytime hourly ambient noise levels ranged from 44.2 to 57.6 dBA Leq resulting in an energy (logarithmic) average daytime noise level of 50.6 dBA Leq. During the nighttime hours, the measured ambient noise levels ranged from 46.4 to 55.7 dBA Leq producing an energy (logarithmic) average nighttime noise level of 52.3 dBA Leq. A review of the 24-hour CNEL indicates that the overall exterior noise level is 58.7 dBA CNEL which is considered "normally acceptable" for office building, businesses and commercial land use by the City of San Bernardino Land Use Compatibility for Community Noise Exposure (General Plan Noise Element Figure N-1).

- Location LT-6 represents the Valley Business Park located west of the Project site across Waterman Avenue. The noise level measurements show an overall 24-hour exterior noise level of 67.9 dBA CNEL which is considered "normally unacceptable" for office building, businesses and commercial land use by the Land Use Compatibility for Community Noise Exposure (General Plan Noise Element Figure N-1). The hourly noise levels measured at Location LT-6 ranged from 60.3 to 65.6 dBA Leq during the daytime hours and from 56.2 to 65.1 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 62.6 dBA Leq with an average nighttime noise level of 61.0 dBA Leq.

The results of the noise level measurements show that ambient noise levels are identified as unacceptable at two of the measurement locations. Measurements taken at Location LT-2, the location of the adjacent residential homes north of the Project site across Orange Show Road, show an overall 24-hour exterior noise level of 77.2 dBA CNEL which is considered "clearly unacceptable" for residential use by the Land Use Compatibility for Community Noise Exposure (General Plan Noise Element Figure N-1). (Urban Crossroads, 2013d, p. 15). Measurements taken at Location LT-6, the location of the Valley Business Park located west of the Project site across Waterman Avenue, show an overall 24-hour exterior noise level of 67.9 dBA CNEL which is considered "normally unacceptable" for office building, businesses and commercial land use by the Land Use Compatibility for Community Noise Exposure (General Plan Noise Element Figure N-1). (Urban Crossroads, 2013d, p. 16).

❑ Existing Vibration

Ground-borne vibration is usually localized to areas within about 100 feet from the vibration source. The Project site is located adjacent to a rail line operated by BNSF Railroad. As such, the southeastern portion of the Project site is subject to nominal vibration when a train passes by the property. As of October 2013, train occurrences occur two (2) times a week (Rousseau, 2013).

4.9.2 BASIS FOR DETERMINING SIGNIFICANCE

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

1. *Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;*

2. *Expose persons to or generate excessive groundborne vibration or groundborne noise levels;*

3. *Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;*

4. *Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;*

5. *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, expose people residing or working in the project area to excessive noise levels; or*

6. *For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.*

While the CEQA Guidelines and the City of San Bernardino noise standards provide direction on noise compatibility and establish noise standards by land use type that are sufficient to assess the significance of noise impacts under the first threshold, they do not define the levels at which increases are considered substantial for use under the second and third threshold. Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels and the location of noise-sensitive receptors in order to determine if a noise increase represents a significant adverse environmental impact.

Noise impacts will be considered significant if any of the following occur as a direct result of the proposed Project:

- If Project related operational noise levels exceed applicable standards.
- If Project-related construction activities take place during noise-sensitive hours (8 p.m. to 7:00 a.m.).

The level of significance attributed to the Project's cumulative contribution to noise impacts is based on the noise levels that occur with and without the Project. The significance of cumulative noise impacts varies depending on the condition of the environment and the Project-related noise level increases. For example, if the ambient noise environment is quiet and the new noise source greatly increase the noise levels, an impact may occur even though the noise criteria might not be exceeded. Therefore, for the purpose of this analysis, a "readily perceptible" 5 dBA or greater Project-related operational noise level increase is considered a significant impact. In areas where the without-Project noise levels range from 60 to 65 dBA, noise level increases become noticeable at some value of greater than 1 dBA, with a 3 dBA "barely perceptible" noise level increase being noticeable to

most people. Thus, when the without-Project noise levels already exceed 65 dBA at a sensitive-receptor location, an increase in community noise by Project operations of 1.5 dBA or greater is considered a cumulatively considerable contribution to the noise environment.

4.9.3 IMPACT ANALYSIS

Threshold 1:	***Would the proposed Project expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?***
Threshold 3:	***Would the proposed Project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?***
Threshold 4:	***Would the proposed Project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?***

A. Short-Term Construction Noise Impacts

Construction activities associated with the Project, especially activities involving heavy equipment, would create intermittent periods of noise when construction equipment is in operation and cause a short-term increase in ambient noise levels. Examples of construction equipment that generate noise includes but is not limited to graders, bulldozers, trucks, power tools, concrete mixers, jackhammers, and portable generators. Construction of the Project is expected to occur in six (6) stages: site preparation, grading, paving, building construction, architecture coating, and off-site utility installation. The highest construction noise levels would occur during the grading and off-site utility installation activities.

In January 2006, the Federal Highway Administration (FHWA) published a national database of construction equipment reference noise emission levels. The database provides a comprehensive list of the noise generating characteristics for specific types of construction equipment. In addition, the database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation. Noise levels generated by heavy construction equipment can range from approximately 70 dBA to noise levels in excess of 100 dBA when measured at 50 feet. 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 78 dBA measured at 50 feet from the noise source to the receptor would be reduced to 72 dBA at 100 feet from the source to the receptor, and would be further reduced to 66 dBA at 200 feet from the source to the receptor (Urban Crossroads, 2013d, p. 27).

To assess the construction-related noise levels expected from the proposed Project, nine (9) noise receiver locations were identified as shown on Figure 4.9-2, *Noise Receiver Locations.* Table 4.9-2, *Construction Equipment Noise Levels*, shows that the peak construction noise levels are expected to range from 66.8 to 88.2 dBA Leq. at receiver locations R1 through R9.

LEGEND:

= NOISE RECEIVER LOCATION

N

Source: Urban Crossroads (11-07-13)

NOT TO SCALE

FIGURE 4.9-2
NOISE RECEIVER LOCATIONS

Table 4.9-2 Construction Equipment Noise Levels

Noise Receptor[1]	Construction Phase Hourly Noise Level (dBA Leq)[2]						
	Site Prep.	Grading	Paving	Building	Arch. Coating	Off-Site Utility	Peak[3]
R1	64.7	66.8	58.4	60.4	53.7	60.8	66.8
R2	66.2	68.3	59.9	61.9	55.2	65.3	68.3
R3	80.3	82.5	74.1	76.1	69.4	88.2	88.2
R4	77.9	80.0	71.6	73.6	66.9	82.2	82.2
R5	79.0	81.1	72.8	74.7	68.1	86.3	86.3
R6	74.9	77.0	68.6	70.6	64.0	73.4	77.0
R7	82.8	85.0	76.6	78.6	71.9	60.6	85.0
R8	82.8	85.0	76.6	78.6	71.9	58.0	85.0
R9	82.8	85.0	76.6	78.6	71.9	59.6	85.0

[1] Noise receiver locations are shown on Exhibit 9-A.
[2] Construction noise calculations by phase are included in Appendix 9-2.
[3] Estimated construction noise levels during peak operating conditions.
Source: Urban Crossroads 2013d, Table 9-1.

Receiver locations R3, R4, and R5 represent non-conforming residential homes, which would experience construction-related noise above levels that the City of San Bernardino General Plan considers acceptable for residential land uses. As discussed in Subsection 4.9.1C above, the City of San Bernardino has established limits on permitted hours of construction activities. Provided that Project-related construction activities do not occur at night and take place only between the hours of 7:00 AM and 8:00 PM, construction noise is exempt from the ambient noise standards of the City's Noise Ordinance. Because Project construction activities would occur within the hours specified in the City's Noise Ordinance, construction of the Project will result in a less than significant short-term noise impacts.

B. Long-Term Operational Noise Impacts

❑ Transportation-Related Noise Impacts

Generally, traffic noise impacts are analyzed both to ensure that a project would not adversely impact the acoustic environment of the surrounding community and also to ensure that a project site is not exposed to an unacceptable level of noise resulting from the ambient noise environment acting upon the property. The proposed Project consists of the construction and operation of one (1) industrial warehouse building and is not considered to be sensitive to noise exposure. Thus, the analysis herein focuses on the Project's potential to increase traffic noise as a result of vehicles traveling to and from the industrial warehouse building proposed on the property.

Using a computer program that replicates the FHWA and Model Inputs Traffic Noise Prediction Model- FHWA-RD-77-108 (the "FHWA Model"), future roadway noise impacts from vehicular traffic were calculated along the Project's predicted local traffic route where fifty (50) or more peak hour trips would be contributed. For more information about the model calculations performed for the Project, refer to *Technical Appendix H* (Urban Crossroads, 2013d, p. 18).

To quantify the effects of the Project's traffic noise on surrounding areas, Urban Crossroads, Inc. calculated traffic noise levels increases on 13 roadway segments surrounding the Project site based on the changes in the average daily traffic volumes. The road segments analyzed are based on the Project's traffic report contained in *Technical Appendix I1* and are listed in Table 4.9-3, *Off-site Roadway Parameters.*

Table 4.9-3 Off-site Roadway Parameters

ID	Roadway	Segment	Jurisdiction	Roadway Classification[1]	Lanes	Vehicle Speed (MPH)
1	E St.	n/o Orange Show Rd.	San Bernardino	Major	4	50
2	Waterman Av.	n/o Orange Show Rd.	San Bernardino	Major	4	50
3	Waterman Av.	s/o Orange Show Rd.	San Bernardino	Major	4	50
4	Waterman Av.	n/o Hospitality Ln.	San Bernardino	Major	4	50
5	Waterman Av.	s/o Hospitality Ln.	San Bernardino	Major	4	50
6	Carnegie Dr.	s/o Hospitality Ln.	San Bernardino	Major	4	50
7	Orange Show Rd.	w/o E St.	San Bernardino	Major	4	50
8	Orange Show Rd.	e/o E St.	San Bernardino	Major	4	50
9	Orange Show Rd.	e/o Arrowhead Av.	San Bernardino	Major	4	50
10	Orange Show Rd.	w/o Waterman Av.	San Bernardino	Major	4	50
11	Orange Show Rd.	e/o Waterman Av.	San Bernardino	Major	4	50
12	Hospitality Ln.	e/o Waterman Av.	San Bernardino	Major	4	50
13	Hospitality Ln.	w/o Carnegie Dr.	San Bernardino	Major	4	50

[1] Road Classifications based upon the General Plan Circulation Element.
Source: Urban Crossroads 2013d, Table 6-1.

A comparison of the without-Project and with-Project noise contours (representing the 55, 60, 65, and 70 dBA noise levels) along these 13 road segments were used to assess the Project's incremental traffic-related noise impacts. Noise contours represent the distance to noise levels of a constant value, are measured in CNEL, and are measured from the center of the roadway. The noise contours assume a normal earth (soft) condition do not take into account the effect of any existing noise barriers (walls, fences, berms, etc.) or topography that may attenuate ambient noise levels. Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway. In addition, because the noise contours reflect modeling of vehicular noise along roadways, they appropriately do not reflect noise contribution from surrounding operational activities that occur as part of commercial and industrial uses, railroad activities, or other uses within the study area.

Traffic noise contour boundaries for every scenario studied in the Project's traffic report were modeled (Existing Without/With Project, Year (2015) Without/With Project, and Year (2035) Without/With Project) and are presented in Table 4.9-4 through Table 4.9-12. Exhibits showing the noise contours are found in *Technical Appendix H.*

Table 4.9-4 and Table 4.9-5 present a comparison of the existing conditions Year 2013 without and with Project conditions CNEL noise levels. Exterior transportation-related noise levels at 100 feet from roadway centerlines are calculated to range from 65.7 to 71.6 dBA CNEL. With the addition of Project-related traffic, the noise levels at 100 feet from roadway centerlines would range from 66.9 to 72.5 dBA CNEL.

Table 4.9-6 and Table 4.9-7 present a comparison of Year 2015 conditions without and with Project conditions CNEL noise levels. Year 2015 transportation-related noise levels at 100 feet from roadway centerlines are calculated to range from 66.0 to 72.0 dBA CNEL without the Project's traffic. With the addition of Project-related traffic, the noise levels at 100 feet from roadway centerlines would range from 67.1 to 72.9 dBA CNEL.

Table 4.9-8 and Table 4.9-9 present a comparison of Year 2035 conditions without and with Project conditions CNEL noise levels. Year 2035 transportation-related noise levels at 100 feet from roadway centerlines are calculated to range from 67.2 to 72.7 dBA CNEL without the Project's traffic. With the addition of Project-related traffic, the noise levels at 100 feet from roadway centerlines would range from 68.0 to 73.5 dBA CNEL.

Applying the Thresholds of Significance (refer to Subsection 4.9.2 above), the addition of Project-related traffic would create an interim significant and direct traffic noise level impact on the segment of Orange Show Road east of Waterman Avenue for Existing and Year 2015 with Project conditions, because the Project would raise the noise level more than 1.5 dBA CNEL. No other study area roadway segments are calculated to experience a significant transportation related noise impact of more than 1.5 dBA CNEL. In addition, by Year 2035, the noise level impact on Orange Show Road east of Waterman Avenue is calculated to be less than significant because as the overall background traffic volumes increase by Year 2035 conditions, the Project-related traffic as a percentage of the overall traffic would continue to diminish. Additionally, by 2035 it is possible that the noise-sensitive non-conforming residential homes located along this roadway segment would have converted to non-residential development as called for by the City of San Bernardino General Plan. The transportation related Project noise level increases on Orange Show Road east of Waterman Avenue shows a Project-related impact of 1.7 dBA CNEL for existing conditions that is reduced to 1.6 dBA CNEL for Year 2015 conditions and continues to decline to a less-than-significant level of 1.4 dBA CNEL by Year 2035 conditions.

Table 4.9-4 Existing Without Project Conditions Noise Contours

ID	Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
1	E St.	n/o Orange Show Rd.	66.6	59	127	274	591
2	Waterman Av.	n/o Orange Show Rd.	68.4	78	167	361	777
3	Waterman Av.	s/o Orange Show Rd.	68.6	81	173	374	805
4	Waterman Av.	n/o Hospitality Ln.	69.2	88	189	408	879
5	Waterman Av.	s/o Hospitality Ln.	71.6	128	277	596	1,284
6	Carnegie Dr.	s/o Hospitality Ln.	68.7	82	176	379	818
7	Orange Show Rd.	w/o E St.	69.6	94	202	434	936
8	Orange Show Rd.	e/o E St.	68.3	77	166	357	769
9	Orange Show Rd.	e/o Arrowhead Av.	67.1	64	139	298	643
10	Orange Show Rd.	w/o Waterman Av.	66.8	61	132	284	611
11	Orange Show Rd.	e/o Waterman Av.	65.7	52	111	239	515
12	Hospitality Ln.	e/o Waterman Av.	68.6	81	175	376	810
13	Hospitality Ln.	w/o Carnegie Dr.	66.1	55	118	253	546

[1] "RW" = Location of the respective noise contour falls within the right-of-way of the road.
Source: Urban Crossroads 2013d, Table 7-1.

Table 4.9-5 Existing With Project Conditions Noise Contours

ID	Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
1	E St.	n/o Orange Show Rd.	67.4	67	145	312	672
2	Waterman Av.	n/o Orange Show Rd.	69.2	88	190	409	882
3	Waterman Av.	s/o Orange Show Rd.	69.6	94	203	437	942
4	Waterman Av.	n/o Hospitality Ln.	70.1	102	220	474	1,021
5	Waterman Av.	s/o Hospitality Ln.	72.5	147	317	682	1,470
6	Carnegie Dr.	s/o Hospitality Ln.	69.5	93	200	432	930
7	Orange Show Rd.	w/o E St.	70.6	109	235	507	1,093
8	Orange Show Rd.	e/o E St.	69.4	91	196	423	911
9	Orange Show Rd.	e/o Arrowhead Av.	68.3	77	165	357	768
10	Orange Show Rd.	w/o Waterman Av.	68.0	73	158	340	734
11	Orange Show Rd.	e/o Waterman Av.	67.3	67	143	309	665
12	Hospitality Ln.	e/o Waterman Av.	69.5	92	199	428	922
13	Hospitality Ln.	w/o Carnegie Dr.	66.9	62	135	290	625

[1] "RW" = Location of the respective noise contour falls within the right-of-way of the road.
Source: Urban Crossroads 2013d, Table 7-2.

Table 4.9-6 Year 2015 Without Project Conditions Noise Contours

ID	Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
1	E St.	n/o Orange Show Rd.	66.9	62	134	288	620
2	Waterman Av.	n/o Orange Show Rd.	68.6	81	173	374	805
3	Waterman Av.	s/o Orange Show Rd.	68.8	83	179	386	833
4	Waterman Av.	n/o Hospitality Ln.	69.6	94	202	434	936
5	Waterman Av.	s/o Hospitality Ln.	72.0	137	295	635	1,368
6	Carnegie Dr.	s/o Hospitality Ln.	68.8	84	180	389	837
7	Orange Show Rd.	w/o E St.	70.1	101	218	470	1,012
8	Orange Show Rd.	e/o E St.	68.8	83	179	385	830
9	Orange Show Rd.	e/o Arrowhead Av.	67.3	66	142	306	660
10	Orange Show Rd.	w/o Waterman Av.	67.0	63	136	293	632
11	Orange Show Rd.	e/o Waterman Av.	66.0	54	116	251	540
12	Hospitality Ln.	e/o Waterman Av.	69.1	86	186	401	864
13	Hospitality Ln.	w/o Carnegie Dr.	66.2	56	121	261	561

[1] "RW" = Location of the respective noise contour falls within the right-of-way of the road.
Source: Urban Crossroads 2013d, Table 7-3.

Table 4.9-7 Year 2015 With Project Conditions Noise Contours

ID	Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
1	E St.	n/o Orange Show Rd.	67.7	70	152	327	705
2	Waterman Av.	n/o Orange Show Rd.	69.4	91	197	424	913
3	Waterman Av.	s/o Orange Show Rd.	69.8	97	209	451	972
4	Waterman Av.	n/o Hospitality Ln.	70.5	108	234	504	1,085
5	Waterman Av.	s/o Hospitality Ln.	72.9	157	337	727	1,565
6	Carnegie Dr.	s/o Hospitality Ln.	69.7	96	206	444	956
7	Orange Show Rd.	w/o E St.	71.1	118	254	546	1,177
8	Orange Show Rd.	e/o E St.	69.8	98	210	453	975
9	Orange Show Rd.	e/o Arrowhead Av.	68.5	79	170	367	790
10	Orange Show Rd.	w/o Waterman Av.	68.2	76	163	351	756
11	Orange Show Rd.	e/o Waterman Av.	67.6	69	149	321	692
12	Hospitality Ln.	e/o Waterman Av.	69.9	98	212	456	983
13	Hospitality Ln.	w/o Carnegie Dr.	67.1	65	139	299	645

[1] "RW" = Location of the respective noise contour falls within the right-of-way of the road.
Source: Urban Crossroads 2013d, Table 7-4.

Table 4.9-8 Year 2035 Without Project Conditions Noise Contours

ID	Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
1	E St.	n/o Orange Show Rd.	68.6	80	173	372	803
2	Waterman Av.	n/o Orange Show Rd.	69.8	96	208	447	964
3	Waterman Av.	s/o Orange Show Rd.	69.9	99	213	458	987
4	Waterman Av.	n/o Hospitality Ln.	70.5	108	232	500	1,078
5	Waterman Av.	s/o Hospitality Ln.	72.7	150	324	697	1,502
6	Carnegie Dr.	s/o Hospitality Ln.	69.5	93	201	432	931
7	Orange Show Rd.	w/o E St.	70.8	113	243	524	1,130
8	Orange Show Rd.	e/o E St.	69.6	94	203	437	941
9	Orange Show Rd.	e/o Arrowhead Av.	68.0	73	157	339	730
10	Orange Show Rd.	w/o Waterman Av.	68.1	75	162	349	751
11	Orange Show Rd.	e/o Waterman Av.	67.6	69	148	319	687
12	Hospitality Ln.	e/o Waterman Av.	69.9	99	213	458	987
13	Hospitality Ln.	w/o Carnegie Dr.	67.2	65	140	301	648

[1] "RW" = Location of the respective noise contour falls within the right-of-way of the road.
Source: Urban Crossroads 2013d, Table 7-5.

Table 4.9-9 Year 2035 With Project Conditions Noise Contours

ID	Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
1	E St.	n/o Orange Show Rd.	69.4	91	196	423	911
2	Waterman Av.	n/o Orange Show Rd.	70.6	109	235	507	1,093
3	Waterman Av.	s/o Orange Show Rd.	70.9	114	246	530	1,142
4	Waterman Av.	n/o Hospitality Ln.	71.4	124	268	577	1,244
5	Waterman Av.	s/o Hospitality Ln.	73.5	171	369	796	1,714
6	Carnegie Dr.	s/o Hospitality Ln.	70.4	106	229	493	1,061
7	Orange Show Rd.	w/o E St.	71.8	131	282	607	1,309
8	Orange Show Rd.	e/o E St.	70.6	110	237	510	1,098
9	Orange Show Rd.	e/o Arrowhead Av.	69.1	87	187	403	867
10	Orange Show Rd.	w/o Waterman Av.	69.2	89	191	412	888
11	Orange Show Rd.	e/o Waterman Av.	68.9	85	183	394	850
12	Hospitality Ln.	e/o Waterman Av.	70.7	112	242	520	1,121
13	Hospitality Ln.	w/o Carnegie Dr.	68.0	74	159	343	740

[1] "RW" = Location of the respective noise contour falls within the right-of-way of the road.
Source: Urban Crossroads 2013d, Table 7-6.

Table 4.9-10 Existing Off-Site Project Related Traffic Noise Impacts

ID	Road	Segment	CNEL at 100 Feet (dBA)			Potential Significant Impact?[1]
			No Project	With Project	Project Addition	
1	E St.	n/o Orange Show Rd.	66.6	67.4	0.8	No
2	Waterman Av.	n/o Orange Show Rd.	68.4	69.2	0.8	No
3	Waterman Av.	s/o Orange Show Rd.	68.6	69.6	1.0	No
4	Waterman Av.	n/o Hospitality Ln.	69.2	70.1	1.0	No
5	Waterman Av.	s/o Hospitality Ln.	71.6	72.5	0.9	No
6	Carnegie Dr.	s/o Hospitality Ln.	68.7	69.5	0.8	No
7	Orange Show Rd.	w/o E St.	69.6	70.6	1.0	No
8	Orange Show Rd.	e/o E St.	68.3	69.4	1.1	No
9	Orange Show Rd.	e/o Arrowhead Av.	67.1	68.3	1.2	No
10	Orange Show Rd.	w/o Waterman Av.	66.8	68.0	1.2	No
11	Orange Show Rd.	e/o Waterman Av.	65.7	67.3	1.7	Yes
12	Hospitality Ln.	e/o Waterman Av.	68.6	69.5	0.8	No
13	Hospitality Ln.	w/o Carnegie Dr.	66.1	66.9	0.9	No

[1] Existing noise level exceeds 65 dBA CNEL and the project generates an increase of greater than 1.5 dBA.
Source: Urban Crossroads 2013d, Table 7-7.

Table 4.9-11 Year 2015 Off-Site Project Related Traffic Noise Impacts

ID	Road	Segment	CNEL at 100 Feet (dBA)			Potential Significant Impact?[1]
			No Project	With Project	Project Addition	
1	E St.	n/o Orange Show Rd.	66.9	67.7	0.8	No
2	Waterman Av.	n/o Orange Show Rd.	68.6	69.4	0.8	No
3	Waterman Av.	s/o Orange Show Rd.	68.8	69.8	1.0	No
4	Waterman Av.	n/o Hospitality Ln.	69.6	70.5	1.0	No
5	Waterman Av.	s/o Hospitality Ln.	72.0	72.9	0.9	No
6	Carnegie Dr.	s/o Hospitality Ln.	68.8	69.7	0.9	No
7	Orange Show Rd.	w/o E St.	70.1	71.1	1.0	No
8	Orange Show Rd.	e/o E St.	68.8	69.8	1.0	No
9	Orange Show Rd.	e/o Arrowhead Av.	67.3	68.5	1.2	No
10	Orange Show Rd.	w/o Waterman Av.	67.0	68.2	1.2	No
11	Orange Show Rd.	e/o Waterman Av.	66.0	67.6	1.6	Yes
12	Hospitality Ln.	e/o Waterman Av.	69.1	69.9	0.8	No
13	Hospitality Ln.	w/o Carnegie Dr.	66.2	67.1	0.9	No

[1] Without project noise level exceeds 65 dBA CNEL and the project generates an increase of greater than 1.5 dBA.
Source: Urban Crossroads 2013d, Table 7-8.

Table 4.9-12 Year 2035 Off-Site Project Related Traffic Noise Impacts

ID	Road	Segment	CNEL at 100 Feet (dBA)			Potential Significant Impact?[1]
			No Project	With Project	Project Addition	
1	E St.	n/o Orange Show Rd.	68.6	69.4	0.8	No
2	Waterman Av.	n/o Orange Show Rd.	69.8	70.6	0.8	No
3	Waterman Av.	s/o Orange Show Rd.	69.9	70.9	1.0	No
4	Waterman Av.	n/o Hospitality Ln.	70.5	71.4	0.9	No
5	Waterman Av.	s/o Hospitality Ln.	72.7	73.5	0.9	No
6	Carnegie Dr.	s/o Hospitality Ln.	69.5	70.4	0.9	No
7	Orange Show Rd.	w/o E St.	70.8	71.8	1.0	No
8	Orange Show Rd.	e/o E St.	69.6	70.6	1.0	No
9	Orange Show Rd.	e/o Arrowhead Av.	68.0	69.1	1.1	No
10	Orange Show Rd.	w/o Waterman Av.	68.1	69.2	1.1	No
11	Orange Show Rd.	e/o Waterman Av.	67.6	68.9	1.4	No
12	Hospitality Ln.	e/o Waterman Av.	69.9	70.7	0.8	No
13	Hospitality Ln.	w/o Carnegie Dr.	67.2	68.0	0.9	No

[1] Without project noise level exceeds 65 dBA CNEL and the project generates an increase of greater than 1.5 dBA.
Source: Urban Crossroads 2013d, Table 7-8.

❑ Stationary Noise Impacts

The proposed Project consists of the construction and operation of one (1) industrial warehouse building. Stationary noise sources associated with operation of the Project would include but not be limited to idling trucks, delivery truck activities, parking, backup alarms, and HVAC equipment. The reference noise levels describe the worst-case noise condition with full 24-hour daytime and nighttime distribution activities. In reality, operational noise levels would vary throughout the day and would not be constant.

Operational noise levels at the Project site would be very similar to operational noise levels generated at other distribution warehouse facilities in southern California. Reference noise level measurements were collected by Urban Crossroads on Tuesday, January 22, 2013, at two operating warehouse facilities in Anaheim, California (Veg Fresh Farms and the FedEx distribution facility, both located at East Orangethorpe Avenue). From a noise standpoint, a warehouse facility's operational characteristics are the primary factors that affect operational noise levels; the geographic location of the facility does not substantially influence operational noise levels. The noise level measurements collected from the Veg Fresh Farms and FedEx warehouse facilities in Anaheim, California are representative of stationary noise levels expected at the Project site because these facilities have 24-hour operational activities that are comparable to those proposed at the Project site. The reference noise level measurements include the daytime and nighttime noise levels associated with idling trucks, delivery truck activities, parking, backup alarms and refrigerated containers or reefers. Although a tenant requiring refrigeration is not expected to occupy the Project site, the inclusion of refrigeration activities as part of the reference noise level allows analysis of a higher intensity operation than a non-refrigeration operation that would likely occupy the Project site.

At a distance of 25 feet from the noise source and with an estimated noise source height of eight (8) feet, the reference noise level was measured at 69.1 dBA Leq. The reference noise levels describe the worst-case noise condition with full 24-hour daytime and nighttime distribution activities. It is likely that the reference noise levels overstate the operational noise levels that will actually occur at the Project site. The specific noise levels at the Project site will depend on the actual tenant (which is not yet know), the intensity of operational activities, and the daytime/nighttime hours of operation.

Based upon the reference noise levels, Table 4.9-13, *Operational Noise Level Predictions*, presents the exterior, operational noise levels expected with the Project at each receiver location shown in Figure 4.9-2. The operational noise level calculations shown on Table 4.9-13 identify the distance from the reference noise source to the noise receivers, the distance attenuation, and the estimated Project-related hourly noise levels. The distance attenuation is provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. With geometric spreading, sound levels attenuate (or decrease) at a rate of 6 dB for each doubling of distance from a point source. As indicated in Table 4.9-13, the hourly noise levels that are expected from Project operations are calculated to range from 37.9 to 52.0 dBA Leq.

Table 4.9-13 Operational Noise Level Projections

Receiver Location[1]	Project Noise[2]	Distance From Source To Receiver (Feet)[3]	Distance Attenuation[4]	Hourly Noise Levels[5]
R1	69.1	880'	-30.9	38.2
R2	69.1	910'	-31.2	37.9
R3	69.1	300'	-21.6	47.5
R4	69.1	220'	-18.9	50.2
R5	69.1	180'	-17.1	52.0
R6	69.1	400'	-24.1	45.0
R7	69.1	230'	-19.3	49.8
R8	69.1	200'	-18.1	51.0
R9	69.1	180'	-17.1	52.0

[1] See Figure 4.9-2 for the noise receiver locations.
[2] The reference noise level measurements include the daytime and nighttime noise levels associated with idling trucks, delivery truck activities, parking, backup alarms and refrigerated containers or reefers. Reference noise level measurements were collected from the existing 24-hour operations of Veg Fresh Farms and FedEx distribution facility located at 500 East Orangethorpe Avenue in the City of Anaheim. The reference noise level measurements were collected on Tuesday, January 22, 2013 and represent the typical 24-hour operations expected at the Project site.
[3] Estimated distance to nearest loading dock activities.
[4] Noise levels diminish at a rate 6 dBA per doubling of distance and a reference distance of 25 feet.
[5] Estimated project stationary source noise levels.
Source: Urban Crossroads 2013d, Table 8-1.

The expected Project operational noise levels at the nine (9) receiver locations are presented on Table 4.9-14, *Daytime (7 a.m. to 10 p.m.) Operation Noise Level Impacts*, and Table 4.9-15, *Nighttime (10 p.m. to 7 a.m.) Operation Noise Level Impacts*. As indicated in the tables, Project operational noise level would range from 37.9 to 52.0 dBA Leq when combined with the existing ambient noise levels

measurements. At receiver locations R1 through R6 that are located in close proximity to nearby sources of transportation noise, the Project's operational noise level contributions would be limited to a level approaching 0.3 dBA Leq. The expected noise level increase of 0.3 dBA Leq is considered

Table 4.9-14 Daytime (7 a.m. to 10 p.m.) Operation Noise Level Impacts

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Contribution[6]
R1	38.2	LT-6	62.6	62.6	0.0
R2	37.9	LT-6	62.6	62.6	0.0
R3	47.5	LT-1	67.2	67.2	0.0
R4	50.2	LT-1	67.2	67.3	0.1
R5	52.0	LT-2	73.8	73.8	0.0
R6	45.0	LT-3	56.9	57.2	0.3
R7	49.8	LT-4	51.3	53.6	2.3
R8	51.0	LT-5	50.6	53.8	3.2
R9	52.0	LT-5	50.6	54.3	3.7

[1] See Figure 4.9-2 for the noise receiver locations.
[2] Total project operational noise level with distance attenuation as shown on Table 4.9-13.
[3] Reference noise level measurement locations as shown on Figure 4.9-1.
[4] Observed daytime ambient noise levels as shown on Table 4.9-4.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
Source: Urban Crossroads 2013d, Table 8-2.

Table 4.9-15 Nighttime (10 p.m. to 7 a.m.) Operation Noise Level Impacts

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Contribution[6]
R1	38.2	LT-6	61.0	61.0	0.0
R2	37.9	LT-6	61.0	61.0	0.0
R3	47.5	LT-1	64.8	64.9	0.1
R4	50.2	LT-1	64.8	64.9	0.1
R5	52.0	LT-2	69.7	69.8	0.1
R6	45.0	LT-3	57.4	57.6	0.2
R7	49.8	LT-4	55.3	56.4	1.1
R8	51.0	LT-5	52.3	54.7	2.4
R9	52.0	LT-5	52.3	55.1	2.8

[1] See Figure 4.9-2 for the noise receiver locations.
[2] Total project operational noise level with distance attenuation as shown on Table 4.9-13.
[3] Reference noise level measurement locations as shown on Figure 4.9-1.
[4] Observed daytime ambient noise levels as shown on Table 4.9-4.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
Source: Urban Crossroads 2013d, Table 8-3.

less than significant at receivers R1 through R6 because existing noise levels are greater than 65 dBA and the Project would not generate a noise level increase of greater than 1.5 dBA. (Refer to Subsection 4.9.2 above for an explanation of the significance criteria.) For receiver locations R7 through R9 where the existing ambient noise levels range from 50.6 to 51.3 dBA Leq, the Project's operational noise level contributions are expected to approach 3.7 dBA Leq. Because the without Project (ambient) noise levels are less than 60 dBA, a significant noise impact at receiver locations R7 through R9 occurs when the Project noise related noise level impacts exceed 5 dBA Leq. Because the analysis demonstrates that the proposed Project's operational noise levels would be lower than 5.0dBA Leq, a less than significant impact would occur. In addition, as stated in the City of San Bernardino Noise Control Ordinance Section 8.54.060.B, 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 [from noise level standards].

Threshold 2: Would the proposed Project expose persons to or generate excessive groundborne vibration or groundborne noise levels?

The proposed Project's operational activities have no potential to cause excessive ground-borne vibration or ground-borne noise. All operational activities would occur inside the proposed building except for vehicle movement and activity at the proposed loading bays.

There is, however, a potential for ground-borne vibration or ground-borne noise to occur during the construction phase from the use of large construction equipment. According to the *Transportation and Construction-Induced Vibration Guidance Manual* prepared for Caltrans, ground-borne vibration from construction activities and equipment such as D-8 and D-9 Caterpillars, bulldozers, earthmovers, and haul trucks at distances of 10 feet do not create vibration amplitudes that cause structural damage to nearby structures. Construction activity that is proposed the closest to existing structures is the proposal to install a subsurface drainage line over an approximately three (3) week period in Orange Show Road from the Project site's frontage to Waterman Avenue. This activity is likely to include jackhammers, industrial saws, and other heavy equipment. Peak construction noise levels associated with the utility installation activity are expected to range from 66.8 to 88.2 dBA Leq at receiver locations R1 through R9 (Urban Crossroads, 2013d, p. 32). Because the nearest receivers are located more than 10 feet from the nearest point of construction activities, impacts from ground-borne vibration or ground-borne noise during near-term construction would be less than significant.

Threshold 5: 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 proposed Project expose people residing or working in the project area to excessive noise levels?

Threshold 6: For a project within the vicinity of a private airstrip, would the proposed Project expose people residing or working in the project area to excessive noise levels?

The San Bernardino International Airport and Trade Center (SBIA) is located approximately 0.75 mile to the northeast of the Project site and a private helipad is located approximately 0.5 mile north of the Project site. The Project does not propose any aircraft operations. Therefore, there is no potential for the proposed Project to increase aircraft-related noise exposures.

The SBIA includes two components: 1) the airport portions (and related facilities) of the former Norton Air Force Base, and 2) the Trade Center, which encompasses the non-airport related portions of the former base. The Project site is located within the SBIA's Comprehensive Land Use Plan (CLUP) and is subject to aircraft-related noise, which is not regarded as excessive (City of San Bernardino, 2005b, Chapter 5.10, Noise). Industrial warehouse use such as proposed by the Project is not a noise-sensitive land use; thus, the exposure of workers and visitors to the Project site to aircraft-related noise would be less than significant.

4.9.4 CUMULATIVE IMPACT ANALYSIS

❑ **Substantial Noise Increase or Violations (Thresholds 1, 3, and 4)**

A. Near-Term Cumulative Construction-Related Noise Impacts

Construction activities associated with the Project, especially activities involving heavy equipment, would create intermittent periods of noise when construction equipment is in operation and cause a short-term increase in ambient noise levels. As discussed above in Subsection 4.9.1.E, the City of San Bernardino limits the hours that construction activity can occur to 7:00 AM and 8:00 PM. Construction noise associated with the Project and any other construction project in the City would be required to comply with this limitation. Regardless, no other construction activities are anticipated to occur simultaneous with construction of the proposed Project and that has the potential to impact the same receiver locations. As previously shown in Table 4.9-1, peak construction noise levels associated with the Project are expected to range from 66.8 to 88.2 dBA Leq. at receiver locations R1 through R9. Receiver locations R3, R4, and R5 represent non-conforming residential homes, which would experience construction-related noise above levels that the City of San Bernardino General Plan considers unacceptable for residential land uses. Construction-related Project noise combined with ambient noise and vehicular noise from potential cumulative development projects would have a cumulative effect on these receivers. Regardless, because Project construction activities would be required to occur within the hours specified by the City's Noise Ordinance, noise associated with the Project's construction phase would be less than cumulatively considerable and would be prohibited from occurring during the nighttime hours when noise sensitivity is greatest. A less than cumulatively considerable impact would occur during the Project's short-term construction phase.

According to the Transportation and Construction-Induced Vibration Guidance Manual prepared for Caltrans, ground-borne vibration from construction activities at distances of 10 feet do not create vibration amplitudes that cause structural damage to nearby structures. Because the nearest receivers are located more than 10 feet from the nearest point of Project construction activities, the Project has no potential to cumulatively contribute to excessive ground-borne vibration and noise and impacts would be less than cumulatively considerable.

B. Long-Term Cumulative Operational Noise Impacts

Under existing with Project conditions, the Project is expected to generate transportation-related noise level increases of up to 1.7 dBA CNEL. Under Year 2015 with Project conditions, the Project is expected to generate transportation-related noise level increases of up to 1.6 dBA CNEL. Based on the cumulative noise impact significance criteria, when the without Project noise levels already exceed 65 dBA, any increase in community noise of greater than 1.5 dBA is considered a significant

impact, since it likely contributes to an existing noise deficiency. Because non-conforming residential homes fronting on Orange Show Road east of Waterman Avenue are exposed to transportation-related noise levels over 65 dBA CNEL and the Project's traffic would increase noise by 1.7 dBA CNEL on this street segment under existing conditions and 1.6 CNEL under Year 2015 conditions, the Project's noise increase is considered significant and cumulatively considerable.

By Year 2035 the Project's contribution of transportation-related noise on this street segment would reduce to 1.4 dBA CNEL because the Project's percentage of overall traffic would decrease as overall traffic volumes increase. Based on the thresholds of significance (refer to Subsection 4.9.2 above), the proposed Project's noise level contribution would be less than cumulatively considerable in Year 2035 conditions (less than a 1.5 dBA CNEL contribution), even though the residential homes fronting on Orange Show Road east of Waterman Avenue would still experience noise levels well above 65 dBA CNEL and remain significantly impacted by cumulative noise from traffic on Orange Show Road. It is expected that the non-conforming residential uses on this street segment will eventually convert to non-residential uses in accordance with the City of San Bernardino General Plan, which are not expected to be noise sensitive.

The proposed Project's operational activities have no potential to cause excessive ground-borne vibration or ground-borne noise; therefore, there is no potential for Project operations to result in a cumulatively significant contribution to vibration effects on surrounding properties.

C. Stationary Noise Impacts (Cumulative Conditions)

The Project would contribute noise levels of up to 3.7 dBA Leq at the nearby receiver locations as a result of operational activities. The significance criteria (refer to Subsection 4.9.2 above) recognizes that the significance of cumulative noise impacts varies depending on the condition of the environment and the Project-related noise level increases. At receiver locations R1 through R6 that are located in close proximity to nearby sources of transportation noise, the Project's operational noise level contributions would be limited to a level approaching 0.3 dBA Leq, which is less than cumulatively considerable because the Project's contribution is less than 1.5 dBA CNEL. For locations R7 through R9 where the existing ambient noise levels range from 50.6 to 51.3 dBA Leq, the Project's operational noise level contributions are expected to approach 3.7 dBA Leq; however, because the without Project (ambient) noise levels are less than 60 dBA, the Project's noise level contribution would be less than the level of 5.0 dBA Leq that is considered cumulatively considerable. Thus, operational related noise impacts would be less than significant on a cumulative basis.

❑ Public and Private Airport-Related Noise Levels (Thresholds 5 and 6)

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 could result in contributing to airport noise or exposure of additional people to unacceptable levels of airport noise. Accordingly, the Project would have no potential to cumulatively contribute to impacts associated with noise from a public airport or public use airport. Additionally, the Project is not a noise-sensitive land use so operation of the Project would not contribute towards the exposure of people to excessive airport-related noise.

4.9.5 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Thresholds 1, 3, and 4: Significant Direct and Cumulative Impact (Near-Term). Noise generated by Project-related traffic using the segment of Orange Show Road east of Waterman Avenue would increase noise levels by 1.7 dBA Leq. under existing conditions and by 1.6 dBA Leq. in Year 2015 conditions. Because non-conforming residential homes front this road segment and are already exposed to noise levels greater than 65 dBA CNEL, the Project's contribution of transportation-related noise is considered significant on direct and cumulative bases. Construction-related noise and stationary noise produced by the Project would elevate noise levels at surrounding receiver locations, but such noise would be less than significant because the Project would comply with the City of San Bernardino Noise Control Ordinance.

Threshold 2: Less than Significant Impact. The Project would not expose persons to or generate excessive ground-borne vibration or ground-borne noise levels.

Thresholds 5 and 6: Less than Significant Impact. The Project would not expose people to excessive noise levels associated with the operation of a public airport or private airstrip.

4.9.6 MITIGATION MEASURES

Project-related construction noise would be less than significant. Regardless, the following mitigation measure is recommended to reduce noise effects on surrounding noise-sensitive receiver locations.

MM 4.9-1 Prior to grading or building permit issuance, the City shall review grading and building plans to ensure that the following notes are included. Project contractors shall be required to comply with these notes and maintain written records of such compliance that can be inspected by the City of San Bernardino upon request.

a) Construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards.

b) Equipment staging areas shall be placed near the western boundary of the property at least 100 feet south of Orange Show Road, or as close thereto as feasible.

c) The construction contractor shall place all stationary construction equipment so that emitted noise is directed towards the center of the property, away from Orange Show Road, the eastern property boundary, and the Santa Ana River.

d) All haul truck deliveries shall occur during the same hours specified for construction equipment (only between the hours of 7:00 a.m. and 8:00 p.m.).

4.9.7 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Thresholds 1, 3, and 4: Significant Direct and Cumulative Impact (Near-Term). No feasible mitigation measures are available to reduce the transportation-related noise impact to non-conforming residential homes fronting on the segment of Orange Show Road east of Waterman Avenue. The only way to feasibly reduce the impact would be to surround the front and side yards of every residential lot on this street segment with a solid wall, which is not feasible due to openings in the wall that would be needed for the lots' driveways and walkways. This impact is considered significant and unavoidable on direct and cumulatively considerable levels in the near-term. By Year 2035, the Project's contribution of transportation-related noise to this street segment would fall below the cumulatively considerable significance threshold of 1.5 dBA Leq., as traffic volumes increase and the Project's overall percentage of the noise level diminishes.

4.10 TRANSPORTATION/CIRCULATION

The following analysis is based on a technical traffic study prepared by Urban Crossroads, titled "Alliance California Gateway South Building 3, Traffic Impact Analysis, City of San Bernardino, California" and dated November 21, 2013. This Traffic Impact Analysis (TIA) report is included as *Technical Appendix I1* to this EIR. The report considers potential traffic impacts associated with construction and operation of the proposed Project and recommends improvements to mitigate impacts considered significant in comparison to stated thresholds. The traffic study was prepared in accordance with the City of San Bernardino's *Traffic Impact Study Guidelines* (September 2004), and also, where appropriate, addresses requirements as identified by the County of San Bernardino Congestion Management Program and Caltrans traffic study guidelines. The analysis in this Subsection is also based on three technical memoranda prepared by Urban Crossroads, titled "Alliance California Gateway South Building 3 – Assessment of Short-Term Construction Related Traffic Impacts" (dated September 25, 2013), "Alliance California Gateway South Building 3 – Analysis of Freeway Mainline Segments" (dated November 19, 2013), and "Alliance California Gateway South Building 3 – Analysis of Peak Hour Queuing at the Intersection of Waterman Avenue and Orange Show Road" (dated November 19, 2013), which are included as *Technical Appendices I2, I3, and I4* to this EIR, respectively.

4.10.1 STUDY AREA DESCRIPTION

A. Intersections

The study area for purposes of evaluating Project-related effects to the local transportation and circulation network was defined in conformance with the requirements of the City of San Bernardino's *Traffic Impact Study Guidelines*. Based on these guidelines, the minimum area to be studied by the Project shall include any intersection at which the proposed Project would add 50 or more AM peak hour (7:00am-9:00am) or PM peak hour (4:00pm-6:00pm) trips (Urban Crossroads 2013e 4). The "50 peak hour trip" criteria utilized by the City of San Bernardino is consistent with the methodology utilized by many other jurisdictions, including the County of San Bernardino, and generally represents a threshold of trips at which a typical intersection would have the potential to be impacted. Although each intersection may have unique operating characteristics, this traffic engineering rule of thumb is a valid and proven way to establish a study area (Urban Crossroads 2013e 6). Intersections that would not receive more than 50 peak hour trips from the Project are not required to be included in the study area.

Eleven study area intersections were selected for analysis based on the City's *Traffic Impact Study Guidelines* and recommendations from the City of San Bernardino Public Works Department, Engineering Division. These intersections are identified on Figure 4.10-1, *Study Area Intersection Locations*. An ID number is assigned to each intersection in the study area and the intersections' jurisdictional locations are identified in Table 4.10-1, *Project Study Area Intersections*. The three (3) italicized intersections in Table 4.10-1 would be developed as part of the Project and do not currently exist.

B. Freeway Mainline Segments

All freeway mainline segments are under the jurisdiction of the California Department of Transportation (Caltrans). Pursuant to the *Caltrans Guide for the Preparation of Traffic Impact*

Studies (dated December 2002), a traffic impact study shall evaluate potential impacts to freeway mainline segments when a proposed development project is anticipated to contribute 100 or more two-way peak hour trips to a State highway facility. The proposed Project would not contribute 100 or more peak hour trips to any State highway facility; regardless, for information disclosure purposes the following 15 freeway mainline segments were identified for evaluation and are listed below (Urban Crossroads 2013g n.p.).

- I-215 Freeway – Southbound, North of Auto Center Off-Ramp
- I-215 Freeway – Southbound, Auto Center Off-Ram to Inland Center Off-Ramp
- I-215 Freeway – Southbound, Inland Center On-Ramp to Auto Plaza Loop On-Ramp
- I-215 Freeway – Southbound Auto Plaza Loop On-Ramp to Auto Plaza On-Ramp
- I-215 Freeway – Southbound, South of Auto Center On-Ramp
- I-215 Freeway – Northbound, North of Orange Show On-Ramp
- I-215 Freeway – Northbound, Orange Show On-Ramp to Inland Center Off-Ramp
- I-215 Freeway – Northbound, Inland Center Off-Ramp to Orange Show Off-Ramp
- I-215 Freeway – Northbound, South of Orange Show Road
- I-10 Freeway – Westbound, West of Carnegie Drive
- I-10 Freeway – Westbound, Carnegie Drive On-Ramp to Carnegie Drive Off-Ramp
- I-10 Freeway – Westbound, East of Carnegie Drive
- I-10 Freeway – Eastbound, West of Waterman Avenue
- I-10 Freeway – Eastbound, Between Waterman Avenue Ramps
- I-10 Freeway – Eastbound, East of Waterman Avenue

4.10.2 EXISTING CONDITIONS

Regional access is provided to the area via Interstate 215 (I-215), which is located approximately 1.1 miles west of the site, and Interstate 10 (I-10), located approximately 1.0 mile south of the site. The Project site is located in the south-central portion of the City of San Bernardino, east of Waterman Avenue and immediately south of Orange Show Road. Figure 4.10-2 *City of San Bernardino General Plan Circulation Plan*, and Figure 4.10-3, *City of San Bernardino General Plan Roadway Cross-Sections*, show the City's roadway designations and cross-sections for the major roads located adjacent to and surrounding the Project site.

A. Existing Intersection Traffic Counts

Manual AM and PM peak hour turning movement counts at study area intersections were collected by Urban Crossroads on July 23, 2013. That day was representative of typical weekday peak hour traffic conditions in the study area, as no observations were made in the field by Urban Crossroads that would indicate atypical traffic conditions on this date. The counts include the vehicle classifications as shown below, per City of San Bernardino TIA requirements:

- Passenger Cars
- 2-Axle Trucks
- 3-Axle Trucks
- 4 or More Axle Trucks

To represent the impact that large trucks, buses, and recreational vehicles have on traffic flow, all trucks were converted into Passenger Car Equivalents (PCEs) for the purpose of conducting the traffic analysis. By their size alone, these vehicles occupy the same space as two or more passenger cars. In addition, the time it takes for large vehicles to accelerate and decelerate is also much longer than for passenger cars, and varies depending on the type of vehicle and number of axles. For the purpose of the Project's traffic impact analysis in *Technical Appendix I1* and this EIR Subsection, a PCE factor of 2.0 was applied to 2-axle trucks, 2.5 for 3-axle trucks, and 3.0 for 4+-axle trucks to estimate each turning movement.

Existing (2013) weekday average daily traffic (ADT) volumes on arterial highways throughout the study area are shown on Figure 4.10-4, *Existing (2013) Average Daily Traffic*. Existing (2013) ADT volumes are based upon factored intersection peak hour counts collected by Urban Crossroads using the following formula for each intersection leg:

Weekday PM Peak Hour (Approach Volume + Exit Volume) x 12 = Leg Volume

Existing weekday AM and PM peak hour traffic volumes for study area intersections are shown on Figure 4.10-5 and Figure 4.10-6, respectively. All of the traffic volumes illustrated on these exhibits and used in the analysis presented in the TIA are shown in terms of PCE.

B. Existing Freeway Mainline Segment Traffic Volumes

Freeway mainline segment traffic volume data for I-215 and I-10 was obtained from Caltrans' Performance System Website (PeMS). The data obtained from Caltrans was dated July 23, 2013, and is the most recent date for which data was available at the time this EIR was prepared. The PeMS website indicates that freeway detectors were out of service for some freeway segments included in this study from January 2013 through November 2013. In instances where available freeway mainline volumes were more than ten (10) months old, a growth rate of 1.0 percent was added to bring slightly older freeway volume data in-line with current conditions (Urban Crossroads 2013g n.p.).

Consistent with industry-standard methodology (i.e., Highway Capacity Manual 2000) actual vehicles, as opposed to PCE volumes, were utilized to calculate density and the associated level of service (LOS) letter grade for each of the analyzed freeway segments. Truck traffic, expressed as a percentage of total traffic, is included as part of the data used to perform the density calculation. Because the peak hour directional volumes are based on actual vehicles (and not PCE volumes), the peak hour freeway mainline segment traffic volume data differs slightly from the peak hour volume data presented in the *Technical Appendix I1*, which is presented in PCE. This difference is expected, and does not indicate an error in volume development.

Existing AM and PM peak hour traffic volumes for studied freeway mainline segments are presented in Table 1 of *Technical Appendix I3*.

C. Existing Intersection Conditions

The operating characteristics (e.g., travel lanes, stop controls) of the existing eight (8) intersections within the study area are illustrated on Figure 4.10-7, *Study Area Intersections: Existing (2013) Through Lanes and Intersection Controls*. (As noted previously under Subsection 4.10.1, the other three (3) intersections in the study area are planned future intersections that do not currently exist.)

Existing (2013) peak hour traffic operations were evaluated for the study area intersections based on the analysis methodologies presented in Subsection 4.10.3A (refer to Page 4.10-7). The levels of service for study area intersections during peak hours are summarized in Table 4.10-2, *Intersection Analysis for Existing (2013) Conditions*. As shown in Table 4.10-2, all intersections in the study area operate at acceptable levels of service during peak hours under existing conditions, with the exception of the Carnegie Drive/I-10 Westbound Ramps/Hospitality Lane intersection (ID #8), which operates at deficient levels of service in the AM and PM peak hours.

Although the Waterman Avenue/I-215 On-Ramp intersection (ID #7) operates at acceptable LOS during the AM and PM peak hours under existing conditions, as shown in Table 4.10-2, based on existing traffic volumes and using the analysis methodology presented in *Technical Appendix I1*, a traffic signal appears to be warranted at this intersection under existing conditions (Urban Crossroads 2013e 25). Meeting this signal warrant condition does not require that a traffic control signal be installed at a particular location. It means that other traffic factors and conditions should be evaluated in order to determine whether the signal is truly justified. Ultimately, the need for a traffic signal at any location should be evaluated by the City Engineer.

D. Existing Freeway Mainline Segment Conditions

Based on the methodology presented in Subsection 4.10.3A, all freeway mainline segments selected for study near the Project site operate at acceptable LOS during the AM and PM peak hours under existing (2013) conditions, with the exception of the following two segments (Urban Crossroads 2013g n.p.):

- I-10 Freeway – Westbound, Carnegie Drive On-Ramp to Carnegie Drive Off-Ramp (LOS "E" during the AM Peak Hour); and
- I-10 Freeway – Eastbound, Between Waterman Avenue Ramps (LOS "E" during the PM Peak Hour).

The peak hour levels of service for studied freeway mainline segments are summarized in Table 4.10-3, *Freeway Mainline Segment Analysis for Existing (2013) and Existing plus Project (E+P) Conditions.*

E. Existing Mass Transit

The Project study area is currently served by Omnitrans, a public transit agency serving the County of San Bernardino and the City of San Bernardino. Bus service in the vicinity of the Project site is

provided along Waterman Avenue and "E" Street/Hospitality Lane via routes 9 and 2, respectively (Urban Crossroads 2013e 21).

F. Existing Bicycle and Pedestrian Facilities

The City of San Bernardino's non-vehicular circulation network is illustrated on Figure 4.10-8, *City of San Bernardino Conceptual Trail System*. As shown, Orange Show Road and Waterman Avenue are planned as part of the City's bicycle route. Existing pedestrian facilities, including sidewalks and crosswalks, within the study area are shown on Figure 4.10-9, *Existing (2013) Pedestrian Facilities*. A sidewalk abuts the Project site along Orange Show Road.

G. Existing Regional Transportation Programs and Plans

Provided below is a discussion of existing planning efforts, programs, and policies regarding transportation that have applicability to the proposed Project.

❑ County of San Bernardino Congestion Management Program (CMP)

The San Bernardino County CMP was prepared by the San Bernardino Associated Governments (SANBAG) in accordance with Proposition 111, which was passed by voters in June 1990. The intent of the CMP 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 eight (8) times, with the most recent comprehensive update in December 2007. Deficiencies along the CMP system must be identified when they occur so that improvement measures can be identified. Understanding the reason for these deficiencies and identifying ways to reduce the impact of future growth and development along a critical CMP corridor is intended to conserve scarce funding resources and help target those resources appropriately.

The San Bernardino County CMP roadway network includes the following intersections in the Project study area (San Bernardino Associated Governments 2007 pp. A-6-12):

- I-215 Southbound Ramps/Auto Plaza Drive (ID #1)
- I-215 Northbound Ramps/Auto Plaza Drive/Orange Show Road (ID #2)
- "E" Street/Orange Show Road (ID #3)
- Waterman Avenue/Hospitality Lane (ID #6)
- Carnegie Drive/I-10 Westbound Ramps/Hospitality Lane (ID #8)

In addition, two CMP roadway network freeways, I-10 and I-215, are located within the Project study area (San Bernardino Associated Governments 2007 A-18).

❑ 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 4, 2012, SCAG adopted a Regional Transportation Plan (RTP) with goals to: 1) maximize mobility and accessibility for all people and goods in the region; 2) ensure travel safety and reliability for all people and goods in the region; 3) preserve and ensure a sustainable transportation system; 4) maximize productivity of the transportation system; 5) protect the environment, improve air quality, and promote energy efficiency; 6) encourage land use and growth patterns that complement the transportation investments and improve the cost-effectiveness of expenditures; and 7) maximize the security of the transportation system (Southern California Association of Governments 2012). Performance measures and funding strategies also are included to ensure that the adopted goals are achieved through implementation.

❑ City of San Bernardino General Plan Circulation Element

The purpose of the City of San Bernardino's General Plan Circulation Element is to ensure a complete, balanced, and well-maintained circulation system that relies on vehicular travel and transit, and incorporates alternative modes including bikeways and pedestrian facilities (City of San Bernardino 2005a 6-1-32). A primary objective of the Circulation Element is to ensure that the effects of future new development on the City's transportation system are understood and that the improvements needed to support new growth are planned and properly funded. Refer to Figure 4.10-2 and Figure 4.10-3 for illustrations of the City's Circulation Element exhibits.

4.10.3 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to transportation/traffic if the Project or any Project-related component would:

1. *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;*

2. *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;*

3. *Result in a change in air traffic patterns, including an increase in traffic levels or a change in location that results in substantial risks;*

4. *Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment);*

5. *Result in inadequate emergency access; or*

6. *Conflict with adopted policies or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.*

A. Methodology

❑ Level of Service

Traffic operations of roadway facilities are described using the term "Level of Service" (LOS). LOS is a qualitative description of traffic flow based on several factors such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined ranging from LOS "A," representing completely free-flow conditions, to LOS "F," representing breakdown in flow resulting in stop-and-go conditions. LOS "E" represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow. Table 4.10-4 and Table 4.10-5 summarize typical operational conditions at signalized and unsignalized intersections for each LOS classification, respectively.

The definition of an intersection deficiency in the City of San Bernardino is based on the City of San Bernardino General Plan Circulation Element. The City of San Bernardino General Plan states that target LOS "D" be maintained at intersections under the City's jurisdiction wherever possible.

Caltrans has established explicit LOS performance criteria related to determining the significance of impacts on the roadway system within their jurisdiction. Generally, Caltrans considers LOS "D" to be the limit of acceptable traffic operations during the peak hour. LOS "D" is therefore used as the significance threshold in this Subsection for impacts to Caltrans facilities. Table 4.10-6, *Freeway Mainline Segment LOS Thresholds*, summarizes the typical freeway operational conditions for each LOS classification.

❑ Intersection Capacity Analysis

The intersection LOS analysis is based on the traffic volumes observed during the 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 (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM Peak Hour (peak hour between 4:00 PM and 6:00 PM)

For signalized intersections, the City of San Bernardino requires operations analysis based on the methodology described in Chapter 16 of the Highway Capacity Manual (HCM). Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections, LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 4.10-4.

Per the Caltrans Guide for the Preparation of Traffic Impact Studies, the traffic modeling and signal timing optimization software package Synchro (Version 8 Build 801) was used to analyze signalized intersections under Caltrans' jurisdiction, which include the following interchange to arterial ramps:

- I-215 Southbound Ramps/Auto Plaza Drive (ID #1)
- I-215 Northbound Ramps/Auto Plaza Drive/Orange Show Road (ID #2)
- Waterman Avenue/I-215 On-Ramps (ID #7)

- Carnegie Drive/I-10 Westbound Ramps/Hospitality Lane (ID #8)

The peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15 minute volumes. Common practice for LOS analysis is to use a peak 15-mintue rate of flow. However, flow rates are typically expressed in vehicles per hour. (The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g. PHF = [Hourly Volume] / [4 x Peak 15-minute Flow Rate])). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs have been used for Existing, Existing + Project, Existing + Ambient Growth (2015), and Existing + Ambient Growth + Cumulative Development (2015) with-and-without Project conditions. A PHF of 0.92 or higher (if higher for Existing conditions) has been used at most intersections for Horizon Year (2035) with-and-without Project traffic conditions. Existing PHFs have been used at certain intersections for Horizon Year (2035) with-and-without Project traffic conditions where it was deemed more representative of the traffic growth at these intersections.

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. The LOS rating is based on the weighted average control delay expressed in seconds per vehicle as shown in Table 4.10-5. All unsignalized study area intersections are analyzed using the Traffix software (Version 8.0 R1, 2008).

❑ Traffic Signal Warrant Analysis

The term "signal warrants" refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the potential need for installation of a traffic signal at an otherwise unsignalized intersection. 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 2012 California Supplement*, is used for all study area intersections. For more information on signal warrant methodology, refer to Section 2.3 of *Technical Appendix I1*.

Traffic signal warrant analyses were performed for all of the study area intersections that are not currently signalized. A signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this signal warrant condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. Ultimately the need for a traffic signal at any intersection should be evaluated by the City Engineer. Signal warrants do not necessarily correlate with level of service. An intersection may satisfy a signal warrant condition and operate at or above LOS "C" or operate below LOS "C" and not meet a signal warrant.

❑ Freeway Mainline Segment Analysis

The segments of I-215 and I-10 located near the Project site have been broken into segments defined by the freeway-to-arterial interchange locations. The freeway segments are evaluated in *Technical Appendix I3* based upon peak hour directional volumes. The freeway segment analysis is based on the methodology described in Chapter 23 of the Highway Capacity Manual 2000 and performed using HCS+ software. The performance measure used by Caltrans to determine the performance of a

freeway segment is density. Density is expressed in terms of passenger cars per mile lane. Table 4.10-6 summarizes the freeway mainline segment LOS thresholds for each density range utilized in the analysis.

❑ Background Traffic

Future year traffic forecasts have been based upon a background (ambient) growth at 1% per year, compounded annually, as directed by City staff. This ambient growth rate is added to existing (2013) traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth has been added to existing (2013) 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.

❑ Cumulative Impact Analysis

CEQA Guidelines require that the impacts from the Project, along with the incremental cumulative impact from "closely related past, present and reasonable foreseeable probably future projects" be analyzed. A cumulative project list was developed for the purposes of this analysis through consultation between Urban Crossroads, Inc. and City of San Bernardino staff. A comprehensive list of 25 cumulative development projects was assumed for the purposes of this analysis based on information provided by City staff and collected through recent traffic studies in close proximity to the proposed Project. Descriptive and locational information about each development project can be found in Section 4.6 of *Technical Appendix I1*.

❑ Opening Year (2015) Conditions

The Project opening year (2015) roadway network is anticipated to be similar to the existing (2013) roadway network with the exception of some intersection modification related to the "E" Street Corridor sbX Bus Rapid Transit Project, which is anticipated to be fully constructed by 2015. Changes to the existing roadway network due to the sbX Bus Rapid Transit Project at study area intersections are summarized on Figure 4.10-10, *Study Area Intersections: Opening Year (2015) Through Lanes and Intersection Controls.* Detailed sbX intersection plans at the intersections of "E" Street at Orange Show Road and Waterman Avenue at Hospitality Lane are included in Appendix 4.2 of *Technical Appendix I1*.

❑ Horizon Year (2035) Conditions

Traffic projections for Horizon Year (2035) with Project conditions were derived from the San Bernardino Transportation Analysis Model (SBTAM) using accepted procedures for model forecast refinement and smoothing. The traffic forecasts reflect the area-wide growth anticipated between Existing conditions and Horizon Year (2035) traffic conditions. In most instances the traffic model zone structure is not designed to provide accurate turning movements along arterial roadways unless refinement and reasonableness checking is performed. Therefore, the Horizon Year (2035) peak hour forecasts were refined using the model derived long-range forecasts, base (validation) year model forecasts, along with existing peak hour traffic count data. A detailed discussion of the methodology utilized by Urban Crossroads to refine the Horizon Year traffic data and derive traffic volumes which are suitable for traffic operations analysis is included in Section 4.8 of *Technical Appendix I1*.

B. Determining Significance of Impacts

❑ Intersections

For purposes of determining the significance of traffic impacts under this Subsection and in accordance with the City's TIA preparation guidelines:

- During the weekday AM peak hour (between 7:00 a.m. and 9:00 a.m.) and/or PM peak hour (between 4:00 p.m. and 6:00 p.m.), if an intersection is projected to operate at an acceptable level of service (i.e., LOS "D" or better) without the Project and the addition of Project traffic (as measured by 50 or more peak hour trips) is expected to cause the intersection to operate at an unacceptable level of service (i.e., LOS "E" or "F"), the impact is considered a significant direct impact.
- During the weekday AM peak hour (between 7:00 a.m. and 9:00 a.m.) and/or PM peak hour (between 4:00 p.m. and 6:00 p.m.), if an intersection is projected 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 that intersection, the impact is considered a significant direct impact.
- A significant cumulative impact is identified when an intersection is projected to operate below an acceptable LOS (i.e., LOS "E" or "F") with the addition of future traffic and Project-related traffic (as measured by 50 or more peak hour trips). Cumulative traffic impacts are created as a result of a combination of the proposed Project together with other future developments contributing to the overall traffic impacts requiring additional improvements to maintain acceptable LOS operations with or without the Project.

❑ Freeway Mainline Segments

For purposes of the analysis in this Subsection, if a freeway segment is projected to operate at an acceptable level of service (i.e., LOS "D" or better) without the Project and the Project would contribute substantial traffic (i.e., 100 or more two-way peak hour trips) that is expected to 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 substantial traffic (i.e., 100 or more two-way peak hour trips), the addition of Project traffic would be considered a significant cumulative impact.

4.10.4 IMPACT ANALYSIS

Threshold 1:	***Would the proposed 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 Project proposes to construct three (3) driveways to provide access to the site from Orange Show Road. These proposed roadway improvements are described in Section 3.0, *Project Description*, and will be enforced as part of the Project's Conditions of Approval, which will be issued by the City of

San Bernardino in association with the Project's approval process. The construction of these driveways is assumed throughout the analyses.

The analysis of Threshold 1 focuses on potential impacts to intersections, based on acceptable LOS standards established by the City of San Bernardino General Plan. Refer to Threshold 2 for an analysis of potential impacts to San Bernardino County CMP roadway network, including potential impacts to I-215 and I-10 freeway mainline segments.

A. Project Trip Generation and Distribution

Trip generation represents the amount of traffic that is both attracted to and produced by a development. 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 being proposed for a given development. Using vehicle trip generation rates collected by the Institute of Transportation Engineers (ITE) and presented in ITE's most recent edition of *Trip Generation* (9th Edition, 2012), the Project is projected to produce a net total of 2,015 raw, actual trip ends per day, with 132 raw AM peak hour trips and 144 raw PM peak hour trips (Urban Crossroads 2013e 36). Although the use of public transit, walking, and/or bicycling have the potential to reduce Project-related vehicular traffic, such reductions have purposely not been taken in this analysis in order to provide a worst-case analysis of the Project's potential to result in significant traffic impacts.

As mentioned above, the trip rates used in this analysis are rates recommended by the Institute of Traffic Engineers (ITE), which are based on national data collection and scientific study. Additionally, the Commercial Real Estate Development Association (formerly known by the acronym NAIOP), commissioned a study of high-cube warehouses of over 500,000 s.f. in size in the Inland Empire in 2011 using data collected in 2008. The NAIOP study, prepared by Kunzman Associates, Inc. and herein incorporated by reference and available for public review at the City of San Bernardino Community Development Department, covered 31 warehouse sites and was overseen by a Technical Advisory Group with representatives of the City of Moreno Valley, WRCOG, RCTC, San Bernardino County Associated Governments (SANBAG) and UC Riverside. That study revealed that no single trip generation rate is uniformly applicable to all warehouse projects, but that on average, trips generated by large warehouses in the Inland Empire are 0.9904 trips per thousand square feet (TSF), which is less than recommended by the ITE and used in this analysis.

The Project proposes the construction and operation of a 1,199,360 s.f. high-cube industrial warehouse facility with 215 loading bays. Consistent with standard traffic engineering practice in southern California, PCE factors have been applied due to the expected heavy truck component of Project-related traffic. PCE factors allow the typical "real-world" mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, for the purposes of capacity and level of service analyses. As previously described in Subsection 4.10.2A, a PCE factor of 2.0 has been applied to large 2-axle trucks, a factor of 2.5 for 3-axle trucks and a factor of 3.0 for 4+-axle trucks. After adjusting for PCE, the Project is estimated to produce 2,722 PCE daily vehicle trips, including 178 trips during the AM peak hour and 194 trips during the PM peak hour (refer to Table 4.10-7, *Project Trip Generation Summary*) (Urban Crossroads 2013e 36). These trip rates are utilized throughout this analysis to determine the Project's effect to the local transportation and circulation network.

Detailed information about the methodology used to determine the Project's trip generation is provided in Section 4.1 of *Technical Appendix I1*.

Trip distribution is the process of identifying the probable destinations, directions or traffic routes that would be utilized by Project traffic. The distribution pattern for truck and passenger vehicle trips generated by the Project were developed based on an understanding of existing travel patterns in the area, the geographical location of the site, and the site's proximity to the regional arterial and state highway system, as well as recommendations provided by City of San Bernardino staff. The total volume on each roadway was divided by the Project's total traffic generation to indicate the percentage of Project traffic that would use each component of the local and regional roadway system in each relevant direction. The traffic distribution pattern for Project-related truck trips is graphically depicted on Figure 4.10-11, *Project Truck Trip Distribution*, while the traffic distribution pattern for Project-related passenger car trips is graphically depicted on Figure 4.10-12, *Project Passenger Car Trip* Distribution.

The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project (2015) and the Horizon Year (2035). Based on the identified Project traffic generation and trip distribution patterns, Project average daily traffic (ADT) volumes for the weekday are shown on Figure 4.10-13, *Project Average Daily Traffic*. Project AM and PM peak hour intersection turning movement volumes are shown on Figure 4.10-14 and Figure 4.10-15, respectively.

B. Analysis Scenarios

Potential impacts to transportation and circulation are assessed for each of the conditions listed below.

- Near-Term Construction Conditions (1 scenario)
- Existing (2013) plus Project Conditions (1 scenario)
- Opening Year (2015) plus Project Conditions and Opening Year (2015) plus Project Conditions plus Cumulative Development Projects (2 scenarios)
- Horizon Year (2035) with Project Conditions (1scenario)

The Near-Term Construction Conditions analysis determines the potential for Project construction-related traffic to result in an adverse effect to the local roadway system. Types of traffic anticipated during construction include employees traveling to/from the Project site and road closures due to construction activities within the public right-of-way, as well as deliveries of construction materials to the Project site.

The Existing (2013) plus Project Conditions (E+P) determines direct Project-related traffic impacts that would occur on the existing roadway system in the theoretical scenario of the project being placed upon existing conditions. Existing conditions (2013) represent the baseline traffic conditions as they existed at the approximate time the NOP for this EIR was distributed for public review. Because the Project is not expected to be fully built out and occupied until at least 2015, the E+P scenario is presented to disclose direct impacts as required by CEQA.

The Opening Year (2015) analysis includes an evaluation the Existing plus Ambient Growth plus Project (E+A+P) traffic conditions. The E+A+P analysis is intended to identify the direct impacts associated solely with the development of the proposed Project based on the expected background growth within the study area. The Opening Year (2015) analysis also includes an evaluation of Existing plus Ambient Growth plus Project plus Cumulative Development (E+A+P+C) to determine if improvements funded through local and regional transportation mitigation fee programs such as the City of San Bernardino Development Impact Fee (DIF) program can accommodate traffic levels from the proposed Project and nearby development projects at the target LOS identified in the City of San Bernardino General Plan.

The Horizon Year (2035) conditions analysis is utilized to determine if improvements funded through local and regional transportation mitigation fee programs such as City of San Bernardino Development Impact Fee (DIF) program can accommodate long-term cumulative traffic at the target level of service (LOS) identified in the City of San Bernardino. If the funded improvements can provide the target LOS, then the Project's payment into the DIF is considered adequate cumulative mitigation as imposed through Conditions of Approval applied to the Project by the City of San Bernardino. If other improvements are needed beyond the funded improvements (such as localized improvements to non-funded facilities), they are identified as such. CEQA allows for the assessment of a fee as an appropriate form of mitigation when it is linked to a specific mitigation program. In this case, the DIF is an established mitigation program.

C. Near-Term Construction Traffic Impact Analysis

During the construction phase of the Project, traffic to-and-from the Project site would be generated by activities such as construction employee trips, delivery of construction materials, and use of heavy equipment. Vehicular traffic associated with construction employees would be minimal, much less than Project-generated operational traffic volumes, and is not expected to result in a substantial adverse effect to the local roadway system. Deliveries of construction materials to the Project site would also have a nominal effect to the local roadway network; construction materials would be delivered to the site throughout the construction phase based on need and would not occur on a daily basis. Heavy equipment would be utilized on the Project site during the construction phase. As most heavy equipment is not authorized to be driven on a public roadway, most equipment would be delivered and removed from the site via flatbed trucks. 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. Near-term traffic generated by the Project during the construction phase would result in less-than-significant impacts to the local roadway system.

As previously described in Subsection 3.3.1.A, the Project would install a 120-inch storm drain line beneath Orange Show Road during the construction phase. Installation of the proposed storm drain line would require the temporary closure of the two (2) westbound lanes of Orange Show Road (north side of the street) from the Orange Show Road/Waterman Avenue intersection to approximately 500 feet east. The temporary lane closures on Orange Show Road would occur for a period of approximately three (3) weeks during the Project's construction phase. During this time period, westbound traffic on Orange Show Road would be redirected into the Number 1 eastbound travel lane to maintain one (1) travel lane in both the westbound and eastbound directions. The

temporary closure of travel lanes on Orange Show Road would lower the capacity of this roadway, and would result in a significant, short-term impact for a period of approximately three (3) weeks during the construction phase.

D. Existing (2013) plus Project Traffic Impact Analysis (E+P)

For purposes of information disclosure, this subsection presents an analysis of existing traffic volumes plus traffic generated by the proposed Project (Existing plus Project, or E+P). The reason this particular analysis scenario is provided is to disclose the potential for direct impacts to the existing environment as required by CEQA. The E+P scenario rarely materializes as an actual scenario in the real world. The time period between the environmental baseline date and the date project buildout occurs can often be a period of several years or more. In the case of the proposed Project, the time period estimated between the distribution of the NOP for the Project's EIR (2013) and estimated Project buildout (2015) is two (2) years. During this time period, 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 exists when a particular 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.

As shown in Table 4.10-2, all intersections in the Project study area operate at acceptable LOS during the AM and PM peak hours under Existing (2013) conditions without Project traffic with the exception of the Carnegie Drive/I-10 Westbound Ramps/Hospitality Lane intersection (ID #8), which operates at LOS "E" during both the AM and PM peak hours. For the Carnegie Drive/I-10 Westbound Ramps/Hospitality Lane intersection (ID # 8) to operate at an acceptable LOS under Existing (2013) conditions without Project traffic, the southbound approach would need to be re-striped from one left turn lane, two through lanes, and one right turn lane to one left turn lane, one shared left turn/through lane and one right turn lane. The analysis of traffic operations at the Carnegie Drive/I-10 Westbound Ramps/Hospitality Lane intersection (ID #8) under E+P conditions assumes the southbound approach has already been improved to the above listed lane configuration.

In addition, the E+P conditions analysis assumes that driveways to be constructed by the Project – to provide site access – will be in place with Project conditions only.

Projected ADT volumes for E+P conditions are shown on Figure 4.10-16, *Existing plus Project (E+P) Average Daily Traffic (2013)*. Peak hour intersection turning movement volumes for E+P traffic conditions are shown on Figure 4.10-17, *Existing plus Project (E+P) Intersection Volumes – AM Peak Hour (2013)*, and Figure 4.10-18, *Existing plus Project (E+P) Intersection Volumes – PM Peak Hour (2013)*, respectively.

❑ Intersection Operations Analysis

Intersection levels of service for E+P conditions are summarized in Table 4.10-8, *Existing plus Project (E+P) Intersection Analysis*. As shown in Table 4.10-8, under E+P traffic conditions all study area intersections are projected to operate at acceptable LOS during AM and PM peak hours, and, therefore, the Project's impact to the local roadway network would be less than significant.

In the event that the southbound approach to the Carnegie Drive/I-10 Westbound Ramps/Hospitality Lane intersection (ID #8) has not been re-striped to correct a LOS deficiency that occurs during the AM and PM peak hours under Existing (2013) conditions – without Project-related traffic – then this intersection would operate at unacceptable LOS during the AM and PM peak hour under E+P conditions. The Project would contribute nominal traffic to this intersection (26 PCE trips in the AM peak hour and 13 PCE trips in the PM peak hour); therefore, the Project's contribution to the existing LOS deficiency at the Carnegie Drive/I-10 Westbound Ramps/Hospitality Lane intersection (ID #8) is determined to be less than significant on both a direct and cumulative basis because less than 50 peak hour trips would be added by the Project and mitigation is not required.

❑ Traffic Signal Warrant Analysis

Under E+P traffic conditions, no additional unsignalized intersections within the Project study area appear to warrant consideration of a traffic signal beyond the one intersection of Waterman Avenue/I-215 On-Ramps (ID #7) where a traffic signal is already warranted under Existing (2013) conditions (without Project-related traffic), as previously described in Subsection 4.10.2B (Urban Crossroads 2013e 51).

E. Opening Year (2015) Traffic Impact Analysis (E+A+P)

The Opening Year (2015) traffic conditions analysis identifies the specific impacts associated solely with the development of the proposed Project based on the expected background growth within the study area (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 intersection lane configurations and traffic controls assumed to be in place for the Opening Year (2015) analysis are consistent with those assumed for E+P conditions (refer to Subsection 4.10.4D) with the exception of intersection modifications related to the "E" Street Corridor sbX Bus Rapid Transit Project as previously described in Subsection 4.10.3A and illustrated on Figure 4.10-10.

Projected ADT volumes for Opening Year (2015) conditions are shown on Figure 4.10-19, *Opening Year (E+A+P) Average Daily Traffic (2015)*. Peak hour intersection turning movement volumes for Opening Year (2015) traffic conditions are shown on Figure 4.10-20, *Opening Year (E+A+P) Intersection Volumes – AM Peak Hour (2015)*, and Figure 4.10-21, *Opening Year (E+A+P) Intersection Volumes – PM Peak Hour (2015)*, respectively.

❑ Intersection Operation Analysis

Table 4.10-9, *Opening Year (E+A+P) Intersection Analysis (2015)*, summarizes the LOS at study area intersections under the Opening Year (2015) traffic condition with the addition of Project-generated traffic. As shown in Table 4.10-9, all 11 intersections in the study area would operate at acceptable LOS under Opening Year (2015) traffic conditions, and Project impacts to the local roadway network would be less than significant.

Based on the professional opinion of City of San Bernardino staff, additional intersection modifications may occur at the Waterman Avenue/Hospitality Lane intersection (ID #6) associated with the sbX project, beyond those already assumed in the Opening Year (2015) scenario (shown on Figure 4.10-10). The additional modifications that may occur include the elimination of the sbX bus-

only eastbound through lane in advance of the intersection to allow for one left turn lane, two through lanes, and one right turn lane on the eastbound approach (Urban Crossroads 2013e 64, 66). In an effort to account for all possible Opening Year (2015) scenarios, an alternative intersection operations analysis was conducted for the Waterman Avenue/Hospitality Lane intersection (ID # 6) based on the lane configuration anticipated by City of San Bernardino staff. The results of this intersection operations analysis is summarized in Table 4.10-10, *Opening Year (E+A+P) Intersection Analysis (2015): Alternative sbX Intersection Layout*. As shown in Table 4.10-10, the intersection of Waterman Avenue and Hospitality Lane (ID #6) is calculated to operate at acceptable LOS in the Opening Year (2015) scenario with the potential lane configurations anticipated by City staff. Accordingly, in the event that alternative sbX improvements are constructed at the intersection of Waterman Avenue and Hospitality Lane (ID #6), the Project would not directly cause or contribute to a substantial adverse effect to traffic operations under Opening Year (2015) traffic conditions.

In the event that the southbound approach to the Carnegie Drive/I-10 Westbound Ramps/Hospitality Lane intersection (ID #8) has not been re-striped to correct a LOS deficiency that occurs during the AM and PM peak hours under Existing (2013) conditions – without Project-related traffic – then this intersection would operate at unacceptable LOS during the AM and PM peak hour under Opening Year (2015) conditions. The Project would contribute nominal traffic to this intersection (26 PCE trips in the AM peak hour and 13 PCE trips in the PM peak hour); therefore, the Project's contribution to the existing LOS deficiency at the Carnegie Drive/I-10 Westbound Ramps/Hospitality Lane intersection (ID #8) is determined to be less than significant on both a direct and cumulative basis because less than 50 peak hour trips would be added by the Project, and mitigation is not required.

❑ Traffic Signal Warrant Analysis

Under Opening Year (2015) traffic conditions, no additional unsignalized intersections within the Project study area appear to warrant a traffic signal beyond the one intersection of Waterman Avenue/I-215 On-Ramps (ID #7) where a traffic signal is already warranted under Existing (2013) conditions (without Project-related traffic), as previously described in Subsection 4.10.2C (Urban Crossroads 2013e 67).

F. Opening Year (2015) plus Cumulative Traffic Impact Analysis (E+A+P+C)

As discussed in Subsection 4.02, CEQA requires that an EIR contain an assessment of the cumulative impacts that may be associated with a proposed project. Accordingly, traffic within the Project study area from development projects that are approved and not yet constructed, along with proposed development projects that are currently in the process of entitlement, have been added to the Opening Year (2015) traffic volumes to represent Existing plus Ambient Growth plus Project plus Cumulative (E+A+P+C) conditions. A total of 25 other known cumulative development projects in the study area were included in addition to 2.01% of ambient growth (refer to Subsection 4.10.3A for a description of the methodology used in this analysis). The purpose of this analysis is to determine if the proposed Project, in conjunction with other nearby approved and anticipated development projects, has the potential to result in traffic impacts that are individually insignificant but considerable on a cumulative basis.

The intersection lane configurations and traffic controls assumed to be in place for the Opening Year (2015) plus Cumulative traffic impact analysis are identical to those assumed for Opening Year (2015) conditions (refer to Subsection 4.10.4E).

Projected ADT volumes for Opening Year (2015) plus Cumulative conditions are shown on Figure 4.10-22, *Opening Year plus Cumulative (E+A+P+C) Average Daily Traffic (2015)*. Peak hour intersection turning movement volumes for Opening Year (2015) traffic conditions are shown on Figure 4.10-23, *Opening Year plus Cumulative (E+A+P+C) Intersection Volumes – AM Peak Hour (2015)*, and Figure 4.10-24, *Opening Year plus Cumulative (E+A+P+C) Intersection Volumes – PM Peak Hour (2015)*, respectively.

❑ Intersection Operations Analysis

Table 4.10-11, *Opening Year plus Cumulative (E+A+P+C) Intersection Analysis (2015)*, summarizes the LOS at study area intersections under Opening Year (2015) plus Cumulative traffic conditions. As shown in Table 4.10-11, for Opening Year (2015) plus Cumulative traffic conditions, all study area intersections are projected to operate at acceptable LOS during peak hours with the exception of the Waterman Avenue/I-215 On-Ramp intersection (ID #7) which is projected to operate at deficient levels during the PM Peak Hour. In the Opening Year (2015) plus Cumulative scenario, this intersection would operate at LOS "E" during the PM Peak Hour with and without Project-related traffic; therefore, the proposed Project would contribute to, but would not directly cause, cumulatively significant traffic impacts at the Waterman Avenue/I-215 On-Ramp intersection (ID #7) under estimated Year 2015 traffic conditions and mitigation for the cumulative impact is required.

Based on the opinion of City of San Bernardino staff, additional intersection modifications may occur at the Waterman Avenue/Hospitality Lane intersection (ID #6) associated with the sbX project, beyond those already assumed in the Year 2015 scenario (shown on Figure 4.10-10). The additional modifications that may occur include the elimination of the sbX bus-only eastbound through lane in advance of the intersection to allow for one left turn lane, two through lanes, and one right turn lane on the eastbound approach (Urban Crossroads 2013e 64, 66). In an effort to account for all possible Year 2015 scenarios, an alternative intersection operations analysis was conducted for the Waterman Avenue/Hospitality Lane intersection (ID #6) based on the lane configuration anticipated by City of San Bernardino staff. The results of this intersection operations analysis is summarized in Table 4.10-12, *Opening Year plus Cumulative (E+A+P+C) Intersection Analysis (2015): Alternative sbX Intersection Layout*. As shown in Table 4.10-12, the intersection of Waterman Avenue and Hospitality Lane (ID #6) is anticipated to operate at acceptable LOS in the Opening Year (2015) plus Cumulative scenario with the potential lane configurations anticipated by City staff. Accordingly, in the event that alternative sbX improvements are constructed at the intersection of Waterman Avenue and Hospitality Lane (ID #6), the proposed Project would not directly cause or contribute to a substantial adverse effect to traffic operations under Opening Year (2015) plus Cumulative traffic conditions.

In the event that the southbound approach to the Carnegie Drive/I-10 Westbound Ramps/Hospitality Lane intersection (ID #8) has not been re-striped to correct a LOS deficiency that occurs during the AM and PM peak hours under Existing (2013) conditions – without Project-related traffic – then this intersection would operate at unacceptable LOS during the AM and PM peak hour under Opening Year (2015) plus Cumulative conditions. The Project would contribute nominal traffic to this

intersection (26 PCE trips in the AM peak hour and 13 PCE trips in the PM peak hour); therefore, the Project's contribution to the existing LOS deficiency at the Carnegie Drive/I-10 Westbound Ramps/Hospitality Lane intersection (ID #8) is determined to be less than significant on both a direct and cumulative basis because the Project would contribute less than 50 peak hour trips, and mitigation is not required.

❑ Traffic Signal Warrant Analysis

Under Opening Year (2015) plus Cumulative traffic conditions, no additional unsignalized intersections within the Project study area appear to warrant a traffic signal beyond the one intersection of Waterman Avenue/I-215 On-Ramps (ID #7) where a traffic signal is already warranted under Existing (2013) conditions (without Project-related traffic), as previously described in Subsection 4.10.2C (Urban Crossroads 2013e 78).

G. Horizon Year (2035) Traffic Impact Analysis

The Horizon Year (2035) conditions analysis is utilized to determine if improvements anticipated in long-term planning documents, such as the City of San Bernardino General Plan, are adequate to accommodate long-term cumulative traffic conditions plus Project-related traffic at the target LOS, or if additional improvements are necessary.

Projected ADT volumes for Horizon Year (2035) conditions (including Project-related traffic) are shown on Figure 4.10-25, *Horizon Year Average Daily Traffic (2035)*. Peak hour intersection turning movement volumes for Horizon Year (2035) traffic conditions are shown on Figure 4.10-26, *Horizon Year Intersection Volumes – AM Peak Hour (2035)*, and Figure 4.10-27, *Horizon Year Intersection Volumes – PM Peak Hour (2035)*, respectively.

❑ Intersection Operations Analysis

Table 4.10-13, *Horizon Year Intersection Analysis (2035)*, summarizes the LOS at study area intersections under Year 2035 traffic conditions (including Project-related traffic). As shown in Table 4.10-13, for Year 2035 traffic conditions, all study area intersections are projected to operate at acceptable LOS during peak hours with the exception of the Waterman Avenue/I-215 On-Ramp intersection (ID #7) which is projected to operate at deficient levels during the PM Peak Hour. In the Horizon Year (2035) scenario, this intersection would operate at LOS "F" during the PM Peak Hour with and without Project-related traffic; therefore, the proposed Project would contribute to, but would not directly cause, cumulatively significant traffic impacts at the Waterman Avenue/I-215 On-Ramp intersection (ID #7) under estimated Year 2035 traffic conditions and mitigation for the cumulative impact is required.

Based on the professional opinion of City of San Bernardino staff, additional intersection modifications may occur at the Waterman Avenue/Hospitality Lane intersection (ID #6) associated with the sbX project, beyond those already assumed (shown on Figure 4.10-10). The additional modifications that may occur include the elimination of the sbX bus-only eastbound through lane in advance of the intersection to allow for one left turn lane, two through lanes, and one right turn lane on the eastbound approach (Urban Crossroads 2013e 64, 66). In an effort to account for all possible Year 2035 scenarios, an alternative intersection operations analysis was conducted for the Waterman Avenue/Hospitality Lane intersection (ID #6) based on the lane configuration anticipated by City of

San Bernardino staff. The results of this intersection operations analysis is summarized in Table 4.10-14, *Horizon Year Intersection Analysis (2035): Alternative sbX Intersection Layout*. As shown in Table 4.10-14, the intersection of Waterman Avenue and Hospitality Lane (ID #6) is anticipated to operate at acceptable LOS in the Horizon Year (2035) scenario (including Project traffic) with the potential lane configurations anticipated by City staff. Accordingly, in the event that alternative sbX improvements are constructed at the intersection of Waterman Avenue and Hospitality Lane (ID #6), the Project would not directly cause or contribute to a substantial adverse effect to traffic operations under Horizon Year (2035) traffic conditions.

In the event that the southbound approach to the Carnegie Drive/I-10 Westbound Ramps/Hospitality Lane intersection (ID #8) has not been re-striped to correct a LOS deficiency that occurs during the AM and PM peak hours under Existing (2013) conditions – without Project-related traffic – then this intersection would operate at unacceptable LOS during the AM and PM peak hour under Horizon Year (2035) traffic conditions. The Project would contribute nominal traffic to this intersection (26 PCE trips in the AM peak hour and 13 PCE trips in the PM peak hour); therefore, the Project's contribution to the existing LOS deficiency at the Carnegie Drive/I-10 Westbound Ramps/Hospitality Lane intersection (ID #8) is determined to be less than significant on both a direct and cumulative basis because less than 50 peak hour trips would be added by the Project, and mitigation is not required.

❑ Traffic Signal Warrant Analysis

Under Horizon Year (2035) traffic conditions, no additional unsignalized intersections within the Project study area appear to warrant a traffic signal beyond the one intersection of Waterman Avenue/I-215 On-Ramps (ID #7) where a traffic signal is already warranted under Existing (2013) conditions (without Project-related traffic), as previously described in Subsection 4.10.2C (Urban Crossroads 2013e 97).

Threshold 2:	***Would the proposed 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 highways?***

The San Bernardino County Congestion Management Plan (CMP) prepared by San Bernardino Associated Governments (SANBAG) is applicable to the Project because of the subject property's proximity to freeway mainline segments and major intersections that are designated as part of the CMP roadway system. As previously described in Subsection 4.10.2G, CMP facilities in the Project study area include two freeways (i.e., I-215 and I-10) and the following five (5) intersections:

- I-215 Southbound Ramps/Auto Plaza Drive (ID #1)
- I-215 Northbound Ramps/Auto Plaza Drive/Orange Show Road (ID #2)
- "E" Street/Orange Show Road (ID #3)
- Waterman Avenue/Hospitality Lane (ID #6)
- Carnegie Drive/I-10 Westbound Ramps/Hospitality Lane (ID #8)

As described under the response to Threshold 1, implementation of the Project would not result in a significant, adverse effect on traffic operations at any of the above-listed CMP roadway network intersections on either a direct or cumulative basis under any traffic impact analysis scenario. Accordingly, implementation of the Project would not conflict with the applicable CMP related to arterial roadways, including LOS standards, and impacts to CMP intersections would be less than significant.

The Project would contribute peak hour vehicle trips to the regional freeway system, including I-215 and I-10. Potential impacts to I-215 and I-10 were evaluated using the same analysis scenarios presented above under Threshold 1 (E+P, E+A+P, E+A+P+C, and Horizon Year). For purposes of analysis, the segments of I-215 (northbound and southbound directions) and I-10 (eastbound and westbound directions) located near the Project site have been broken into smaller segments defined by the freeway-to-arterial interchange locations. The findings of the freeway mainline segment impact analysis are presented below and in *Technical Appendix I3*.

A. Existing (2013) plus Project Freeway Mainline Segment Impact Analysis (E+P)

As previously stated, for purposes of full disclosure and in an effort to satisfy CEQA Guidelines §15125(a), this subsection presents an analysis of existing traffic volumes plus traffic generated by the proposed Project (Existing plus Project, or E+P). The E+P scenario rarely materializes as an actual scenario in the real world because conditions are not static. Other projects are being constructed, the transportation network is evolving, and traffic patterns are changing. Regardless, the E+P scenario is analyzed to satisfy CEQA requirements to identify the Project's impacts to the existing environment.

E+P freeway mainline volumes for I-215 and I-10 during the AM and PM peak hours are summarized in Table 4.10-3, *Freeway Mainline Segment Analysis for Existing (2013) and Existing plus Project (E+P) Conditions*. As shown in Table 4.10-3, all freeway mainline segments in the vicinity of the Project would operate at acceptable LOS under E+P conditions, with the exception of the two (2) segments listed below:

- I-10 Freeway – Westbound, Carnegie Drive On-Ramp to Carnegie Drive Off-Ramp (LOS "E" during the AM Peak Hour); and
- I-10 Freeway – Eastbound, Between Waterman Avenue Ramps (LOS "E" during the PM Peak Hour).

Both of the above-listed freeway mainline segments are projected to operate at unacceptable LOS under Existing (2013) conditions without Project-related traffic (refer to Subsection 4.10.2D); the Project would not cause the LOS deficiency at these freeway mainline segments. Furthermore, the Project is not expected to contribute measureable traffic (i.e., 100 or more two-way peak hour trips) at either of these freeway mainline segments during peak hours and, as summarized in Table 4.10-3, would not worsen the existing traffic density (as measured by passenger cars per mile per lane) at either of these freeway mainline segments. For these reasons, the Project's contribution of traffic to I-215 and I-10 under E+P traffic conditions is determined to be less than significant on a direct and cumulative basis.

B. Opening Year (2015) Freeway Mainline Segment Impact Impact Analysis (E+A+P)

Opening Year (2015) freeway mainline volumes for I-215 and I-10 during the AM and PM peak hours are summarized in Table 4.10-15, *Opening Year (E+A+P) Freeway Mainline Segment Analysis (2015)*. The Opening Year (2015) traffic condition includes existing traffic, estimated ambient growth, and the proposed Project (E+A+P). As shown in Table 4.10-15, all freeway mainline segments in the vicinity of the Project would operate at acceptable LOS under E+A+P conditions, with the exception of the two (2) segments listed below:

- I-10 Freeway – Westbound, Carnegie Drive On-Ramp to Carnegie Drive Off-Ramp (LOS "E" during the AM Peak Hour); and
- I-10 Freeway – Eastbound, Between Waterman Avenue Ramps (LOS "E" during the PM Peak Hour).

The above-listed freeway mainline segments are projected to operate at unacceptable LOS under Opening Year (2015) traffic conditions both without and with Project-related traffic. As summarized in Table 4.10-15, Project-related traffic would not worsen the projected peak hour traffic conditions (i.e., traffic density, as measured by passenger cars per mile per lane) along either of the two freeway mainline segments listed above under Opening Year (2015) traffic conditions. Furthermore, the Project would not contribute more than 100 two-way peak hour trips to any freeway mainline segment (including the I-215 and I-10 segments listed above), which is below the screening threshold for impacts to freeway mainline segments. Because the Project would not cause or worsen a projected LOS deficiency at any freeway mainline segment under Opening Year (2015) traffic conditions and also would not contribute more than 100 two-way peak hour vehicle trips to any mainline segment of I-215 and/or I-10, the Project's potential impact to CMP freeway segments is determined to be less than significant on both a direct and cumulative basis under Opening Year (2015) traffic conditions.

C. Opening Year (2015) plus Cumulative Freeway Mainline Segment Impact Analysis (E+A+P+C)

Opening Year (2015) plus cumulative projects (E+A+P+C) freeway mainline volumes for I-215 and I-10 during the AM and PM peak hours are summarized in Table 4.10-16, *Opening Year plus Cumulative (E+A+P+C) Freeway Mainline Segment Analysis (2015)*. As shown in Table 4.10-16, all freeway mainline segments in the vicinity of the Project would operate at acceptable LOS under E+A+P+C conditions, with the exception of the two (2) segments listed below:

- I-10 Freeway – Westbound, Carnegie Drive On-Ramp to Carnegie Drive Off-Ramp (LOS "E" during the AM Peak Hour); and
- I-10 Freeway – Eastbound, Between Waterman Avenue Ramps (LOS "E" during the PM Peak Hour).

These two freeway mainline segments are projected to operate at unacceptable LOS under E+A+P+C traffic conditions both without and with Project-related traffic. As summarized in Table 4.10-16, Project-related traffic would not worsen projected peak hour traffic conditions (i.e., traffic density, as

measured by passenger cars per mile per lane) along either of freeway mainline segments listed above under E+A+P+C traffic conditions. Furthermore, the Project would not contribute more than 100 two-way peak hour trips to any freeway mainline segment (including the I-215 and I-10 segments listed above), which is below the screening threshold for impacts to freeway mainline segments. Because the Project would not cause or worsen a projected LOS deficiency at any freeway mainline segment under E+A+P+C traffic conditions and also would not contribute more than 100 two-way peak hour vehicle trips to any mainline segment of I-215 and/or I-10, the Project's potential impact to CMP freeway segments is determined to be less than significant on both a direct and cumulative basis under E+A+P+C traffic conditions.

D. Horizon Year (2035) Freeway Mainline Segment Impact Analysis

Horizon Year (2035) freeway mainline volumes for I-215 and I-10 during the AM and PM peak hours are summarized in Table 4.10-17, *Horizon Year Freeway Mainline Analysis (2035)*. As shown in Table 4.10-17, the following freeway mainline segments would operate at unacceptable LOS under Horizon Year (2035) traffic conditions:

- I-215 Freeway – Southbound, North of Auto Center Off-Ramp (LOS "F" during the AM Peak Hour);
- I-215 Freeway – Southbound Auto Plaza Loop On-Ramp to Auto Plaza On-Ramp (LOS "E" during the AM and PM Peak Hours);
- I-215 Freeway – Southbound, South of Auto Center On-Ramp (LOS "E" during the AM and PM Peak Hours);
- I-215 Freeway – Northbound, North of Orange Show On-Ramp (LOS "E" during the AM Peak Hour and LOS "F" during the PM Peak Hour);
- I-215 Freeway – Northbound, Orange Show On-Ramp to Inland Center Off-Ramp (LOS "E" during the PM Peak Hour);
- I-215 Freeway – Northbound, Inland Center Off-Ramp to Orange Show Off-Ramp (LOS "F" during the AM and PM Peak Hours);
- I-215 Freeway – Northbound, South of Orange Show Road (LOS "E" during the AM and PM Peak Hours);
- I-10 Freeway – Westbound, West of Carnegie Drive (LOS "E" during the AM Peak Hour and LOS "F" during the PM Peak Hour);
- I-10 Freeway – Westbound, Carnegie Drive On-Ramp to Carnegie Drive Off-Ramp
- I-10 Freeway – Westbound, East of Carnegie Drive(LOS "F" during the AM and PM Peak Hours);
- I-10 Freeway – Eastbound, West of Waterman Avenue (LOS "E" during the AM Peak Hour and LOS "F" during the PM Peak Hour);
- I-10 Freeway – Eastbound, Between Waterman Avenue Ramps (LOS "E" during the AM Peak Hour and LOS "F" during the PM Peak Hour); and

- I-10 Freeway – Eastbound, East of Waterman Avenue (LOS "E" during the AM Peak Hour and LOS "F" during the PM Peak Hour).

All of the freeway mainline segments listed above are projected to operate at unacceptable LOS under Horizon Year (2035) traffic conditions both without and with Project-related traffic; the Project would not directly cause any LOS deficiency along nearby freeway mainline segments. In addition, the Project would not worsen the LOS at any of the above-listed freeway mainline segments (refer to Table 4.10-17). The Project would not contribute more than 100 two-way peak hour trips to any segment of I-215 or I-10. As previously described, 100 two-way peak hour trips is the screening threshold used by Caltrans to determine potential impacts to State freeway facilities. Because the Project would not cause or worsen a projected LOS deficiency at any freeway mainline segment under Horizon Year (2035) traffic conditions and also would not contribute more than 100 two-way peak hour vehicle trips to any mainline segment of I-215 and/or I-10, the Project's potential impact to CMP freeway segments is determined to be less than significant on both a direct and cumulative basis under Horizon Year (2035) traffic conditions.

Threshold 3: Would the proposed Project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The proposed Project does not contain an air travel component; thus, air traffic volumes would not be changed as a result of the Project.

Although the Project site is located approximately 0.5-mile north of a private helipad and 0.75-mile southwest of the San Bernardino International Airport, the warehouse building proposed by the Project would have a height of less than 45 feet and would not extend into the airspace or interfere with flight operations at the nearby helipad or the San Bernardino International Airport. Furthermore, the Project does not include an air travel component (e.g., runway, helipad, etc.) that could affect air traffic patterns. 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 4: Would the proposed Project substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?

The large warehouse proposed by the Project would be compatible with existing development in the surrounding area and the long-term planning vision for the area as called for by the City of San Bernardino General Plan; therefore, implementation of the Project would not create a transportation hazard as a result of an incompatible use. Although the land uses proposed by the Project would be consistent with the long-term planning vision for the area, the Project would generate traffic that would traverse across two existing at-grade railroad crossings located approximately 600 feet to the south and 585 feet to the west of the Orange Show Road/Waterman Avenue intersection. According to information received from BNSF, there are only two train trips per week that use this track under existing conditions (Rousseau 2013). During near-term construction activities, the Project would not generate substantial construction-related traffic and would not substantially affect intersection operations and vehicle queuing at the Orange Show Road/Waterman Avenue intersection. The

Project would close westbound lanes of Orange Show Road east of the Orange Show Road/Waterman Avenue intersection for a three (3)-week period during the construction phase, which has the potential to increase vehicle queuing in the vicinity of the at-grade railroad crossings near the Orange Show Road/Waterman Avenue intersection; however, Project-related construction activities would not introduce a safety hazard for motorists because the railroad crossings already include appropriate signage, striping, and crossing guards to notify motorists of on-coming trains and the Project would be required to comply with Mitigation Measure MM 4.10-1 (refer to Subsection 4.10.7, below) to maximize the performance of the Orange Show Road/Waterman Avenue intersection during construction. The Project also would not introduce a safety hazard for motorists under long-term operational conditions because anticipated peak hour vehicle queues for both the northbound and eastbound directions of travel would be within the allowable stacking distance provided between the Orange Show Road/Waterman Avenue intersection and the railroad crossing stop bar under the E+P, E+A+P, E+A+P+C, and Horizon Year (2035) traffic conditions presented above under Threshold 1 (Urban Crossroads 2013h 2).

The Project proposes to construct utility infrastructure beneath existing Orange Show Road, which would result in the temporary closure of westbound travel lanes within Orange Show Road for approximately three (3) weeks during the Project's construction phase. All improvements within the Orange Show Road right-of-way would be installed in conformance with City design standards to ensure that no hazardous transportation design features would be introduced by the Project. A construction traffic control plan will be required by the City to safely route traffic through the area during temporary construction activities and maintain adequate emergency access.

Accordingly, the proposed Project would not create or substantially increase safety hazards due to a design feature or incompatible use. Impacts would be less than significant.

Threshold 5: Would the proposed Project result in inadequate emergency access?

The Project would result in the construction of one warehouse building on the Project site, which would require the need for emergency access to-and-from the site. During the course of the City of Bernardino's required review of the proposed Project, the Project's design was reviewed to ensure that adequate access to-and-from the site is provided for emergency vehicles. The City of San Bernardino also will require that the Project provide adequate paved access to-and-from the site as a condition of Project approval. Furthermore, as described above under the response to Threshold 4, the City of San Bernardino will require that adequate emergency access be maintained along Orange Show Road during temporary construction activities within the roadway (i.e., the installation of utility infrastructure). With required adherence to City requirements for emergency vehicle access, impacts would be less than significant.

Threshold 6: Would the proposed Project conflict with adopted policies or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The proposed Project is an industrial 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, Orange Show Road is designated as a bicycle route along its frontage with the Project site. The Project does not include any element that would preclude the use of Orange Show Road as a bicycle route. Screen walls are designed to be installed along the Project's frontage with Orange Show Road, which would separate the adjacent public road right-of way (and its associated streetscapes, sidewalks, and bikeways) from the proposed Project's interior, thereby precluding any potential conflict between Project operations and the sidewalks and bikeways. 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.

There are no bus stops existing or planned along the Project's frontage with Orange Show Road. Bus service in the local area is available along Waterman Avenue (Route 9) and Hospitality Lane (Route 2), located approximately 0.25 mile west and 1.0 mile south of the Project site, respectively. 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.

4.10.5 CUMULATIVE IMPACT ANALYSIS

The analysis under Threshold 1 disclosed the Project's potential to affect the transportation network on a direct and cumulative basis. As concluded under Threshold 1, the addition of Project traffic to the existing and planned circulation network would result in the Project's contribution of cumulatively considerable traffic at the Waterman Avenue/I-215 On-Ramp intersection (ID #7) during the PM Peak Hour under the Opening Year (2015) plus Cumulative (E+A+P+C) and Horizon Year (2035) traffic scenarios.

The analysis under Threshold 2 evaluated the Project's potential to result in substantial adverse effects to the CMP Roadway System. As concluded under Threshold 2, the addition of Project traffic to the existing and planned CMP Roadway System would not substantially affect the operation of arterial roadways or freeway mainline segments (i.e., I-215 and I-10) within the CMP Roadway System on a cumulative basis.

The proposed Project has no potential to contribute to significant cumulative impacts under the topics discussed under Thresholds 3, 4, and 5 because the Project has no potential to result in changes to air traffic patterns, to result in transportation design safety concerns, or to adversely affect emergency access on a direct or cumulative basis.

Regarding Threshold 6, the 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 consists of one distribution warehouse building, which is likely to attract passenger cars and trucks and only small volumes of pedestrian, bicycle, or transit traffic. Landscaping is designed to be installed along the Project's frontage with Orange Show Road and all Project driveways would be stop-sign controlled and reviewed for adequate sight distance before construction commences. 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.

4.10.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold 1: Significant Direct and Cumulative Impact. The proposed Project would result in a temporary, significant direct impact to traffic circulation on Orange Show Road for a period of approximately three (3) weeks when two lanes would be closed to install a subsurface drainage line. In addition, the proposed Project would contribute cumulatively considerable traffic to a projected LOS deficiency at the Waterman Avenue/I-215 On-Ramp intersection during the PM Peak Hour under Opening Year (2015) plus Cumulative (E+A+P+C) and Horizon Year (2035) traffic conditions. The Project's traffic contribution to this intersection is 4.9%.

Threshold 2: Less-than-Significant Impact. The proposed Project's contribution of traffic to arterial roadways and freeway mainline segments (i.e., I-215 and I-10) within the CMP Roadway System would not conflict with applicable level of service standards or the CMP.

Threshold 3: No Impact. There is no potential for the Project to change air traffic levels or create substantial air traffic safety risks.

Threshold 4: Less-than-Significant Impact. No significant transportation safety hazards would be introduced as a result of the proposed Project's design.

Threshold 5: Less-than-Significant Impact. Adequate emergency access would be provided to the Project site during both near-term construction and long-term operational activities.

Threshold 6: Less-than-Significant Impact. The proposed 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. Potential impacts to the performance or safety of transit, bicycle, and pedestrian systems would be less than significant.

4.10.7 MITIGATION MEASURES

MM 4.10-1 Prior to the issuance of improvement permits for utility infrastructure to be installed beneath Orange Show Road that would result in closure or disruption of vehicular travel lanes, the Project Proponent shall prepare and the City of San Bernardino shall approve a traffic control plan. The traffic control plan shall require the following:

a) Construction activities that would impede the flow of traffic along Orange Show Road or through the Orange Show Road/Waterman Avenue intersection and that are feasible to suspend during peak travel periods, shall occur outside of the typical morning and evening peak commute hours (i.e., 7:00 am-9:00 pm and 4:00 pm-6:00 pm).

b) A minimum one (1) travel lane shall be maintained in both the westbound and eastbound directions of Orange Show Road throughout the duration of construction activities.

c) The Project Proponent shall work in conjunction with City of San Bernardino engineering staff to temporarily modify traffic signal timing at the Orange Show Road/Waterman Avenue intersection and/or employ other temporary traffic controls to facilitate traffic flow through the intersection during temporary construction activities within the Orange Show public right-of-way.

MM 4.10-2 In the event the City of San Bernardino and/or the California Department of Transportation (Caltrans) establish a fair-share funding program(s) for the construction of a traffic signal at the Waterman Avenue/I-215 On-Ramp intersection (or immediately adjacent roadway segments that contribute to the improvement of the intersection's level of service), then prior to the issuance of a building permit, the Project Proponent shall contribute a fair-share payment to the City/Caltrans-established funding program(s) to address the Project's cumulative impacts. The Project's fair-share contribution for construction of a traffic signal at the Waterman Avenue/I-215 On-Ramp intersection is 4.9%.

4.10.8 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold 1: Significant Unavoidable Direct & Cumulative Impact. Implementation of Mitigation Measure MM 4.10-1 would ensure that traffic control measures are in place during temporary, construction activities within the Orange Show Road public right-of-way that would occur over a duration approximately three (3) weeks. With the traffic control in place, traffic flow along Orange Show Road and operations at the Orange Show Road/Waterman Avenue intersection would be mitigated to the maximum extent possible. However, even with the traffic controls in place, the City cannot assure that levels of service along the Orange Show Road street segment or at the Orange Show Road/Waterman Avenue intersection would always operate at an acceptable level of service (LOS D or better) during the entire time that construction activities are occurring. Therefore, the City finds the temporary (approximately three (3) week) direct and cumulative impact to be significant and unavoidable and the Project's direct impact would not be reduced to less-than-significant levels.

The Waterman Avenue/I-215 On-Ramp intersection is under the jurisdiction of Caltrans; therefore, the City of San Bernardino cannot assure improvements to this intersection. Implementation of Mitigation Measure MM 4.10-2 would require the Project to participate in funding program(s) to address the Project's fair-share toward cumulative impacts at the Waterman/I-215 On-ramp intersection, if such funding program(s) is established prior to the issuance of building permits. However, because there is no assurance that the City of San Bernardino and/or Caltrans would identify funding program(s) for the Waterman/I-215 On-ramp intersection and that these improvements would be in place prior to the Project's Opening Year (2015) or Horizon Year (2035), the Project's cumulative impact to this intersection is concluded to be significant and unavoidable.

Table 4.10-1 Project Study Area Intersections

ID	INTERSECTION LOCATION	JURISDICTION
1	I-215 Southbound Ramps/Auto Plaza Drive	Caltrans
2	I-215 Northbound Ramps/Auto Plaza Drive/Orange Show Road	Caltrans
3	"E" Street/Orange Show Road	City of San Bernardino
4	Arrowhead Avenue/Orange Show Road	City of San Bernardino
5	Waterman Avenue/Orange Show Road	City of San Bernardino
6	Waterman Avenue/Hospitality Lane	City of San Bernardino
7	Waterman Avenue/I-215 On-Ramps	Caltrans
8	Carnegie Drive/I-10 Westbound Ramps/Hospitality Road	Caltrans
9	*Driveway 1 / Orange Show Road-Future Intersection*	*City of San Bernardino*
10	*Driveway 1 / Orange Show Road-Future Intersection*	*City of San Bernardino*
11	*Driveway 1 / Orange Show Road-Future Intersection*	*City of San Bernardino*

Source: Urban Crossroads 2013e, Table 1-1

Table 4.10-2 Intersection Analysis for Existing (2013) Conditions

#	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
1	I-215 SB Ramps / Auto Plaza Dr.	TS	0	0	0	1	1	1	0	2	0	0	2	1>>	17.5	10.4	B	B
2	I-215 NB Ramps / Auto Plaza Dr./Orange Show Rd.	TS	1	1	2	0	0	0	1	2	0	0	2	1	21.0	18.0	C	B
3	S. "E" St. / Orange Show Rd.	TS	2	2	0	2	2	2>	2	2	0	2	2	1>	31.3	33.8	C	C
4	Arrowhead Ave. / Orange Show Rd.	TS	1	1	0	1	1	1>	1	2	0	1	2	0	35.2	39.7	D	D
5	Waterman Ave. / Orange Show Rd.	TS	1	2	0	1	2	0	1	2	0	1	2	0	26.3	33.5	C	C
6	Waterman Ave. / Hospitality Ln.	TS	2	2	2>	1	3	1	1	2	1>	2	2	0	26.7	33.6	C	C
7	Waterman Ave. / I-215 On-Ramps	CSS	1	2	0	0	3	0	0	0	0	0	0	0	10.6	29.7	B	D
8	Carnegie Dr./I-10 WB Ramps / Hospitality Ln.	TS	1	2	1	1	2	1	1	2	1>	2	2	0	**56.2**	**64.1**	**E**	**E**
9	Driveway 1 / Orange Show Rd.	–	Future Intersection												–	–	--	–
10	Driveway 2 / Orange Show Rd.	–	Future Intersection												–	–	--	–
11	Driveway 3 / Orange Show Rd.	–	Future Intersection												–	–	--	–

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; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; d= Defacto Right Turn Lane

[2] Per the 2000 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. The I-215 ramp locations at Auto Plaza Dr./Orange Show Rd. and I-215/I-10 ramp locations at Waterman Ave. and Hospitality Ln. have been analyzed using the Synchro software (Version 8).

[3] CSS = Cross-street Stop; TS = Traffic Signal

Source: Urban Crossroads 2013e, Table 3-1

Table 4.10-3 Freeway Mainline Segment Analysis for Existing (2013) and Existing plus Project (E+P) Conditions

Direction	Mainline Segment	Lanes[1]	Existing (2013) Conditions				Existing plus Project Conditions			
			Density[2]		LOS		Density[2]		LOS	
			AM	PM	AM	PM	AM	PM	AM	PM
I-215 SB	North of Auto Center Off-Ramp	4	22.7	19.5	C	C	22.8	19.5	C	C
	Auto Plaza Off-Ramp to Inland Center On-Ramp	4	19.8	18.5	C	C	19.8	18.5	C	C
	Inlane Center On-Ramp to Auto Plaza Loop On-Ramp	4	22.2	22.6	C	C	22.2	22.6	C	C
	Auto Plaza Loop On-Ramp to Auto Plaza On-Ramp	5	18.6	20.5	C	C	18.7	20.6	C	C
	South of Auto Center Drive	5	18.9	20.8	C	C	19.0	21.0	C	C
I-215 NB	North of Orange Show On-Ramp	4	14.9	17.4	B	B	15.0	17.4	B	B
	Orange Show On-Ramp to Inland Center Off-Ramp	4	14.2	15.0	B	B	14.2	15.0	B	B
	Inland Center Off-Ramp to Orange Show Off-Ramp	4	19.1	19.4	C	C	19.1	19.4	C	C
	South of Orange Show Road	5	17.9	17.5	B	B	18.0	17.5	B	B
I-10 WB	West of Carnegie Drive	5	28.4	26.5	D	D	28.4	26.5	D	D
	Carnegie Drive On-Ramp to Carnegie Drive Off-Ramp	4	**38.5**	30.7	**E**	D	**38.5**	30.7	**E**	D
	East of Carnegie Drive	5	32.1	27.4	D	D	32.2	27.4	D	D
I-10 EB	West of Waterman Avenue	5	23.9	29.5	C	D	23.9	29.8	C	D
	Between Waterman Avenue Ramps	4	25.3	**37.4**	C	**E**	25.3	**37.4**	C	**E**
	East of Waterman Avenue	5	21.2	30.5	C	D	21.2	30.6	C	D

[1] Number of lanes are in the specified direction and is based on existing conditions (mixed-flow lanes only).
[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).
BOLD = Unacceptable LOS
Source: Urban Crossroads 2013g, Table 2

Table 4.10-4 Signalized Intersection LOS Thresholds

Level of Service	Description	Average Control Delay (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00
D	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
E	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
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths	80.01 and up

Source: HCM 2000, Chapter 16

Source: Urban Crossroads 2013e, Table 2-1

Table 4.10-5 Unsignalized Intersection LOS Thresholds

Level of Service	Description	Average Control Per Vehicle (Seconds)
A	Little or no delays.	0 to 10.00
B	Short traffic delays.	10.01 to 15.00
C	Average traffic delays.	15.01 to 25.00
D	Long traffic delays.	25.01 to 35.00
E	Very long traffic delays.	35.01 to 50.00
F	Extreme traffic delays with intersection capacity exceeded.	> 50.00

Source: HCM 2000, Chapter 17

Source: Urban Crossroads 2013e, Table 2-2

Table 4.10-6 Freeway Mainline Segment 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 2000, Chapter 23*

Source: Urban Crossroads 2013g

Table 4.10-7 Project Trip Generation Summary

Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
High-Cube Warehouse	**1,199.360**	TSF							
Passenger Cars:			72	33	105	36	79	115	1,603
Truck Trips:									
2-axle:			*6*	*3*	*9*	*3*	*7*	*10*	*139*
3-axle:			*11*	*5*	*15*	*5*	*12*	*17*	*234*
4+-axle:			*34*	*15*	*49*	*17*	*37*	*53*	*745*
- Net Truck Trips (PCE)			*51*	*23*	*73*	*25*	*55*	*80*	*1,118*
Total Trips (Raw Vehicles) [2]			*91*	*41*	*132*	*45*	*99*	*144*	*2,015*
Total Trips (PCE) [3]			*123*	*55*	*178*	*60*	*134*	*194*	*2,722*

[1] TSF = thousand square feet

[2] TOTAL TRIPS (Raw Vehicles) = Passenger Cars + Net Truck Trips.

[3] TOTAL TRIPS (PCE) = Passenger Cars + Net Truck Trips (PCE).

Source: Urban Crossroads 2013e, Table 4-2

Table 4.10-8 Existing plus Project (E+P) Intersection Analysis (2013)

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1] Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R	Existing (2013) Delay[2] (secs.) AM	Existing (2013) Delay[2] (secs.) PM	Existing (2013) Level of Service AM	Existing (2013) Level of Service PM	Existing plus Project Delay[2] (secs.) AM	Existing plus Project Delay[2] (secs.) PM	Existing plus Project Level of Service AM	Existing plus Project Level of Service PM
1	I-215 SB Ramps / Auto Plaza Dr.	TS	0	0	0	1	1	1	0	2	0	0	2	1>>	17.5	10.4	B	B	17.6	10.6	B	B
2	I-215 NB Ramps / Auto Plaza Dr./Orange Show Rd.	TS	1	1	2	0	0	0	1	2	0	0	2	1	21.0	18.0	B	B	21.3	18.1	C	B
3	S. "E" St. / Orange Show Rd.	TS	2	2	0	2	2	2>	2	2	0	2	2	1>	31.3	33.8	C	C	31.6	34.3	C	C
4	Arrowhead Ave. / Orange Show Rd.	TS	1	1	0	1	1	1>	1	2	0	1	2	0	35.2	39.7	D	D	35.9	41.3	D	D
5	Waterman Ave. / Orange Show Rd.	TS	1	2	0	1	2	0	1	2	0	1	2	0	26.3	33.5	C	C	26.7	33.9	C	C
6	Waterman Ave. / Hospitality Ln.	TS	2	2	2>	1	3	1	1	2	1>	2	2	0	26.7	33.6	C	C	27.0	33.8	C	C
7	Waterman Ave. / I-215 On-Ramps	CSS	1	2	0	0	3	0	0	0	0	0	0	0	10.6	29.7	B	D	10.7	31.6	B	D
8	Carnegie Dr./I-10 WB Ramps / Hospitality Ln.[4]	TS	1	2	1	1	2	1	1	2	1>	2	2	0	42.2	52.5	D	D	43.1	52.7	D	D
9	Driveway 1 / Orange Show Rd.	**CSS**	0	**1**	0	0	1	0	1	2	0	1	2	0	--	--	--	--	17.1	22.3	C	C
10	Driveway 2 / Orange Show Rd.	CSS	0	1	0	0	1	0	1	2	0	1	2	0	--	--	--	--	14.6	17.7	B	C
11	Driveway 3 / Orange Show Rd.	**CSS**	0	**1**	0	0	0	0	0	2	0	**1**	2	0	--	--	--	--	14.1	17.3	B	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; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; d= Defacto Right Turn Lane

[2] Per the 2000 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. The I-215 ramp locations at Auto Plaza Dr./Orange Show Rd. and I-215/I-10 ramp locations at Waterman Ave. and Hospitality Ln. have been analyzed using the Synchro software (Version 8).

[3] CSS = Cross-street Stop; TS = Traffic Signal

[4] Analysis includes measures needed to provide acceptable LOS under Existing (2013) Conditions as shown on Table 3-2.

Source: Urban Crossroads 2013e, Table 5-1

Table 4.10-9 Opening Year (E+A+P) Intersection Analysis (2015)

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1] Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R	Without Project Delay[2] (secs.) AM	Without Project Delay[2] (secs.) PM	Without Project Level of Service AM	Without Project Level of Service PM	With Project Delay[2] (secs.) AM	With Project Delay[2] (secs.) PM	With Project Level of Service AM	With Project Level of Service PM
1	I-215 SB Ramps / Auto Plaza Dr.	TS	0	0	0	1	1	1	0	2	0	0	2	1>>	17.5	10.5	B	B	17.6	10.6	B	B
2	I-215 NB Ramps / Auto Plaza Dr./Orange Show Rd.	TS	1	1	2	0	0	0	1	2	0	0	2	1	21.0	18.1	C	B	21.5	18.3	C	B
3	S. "E" St. / Orange Show Rd.[4]	TS	2	2	0	2	2	1>	2	2	1>	2	2	1>	29.0	33.7	C	C	29.1	34.3	C	C
4	Arrowhead Ave. / Orange Show Rd.	TS	1	1	0	1	1	1>	1	2	0	1	2	0	35.4	40.2	D	D	36.1	41.8	D	D
5	Waterman Ave. / Orange Show Rd.	TS	1	2	0	1	2	0	1	2	0	1	2	0	26.5	34.1	C	C	26.9	34.6	C	C
6	Waterman Ave. / Hospitality Ln.[4]	TS	2	2	2>	1	3	1	1	1	1>	2	2	0	27.0	34.7	C	C	27.1	34.9	C	C
7	Waterman Ave. / I-215 On-Ramps	CSS	1	2	0	0	3	0	0	0	0	0	0	0	10.7	32.9	B	D	10.8	35.0	B	D
8	Carnegie Dr./I-10 WB Ramps / Hospitality Ln.[5]	TS	1	2	1	1	2	1	1	2	1>	2	2	0	43.0	53.6	D	D	46.7	53.7	D	D
9	Driveway 1 / Orange Show Rd.	**CSS**	0	**1**	0	0	1	0	1	2	0	1	2	0	--	--	--	--	17.4	22.8	C	C
10	Driveway 2 / Orange Show Rd.	CSS	0	1	0	0	1	0	1	2	0	1	2	0	--	--	--	--	14.8	18.0	B	C
11	Driveway 3 / Orange Show Rd.	**CSS**	0	**1**	0	0	0	0	0	2	0	**1**	2	0	--	--	--	--	14.3	17.6	B	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; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; d= Defacto Right Turn Lane

[2] Per the 2000 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. The I-215 ramp locations at Auto Plaza Dr./Orange Show Rd. and I-215/I-10 ramp locations at Waterman Ave. and Hospitality Ln. have been analyzed using the Synchro software (Version 8).

[3] CSS = Cross-street Stop; TS = Traffic Signal

[4] 2015 intersection geometries and signal phasings are based on the currently approved Omnitrans sbX plans provided by City of San Bernardino staff.

[5] Analysis includes measures needed to provide acceptable LOS under Existing (2013) Conditions as shown on Table 3-2.

Source: Urban Crossroads 2013e, Table 6-1

Table 4.10-10 Opening Year (E+A+P) Intersection Analysis (2015): Alternative sbX Intersection Layout

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1] Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R	Without Project Delay[2] (secs.) AM	Without Project Delay[2] (secs.) PM	Without Project Level of Service AM	Without Project Level of Service PM	With Project Delay[2] (secs.) AM	With Project Delay[2] (secs.) PM	With Project Level of Service AM	With Project Level of Service PM
6	Waterman Ave. / Hospitality Ln.[4]	TS	2	2	2>	1	3	1	1	1	1>	2	2	0	27.0	34.7	C	C	27.1	34.9	C	C
	- City of San Bernardino Proposed Alternative[5]	TS	2	2	2>	1	3	1	1	2	1>	2	2	0	27.0	34.6	C	C	27.1	34.8	C	C

[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, > = Right-Turn Overlap Phasing

[2] Per the 2000 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 at Waterman Ave. and Hospitality Ln. have been analyzed using the Synchro software (Version 8).

[3] TS = Traffic Signal

[4] 2015 intersection geometries and signal phasings are based on the currently approved Omnitrans sbX plans provided by City of San Bernardino staff.

[5] City of San Bernardino proposed intersection geometry consists of eliminating the sbX bus only eastbound through lane in advance of the intersection to allow for one eastbound left turn lane, two through lanes and one right turn lane.

Source: Urban Crossroads 2013e, Table 6-2

Table 4.10-11 Opening Year plus Cumulative (E+A+P+C) Intersection Analysis (2015)

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1] Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R	Without Project Delay[2] (secs.) AM	Without Project Delay[2] (secs.) PM	Without Project Level of Service AM	Without Project Level of Service PM	With Project Delay[2] (secs.) AM	With Project Delay[2] (secs.) PM	With Project Level of Service AM	With Project Level of Service PM
1	I-215 SB Ramps / Auto Plaza Dr.	TS	0	0	0	1	1	1	0	2	0	0	2	1>>	17.2	10.1	B	B	17.4	10.2	B	B
2	I-215 NB Ramps / Auto Plaza Dr./Orange Show Rd.	TS	1	1	2	0	0	0	1	2	0	0	2	1	23.9	19.0	C	B	24.9	19.2	C	B
3	S. "E" St. / Orange Show Rd.[4]	TS	2	2	0	2	2	1>	2	2	1>	2	2	1>	29.4	35.1	C	D	29.8	35.8	C	D
4	Arrowhead Ave. / Orange Show Rd.	TS	1	1	0	1	1	1>	1	2	0	1	2	0	37.6	46.0	D	D	37.8	47.9	D	D
5	Waterman Ave. / Orange Show Rd.	TS	1	2	0	1	2	0	1	2	0	1	2	0	27.6	36.0	C	D	28.1	37.0	C	D
6	Waterman Ave. / Hospitality Ln.[4]	TS	2	2	2>	1	3	1	1	1	1>	2	2	0	27.7	40.0	C	D	27.9	40.1	C	D
7	Waterman Ave. / I-215 On-Ramps	CSS	1	2	0	0	3	0	0	0	0	0	0	0	11.0	**39.6**	B	**E**	11.1	**42.9**	B	**E**
8	Carnegie Dr./I-10 WB Ramps / Hospitality Ln.[5]	TS	1	2	1	1	2	1	1	2	1>	2	2	0	45.2	54.1	D	D	48.2	54.5	D	D
9	Driveway 1 / Orange Show Rd.	**CSS**	0	**1**	0	0	1	0	1	2	0	1	2	0	--	--	--	--	17.6	23.4	C	C
10	Driveway 2 / Orange Show Rd.	CSS	0	1	0	0	1	0	1	2	0	1	2	0	--	--	--	--	15.0	18.4	C	C
11	Driveway 3 / Orange Show Rd.	**CSS**	0	**1**	0	0	0	0	0	2	0	**1**	2	0	--	--	--	--	14.5	18.1	B	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, > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; de Defacto Right Turn Lane

[2] Per the 2000 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. The I-215 ramp locations at Auto Plaza Dr./Orange Show Rd. and I-215/I-10 ramp locations at Waterman Ave. and Hospitality Ln. have been analyzed using the Synchro software (Version 8).

[3] CSS = Cross-street Stop; TS = Traffic Signal

[4] 2015 intersection geometries and signal phasings are based on the currently approved Omnitrans sbX plans provided by City of San Bernardino staff.

[5] Analysis includes measures needed to provide acceptable LOS under Existing (2013) Conditions as shown on Table 3-2

Source: Urban Crossroads 2013e, Table 7-1

Table 4.10-12 Opening Year plus Cumulative (E+A+P+C) Intersection Analysis (2015): Alternative sbX Intersection Layout

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1] Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R	Without Project Delay[2] (secs.) AM	Without Project Delay[2] (secs.) PM	Without Project Level of Service AM	Without Project Level of Service PM	With Project Delay[2] (secs.) AM	With Project Delay[2] (secs.) PM	With Project Level of Service AM	With Project Level of Service PM
6	Waterman Ave. / Hospitality Ln.[4]	TS	2	2	2>	1	3	1	1	1	1>	2	2	0	27.7	40.0	C	D	27.9	40.1	C	D
	- City of San Bernardino Proposed Alternative[5]	TS	2	2	2>	1	3	1	1	2	1>	2	2	0	27.7	39.9	C	D	27.9	40.0	C	D

[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, > = Right Turn Overlap Phasing

[2] Per the 2000 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 at Waterman Ave. and Hospitality Ln. have been analyzed using the Synchro software (Version 8).

[3] TS = Traffic Signal

[4] 2015 intersection geometries and signal phasings are based on the currently approved Omnitrans sbX plans provided by City of San Bernardino staff

[5] City of San Bernardino proposed intersection geometry consists of eliminating the sbX bus only eastbound through lane in advance of the intersection to allow for one eastbound left turn lane, two through lanes, and one right turn lane.

Source: Urban Crossroads 2013e, Table 7-2

Table 4.10-13 Horizon Year Intersection Analysis (2035)

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1] Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R	Without Project Delay[2] (secs.) AM	Without Project Delay[2] (secs.) PM	Without Project Level of Service AM	Without Project Level of Service PM	With Project Delay[2] (secs.) AM	With Project Delay[2] (secs.) PM	With Project Level of Service AM	With Project Level of Service PM
1	I-215 SB Ramps / Auto Plaza Dr.	TS	0	0	0	1	1	1	0	2	0	0	2	1>>	17.3	11.0	B	B	17.4	11.1	B	B
2	I-215 NB Ramps / Auto Plaza Dr./Orange Show Rd.	TS	1	1	2	0	0	0	1	2	0	0	2	1	33.0	20.8	C	C	37.3	21.4	D	C
3	S. "E" St. / Orange Show Rd.[4]	TS	2	2	0	2	2	1>	2	2	1>	2	2	1>	30.3	36.4	C	D	30.6	37.6	C	D
4	Arrowhead Ave. / Orange Show Rd.	TS	1	1	0	1	1	1>	1	2	0	1	2	0	38.4	50.1	D	D	38.8	53.6	D	D
5	Waterman Ave. / Orange Show Rd.	TS	1	2	0	1	2	0	1	2	0	1	2	0	29.2	40.6	C	D	29.7	42.8	C	D
6	Waterman Ave. / Hospitality Ln.[4]	TS	2	2	2>	1	3	1	1	1	1>	2	2	0	29.0	41.2	C	D	29.5	41.7	C	D
7	Waterman Ave. / I-215 On-Ramps	CSS	1	2	0	0	3	0	0	0	0	0	0	0	16.1	**>100.0**	C	**F**	16.3	**>100.0**	C	**F**
8	Carnegie Dr./I-10 WB Ramps / Hospitality Ln.[5]	TS	1	2	1	1	2	1	1	2	1>	2	2	0	52.1	54.8	D	D	53.3	54.8	D	D
9	Driveway 1 / Orange Show Rd.	CSS	0	1	0	0	1	0	1	2	0	1	2	0	--	--	--	--	19.8	30.0	C	D
10	Driveway 2 / Orange Show Rd.	CSS	0	1	0	0	1	0	1	2	0	1	2	0	--	--	--	--	18.7	22.9	C	C
11	Driveway 3 / Orange Show Rd.	CSS	0	1	0	0	0	0	0	2	0	1	2	0	--	--	--	--	18.9	24.0	C	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, > = Right-Turn Overlap Phasing, >> = Free-Right Turn Lane, d= Defacto Right Turn Lane

[2] Per the 2000 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. The I-215 ramp locations at Auto Plaza Dr./Orange Show Rd. and I-215/I-10 ramp locations at Waterman Ave. and Hospitality Ln. have been analyzed using the Synchro software (Version 8).

[3] CSS = Cross-street Stop; TS = Traffic Signal

[4] 2015 intersection geometries and signal phasings are based on the currently approved Omnitrans sbX plans provided by City of San Bernardino staff

[5] Analysis includes measures needed to provide acceptable LOS under Existing (2013) Conditions as shown on Table 3-2.

Source: Urban Crossroads 2013e, Table 8-1

Table 4.10-14 Horizon Year Intersection Analysis (2035): Alternative sbX Intersection Layout

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Without Project				With Project			
			Northbound			Southbound			Eastbound			Westbound			Delay[2] (secs.)		Level of Service		Delay[2] (secs.)		Level of Service	
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	AM	PM	AM	PM
6	Waterman Ave. / Hospitality Ln.[4]	TS	2	2	2>	1	3	1	1	1	1>	2	2	0	29.0	41.2	C	D	29.5	41.7	C	D
	- City of San Bernardino Proposed Alternative[5]	TS	2	2	2>	1	3	1	1	2	1>	2	2	0	28.0	41.2	C	D	28.2	41.7	C	D

[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, > = Right-Turn Overlap Phasing

[2] Per the 2000 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 at Waterman Ave. and Hospitality Ln. have been analyzed using the Synchro software (Version 8).

[3] TS = Traffic Signal

[4] 2015 intersection geometries and signal phasings are based on the currently approved Omnitrans sbX plans provided by City of San Bernardino staff.

[5] City of San Bernardino proposed intersection geometry consists of eliminating the sbX bus only eastbound through lane in advance of the intersection to allow for one eastbound left turn lane, two through lanes and one right turn lane.

Source: Urban Crossroads 2013e, Table 8-2

Table 4.10-15 Opening Year (E+A+P) Freeway Mainline Segment Analysis (2015)

Direction	Mainline Segment	Lanes[1]	EA (2015) Conditions				EAP (2015) Conditions			
			Density[2]		LOS		Density[2]		LOS	
			AM	PM	AM	PM	AM	PM	AM	PM
I-215 SB	North of Auto Center Off-Ramp	4	23.2	19.9	C	C	23.2	19.9	C	C
	Auto Plaza Off-Ramp to Inland Center On-Ramp	4	20.2	18.9	C	C	20.2	18.9	C	C
	Inlane Center On-Ramp to Auto Plaza Loop On-Ramp	4	22.6	23.0	C	C	22.6	23.0	C	C
	Auto Plaza Loop On-Ramp to Auto Plaza On-Ramp	5	19.0	20.9	C	C	19.0	21.0	C	C
	South of Auto Center Drive	5	19.3	21.2	C	C	19.4	21.4	C	C
I-215 NB	North of Orange Show On-Ramp	4	15.2	17.7	B	B	15.3	17.8	B	B
	Orange Show On-Ramp to Inland Center Off-Ramp	4	14.5	15.3	B	B	14.5	15.3	B	B
	Inland Center Off-Ramp to Orange Show Off-Ramp	4	19.5	19.8	C	C	19.5	19.8	C	C
	South of Orange Show Road	5	18.3	17.8	C	B	18.3	17.8	C	B
I-10 WB	West of Carnegie Drive	5	29.1	27.1	D	D	29.1	27.1	D	D
	Carnegie Drive On-Ramp to Carnegie Drive Off-Ramp	4	**40.1**	31.6	**E**	D	**40.1**	31.6	**E**	D
	East of Carnegie Drive	5	33.1	28.1	D	D	33.2	28.1	D	D
I-10 EB	West of Waterman Avenue	5	24.4	30.6	C	D	24.4	30.6	C	D
	Between Waterman Avenue Ramps	4	25.8	**38.9**	C	**E**	25.8	**38.9**	C	**E**
	East of Waterman Avenue	5	21.6	31.3	C	D	21.7	31.5	C	D

[1] Number of lanes are in the specified direction and is based on existing conditions (mixed-flow lanes only).

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

BOLD = Unacceptable LOS

Source: Urban Crossroads 2013g, Table 3

Table 4.10-16 Opening Year plus Cumulative (E+A+P+C) Freeway Mainline Segment Analysis (2015)

Direction	Mainline Segment	Lanes[1]	EAC (2015) Conditions				EAPC (2015) Conditions			
			Density[2]		LOS		Density[2]		LOS	
			AM	PM	AM	PM	AM	PM	AM	PM
I-215 SB	North of Auto Center Off-Ramp	4	23.7	20.4	C	C	23.8	20.4	C	C
	Auto Plaza Off-Ramp to Inland Center On-Ramp	4	20.6	19.3	C	C	20.6	19.3	C	C
	Inlane Center On-Ramp to Auto Plaza Loop On-Ramp	4	24.0	24.5	C	C	24.0	24.5	C	C
	Auto Plaza Loop On-Ramp to Auto Plaza On-Ramp	5	20.2	22.1	C	C	20.3	22.2	C	C
	South of Auto Center Drive	5	20.6	22.6	C	C	20.6	22.7	C	C
I-215 NB	North of Orange Show On-Ramp	4	16.1	18.6	B	C	16.1	18.7	B	C
	Orange Show On-Ramp to Inland Center Off-Ramp	4	15.2	16.2	B	B	15.2	16.2	B	B
	Inland Center Off-Ramp to Orange Show Off-Ramp	4	20.9	22.2	C	C	20.9	22.2	C	C
	South of Orange Show Road	5	19.6	19.8	C	C	19.6	19.8	C	C
I-10 WB	West of Carnegie Drive	5	29.3	27.7	D	D	29.3	27.7	D	D
	Carnegie Drive On-Ramp to Carnegie Drive Off-Ramp	4	**40.4**	32.2	**E**	D	**40.4**	32.2	**E**	D
	East of Carnegie Drive	5	33.3	28.7	D	D	33.4	28.7	D	D
I-10 EB	West of Waterman Avenue	5	24.8	30.8	C	D	24.9	30.8	C	D
	Between Waterman Avenue Ramps	4	26.4	**39.3**	D	**E**	26.4	**39.3**	D	**E**
	East of Waterman Avenue	5	22.1	31.6	C	D	22.1	31.7	C	D

[1] Number of lanes are in the specified direction and is based on existing conditions (mixed-flow lanes only).
[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).
BOLD = Unacceptable LOS

Source: Urban Crossroads 2013g, Table 4

Table 4.10-17 Horizon Year Freeway Mainline Analysis (2035)

Direction	Mainline Segment	Lanes[1]	HY (2035) without Project				HY (2035) with Project			
			Density[2]		LOS		Density[2]		LOS	
			AM	PM	AM	PM	AM	PM	AM	PM
I-215 SB	North of Auto Center Off-Ramp	4	--	24.8	F	C	--	24.8	F	C
	Auto Plaza Off-Ramp to Inland Center On-Ramp	4	35.0	30.3	D	D	35.0	30.3	D	D
	Inlane Center On-Ramp to Auto Plaza Loop On-Ramp	4	**44.5**	**42.0**	**E**	**E**	**44.5**	**42.0**	**E**	**E**
	Auto Plaza Loop On-Ramp to Auto Plaza On-Ramp	5	31.4	33.6	D	D	31.4	33.8	D	D
	South of Auto Center Drive	5	32.0	**35.1**	D	**E**	32.0	**35.3**	D	**E**
I-215 NB	North of Orange Show On-Ramp	4	**37.3**	--	**E**	**F**	**37.4**	--	**E**	**F**
	Orange Show On-Ramp to Inland Center Off-Ramp	4	33.2	**41.4**	D	**E**	33.2	**41.4**	D	**E**
	Inland Center Off-Ramp to Orange Show Off-Ramp	4	--	--	**F**	**F**	--	--	**F**	**F**
	South of Orange Show Road	5	**40.9**	**44.0**	**E**	**E**	**41.1**	**44.1**	**E**	**E**
I-10 WB	West of Carnegie Drive	5	**41.7**	--	**E**	**F**	**41.7**	--	**E**	**F**
	Carnegie Drive On-Ramp to Carnegie Drive Off-Ramp	4	--	--	**F**	**F**	--	--	**F**	**F**
	East of Carnegie Drive	5	--	--	**F**	**F**	--	--	**F**	**F**
I-10 EB	West of Waterman Avenue	5	**42.3**	--	**E**	**F**	**42.4**	--	**E**	**F**
	Between Waterman Avenue Ramps	4	--	--	**F**	**F**	--	--	**F**	**F**
	East of Waterman Avenue	5	**36.2**	--	**E**	**F**	**36.3**	--	**E**	**F**

[1] Number of lanes are in the specified direction and is based on existing conditions (mixed-flow lanes only).
[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).
BOLD = Unacceptable LOS

Source: Urban Crossroads 2013g, Table 5

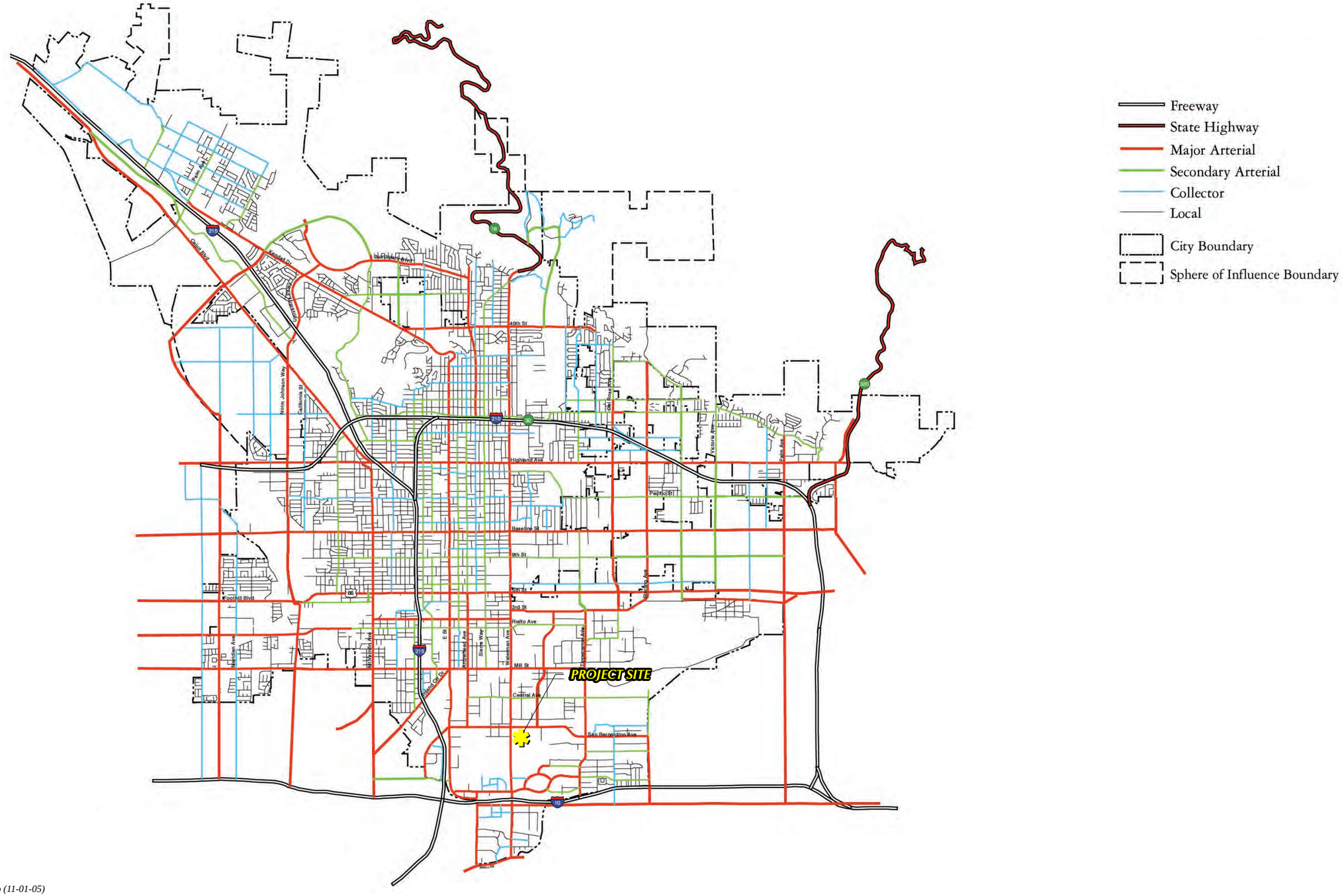
LEGEND:

(11) = **INTERSECTION ANALYSIS LOCATION**

Source: Urban Crossroads (09-25-13)

NOT TO SCALE

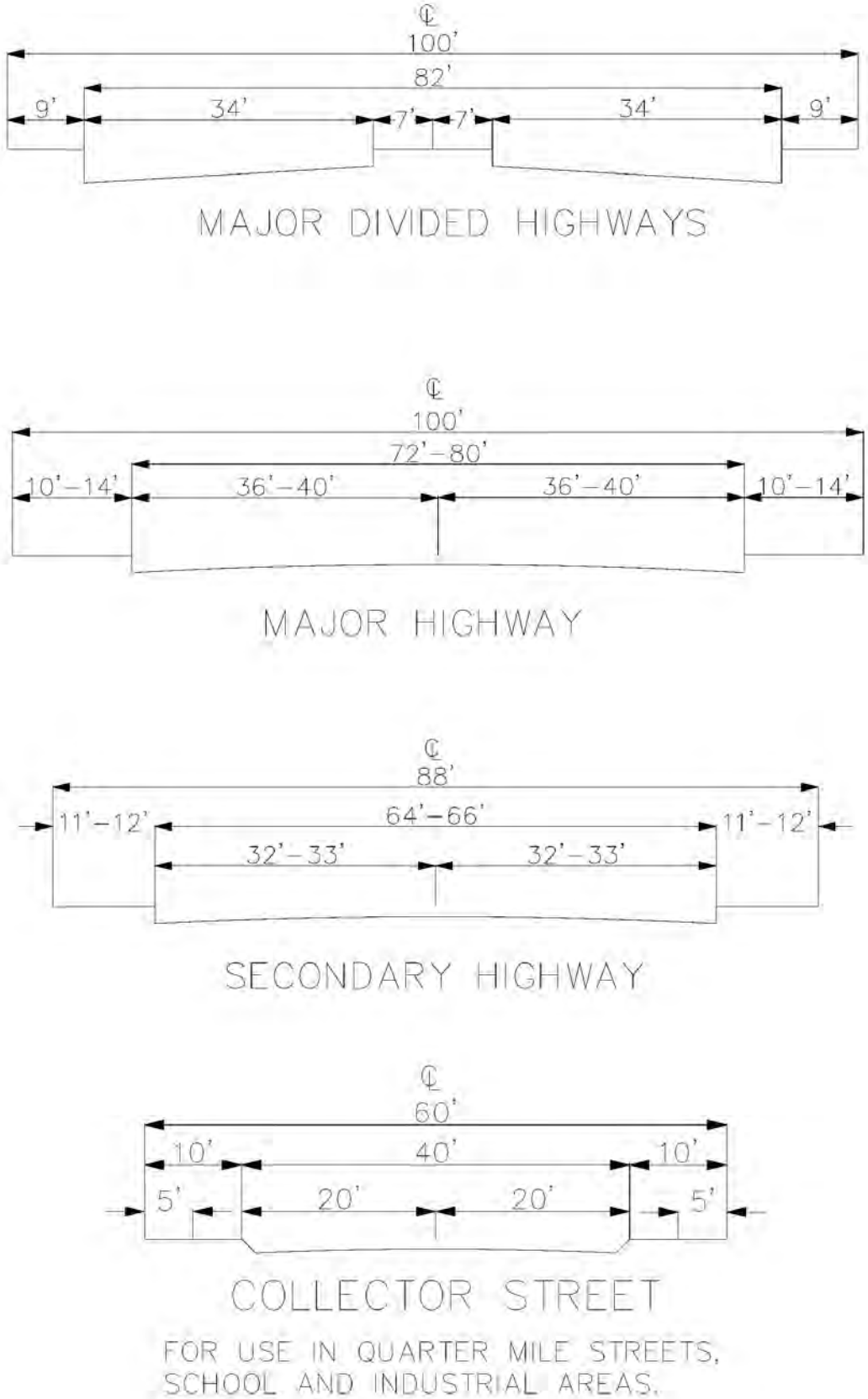
FIGURE 4.10-1
STUDY AREA INTERSECTION LOCATIONS



Source: City of San Bernardino (11-01-05)

NOT TO SCALE

FIGURE 4.10-2
CITY OF SAN BERNARDINO GENERAL PLAN CIRCULATION PLAN



Source: City of San Bernardino (11-01-05)

FIGURE 4.10-3

NOT TO SCALE

CITY OF SAN BERNARDINO GENERAL PLAN ROADWAY CROSS-SECTIONS

LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-4

EXISTING (2013) AVERAGE DAILY TRAFFIC

1 I-215 SB Ramps & Auto Plaza Dr.	2 I-215 NB Ramps & Auto Plaza Dr./ Orange Show Rd.	3 E St. & Orange Show Rd.	4 Arrowhead Av. & Orange Show Rd.	5 Waterman Av. & Orange Show Rd.	6 Waterman Av. & Hospitality Ln.
122 ← 0 ↓ 600 → 297 ← 172	177 ← 321	109 ← 129 ↓ 44 → 56 ← 358 ← 61	209 ← 10 ↓ 131 → 115 ← 220 ← 3	49 ← 545 ↓ 69 → 63 ← 174 ← 58	98 ← 406 ↓ 60 → 76 ← 371 ← 290
105 → 97 ↓	40 → 665 → 148 ↑ 3 ↑ 672 ↱	247 → 838 → 252 ↓ 81 ↑ 92 ↑ 54 ↱	242 → 601 → 6 ↓ 0 ↑ 0 ↑ 4 ↱	85 → 314 → 272 ↓ 89 ↑ 495 ↑ 35 ↱	78 → 70 → 134 ↓ 290 ↑ 772 ↑ 987 ↱

7 Waterman Av. & I-215 On-Ramps	8 Carnegie Dr./ I-10 WB Ramps & Hospitality Ln.	9 Driveway 1 & Orange Show Rd.	10 Driveway 2 & Orange Show Rd.	11 Driveway 3 & Orange Show Rd.
154 ← 666 ↓	53 ← 78 ↓ 17 → 20 ← 91 ← 50	Future Intersection	Future Intersection	Future Intersection
262 ↑ 2049 ↑	435 → 322 → 127 ↓ 657 ↑ 369 ↑ 25 ↱			

Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-5

EXISTING (2013) AM PEAK HOUR INTERSECTION VOLUMES

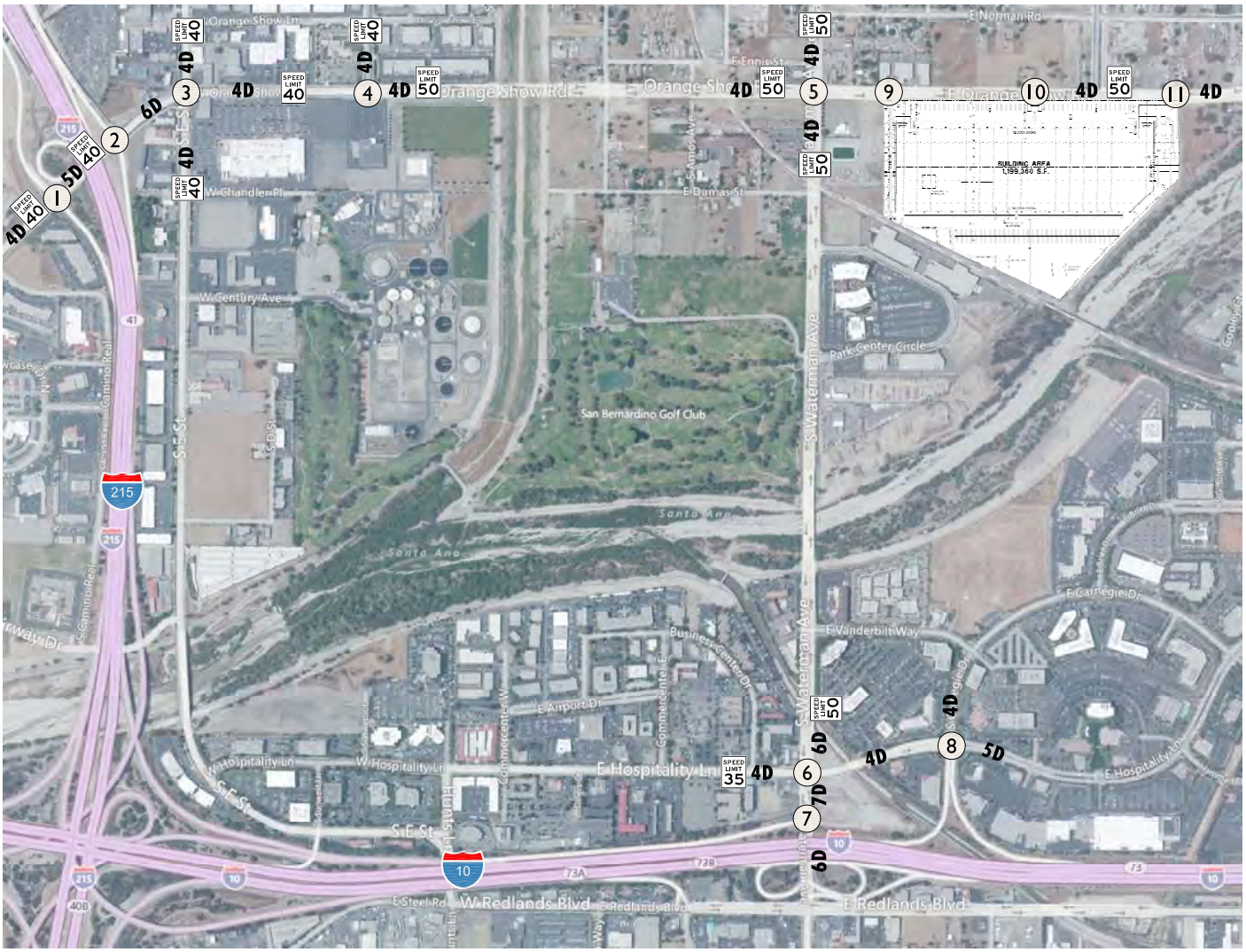
1 I-215 SB Ramps & Auto Plaza Dr.	2 I-215 NB Ramps & Auto Plaza Dr./ Orange Show Rd.	3 E St. & Orange Show Rd.	4 Arrowhead Av. & Orange Show Rd.	5 Waterman Av. & Orange Show Rd.	6 Waterman Av. & Hospitality Ln.
48 0 195 / 746 216	492 895	285 174 134 / 98 705 92	347 5 197 / 133 468 11	96 706 85 / 71 276 56	92 1003 142 / 83 236 486
210 127	95 310 / 67 3 526	206 516 115 / 347 223 117	227 439 8 / 14 7 16	116 350 147 / 188 610 71	130 175 598 / 244 576 671

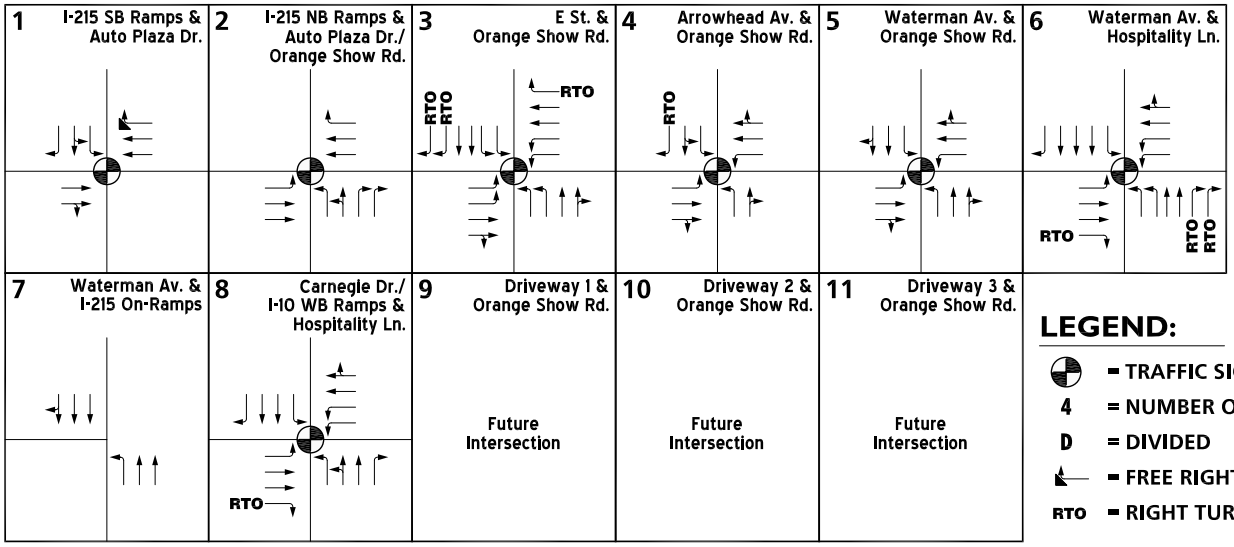
7 Waterman Av. & I-215 On-Ramps	8 Carnegie Dr./ I-10 WB Ramps & Hospitality Ln.	9 Driveway 1 & Orange Show Rd.	10 Driveway 2 & Orange Show Rd.	11 Driveway 3 & Orange Show Rd.
480 1559 / 320 1491	41 323 358 / 68 66 362	Future Intersection	Future Intersection	Future Intersection
	53 596 92 / 144 603 289			

Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-6
EXISTING (2013) PM PEAK HOUR INTERSECTION VOLUMES



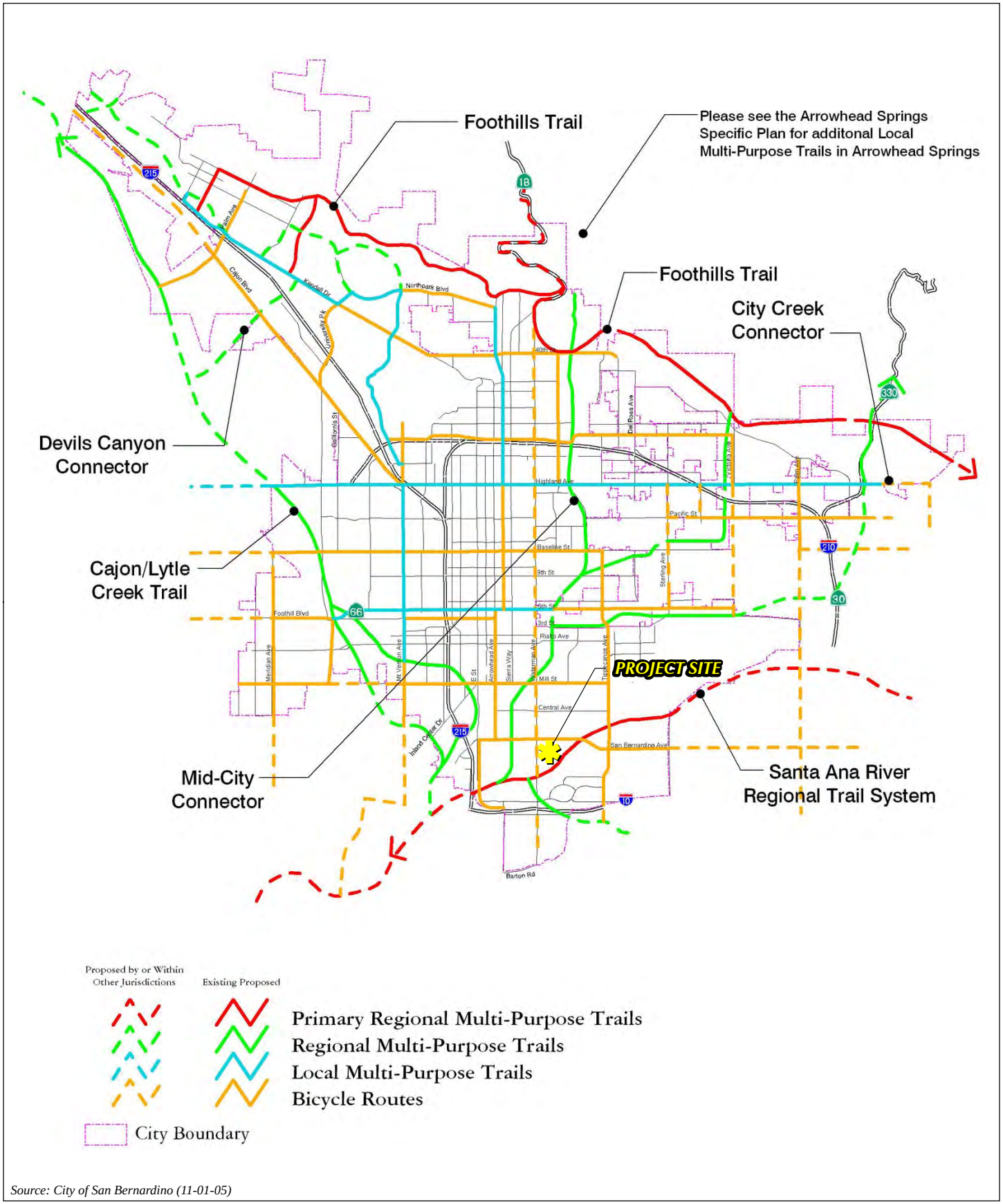


Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-7

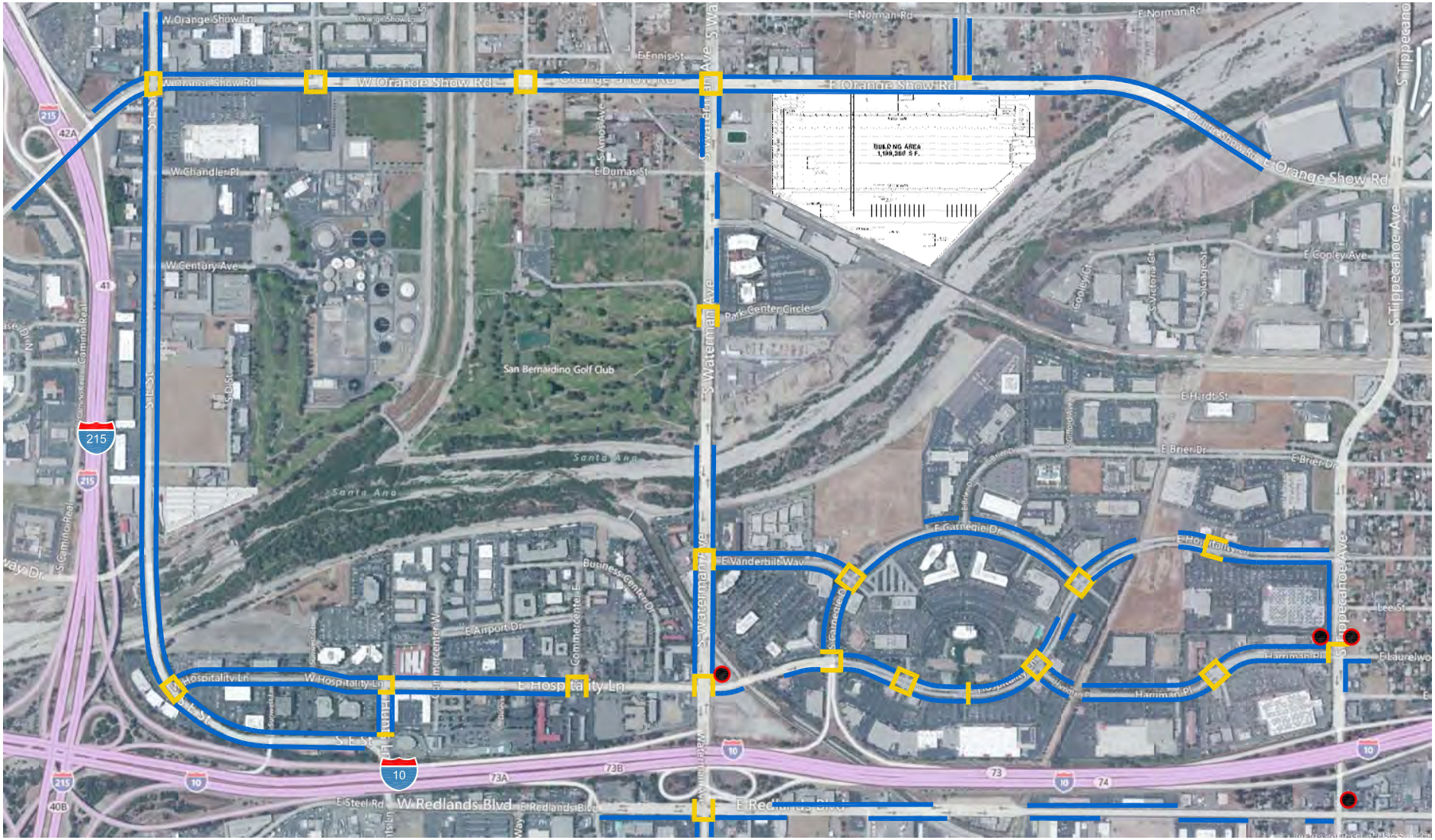
STUDY AREA INTERSECTIONS: EXISTING (2013) THROUGH LANES AND INTERSECTION CONTROLS



Source: City of San Bernardino (11-01-05)

NOT TO SCALE

FIGURE 4.10-8
CITY OF SAN BERNARDINO CONCEPTUAL TRAIL SYSTEM



LEGEND:

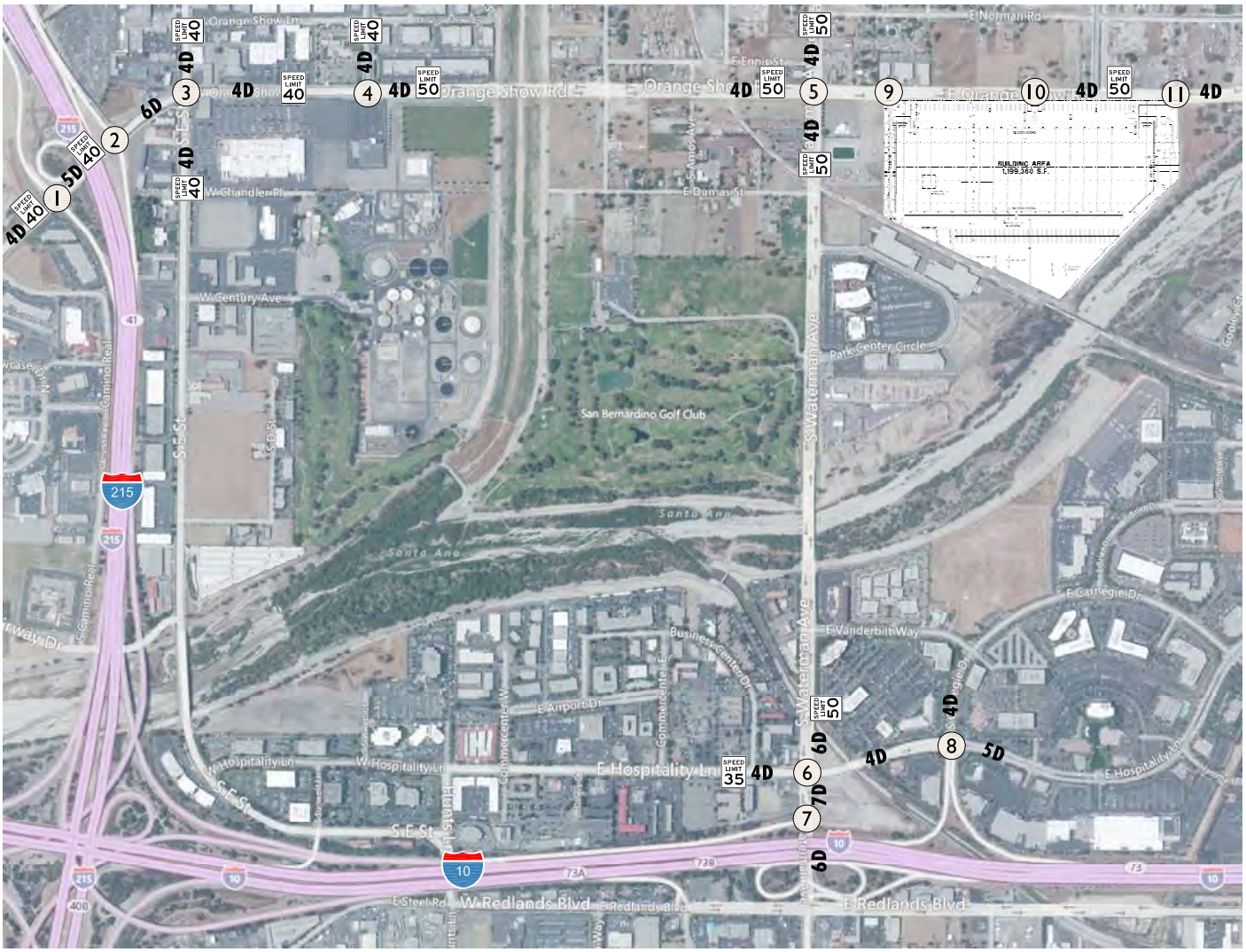
- SIDEWALK
- CROSSWALK
- BUS STOP

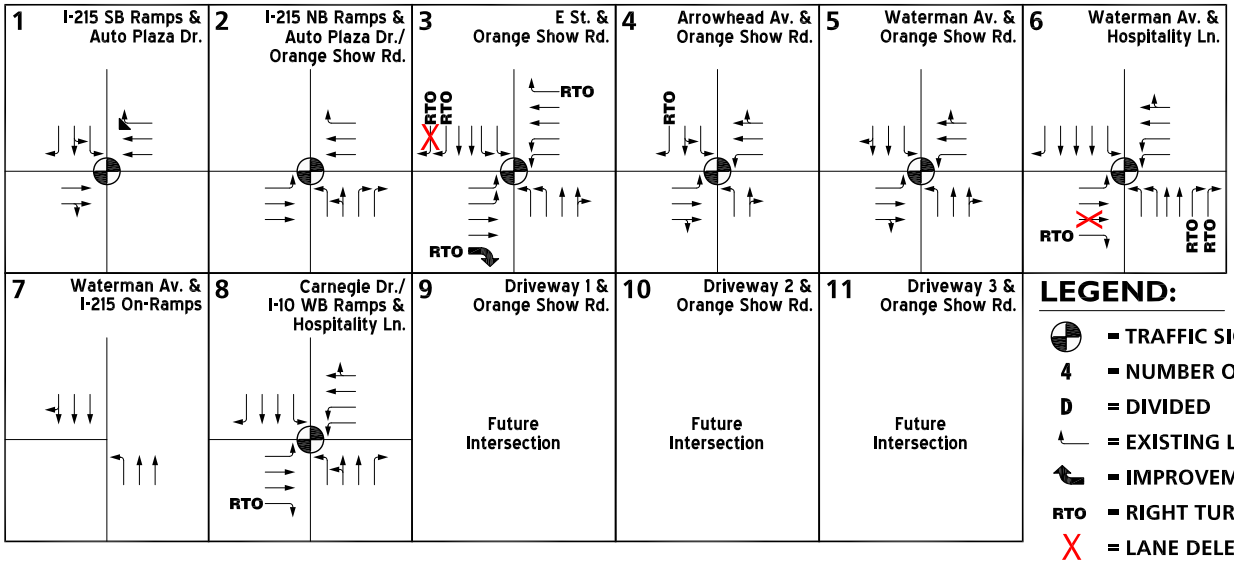
Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-9

EXISTING (2013) PEDESTRIAN FACILITIES





LEGEND:

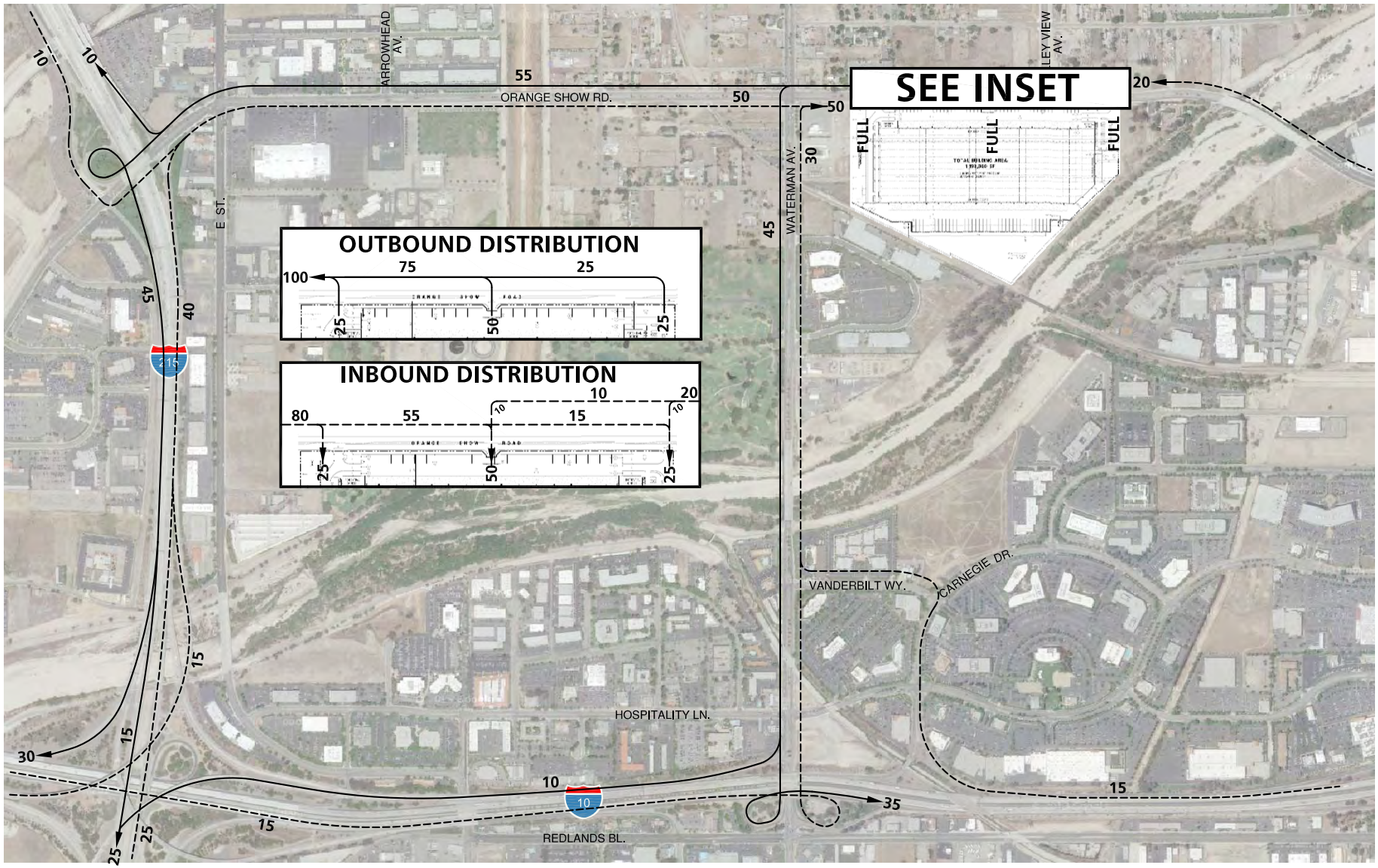
- = TRAFFIC SIGNAL
- 4 = NUMBER OF LANES
- D = DIVIDED
- = EXISTING LANE
- = IMPROVEMENT
- RTO = RIGHT TURN OVERLAP
- X = LANE DELETION

Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-10

STUDY AREA INTERSECTIONS: OPENING YEAR (2015) THROUGH LANES AND INTERSECTION CONTROLS



LEGEND:

10 = PERCENT TO/FROM PROJECT

= OUTBOUND

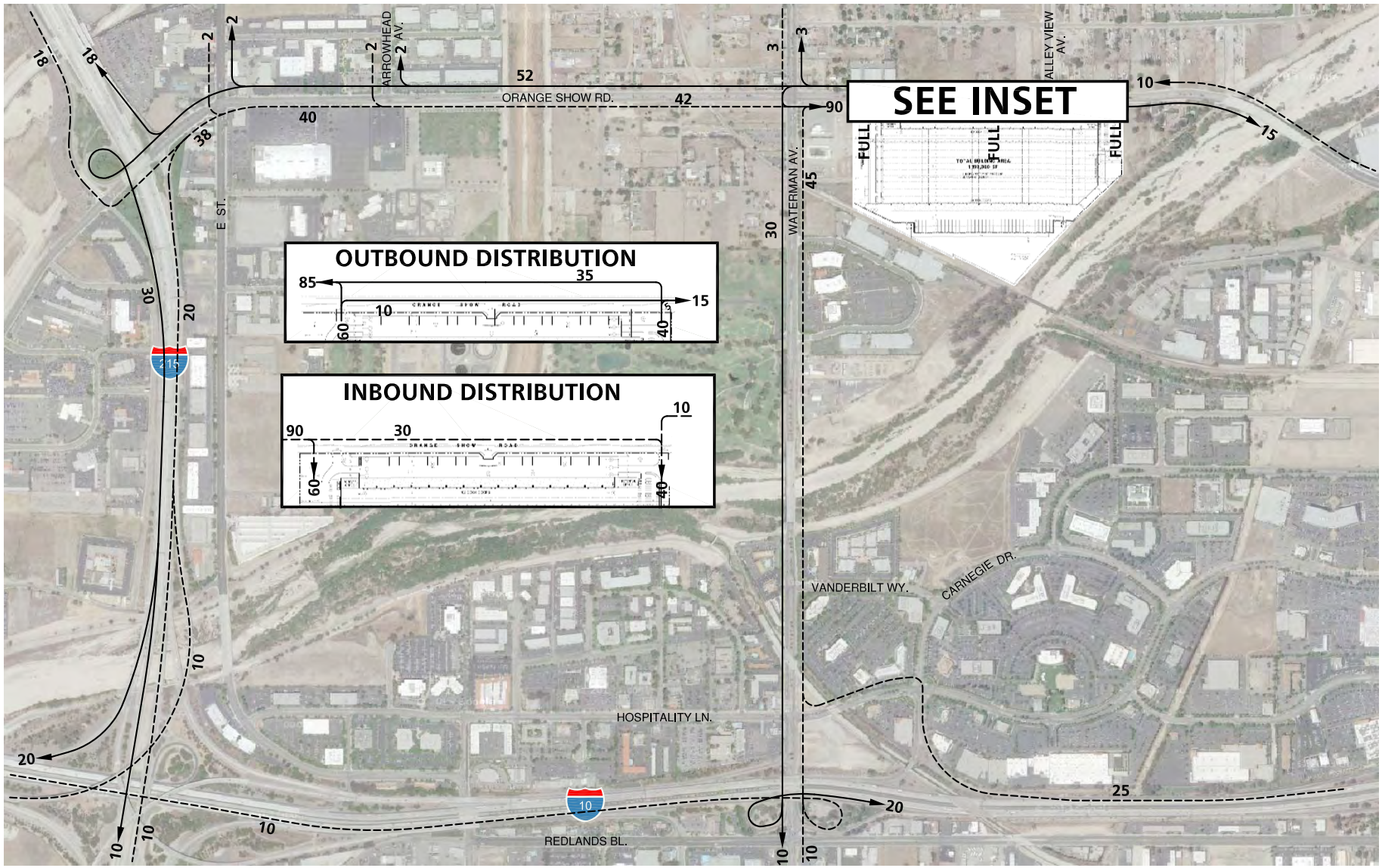
= INBOUND

Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-11

PROJECT TRUCK TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

= OUTBOUND

= INBOUND

Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-12

PROJECT PASSENGER CAR TRIP DISTRIBUTION

LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-13

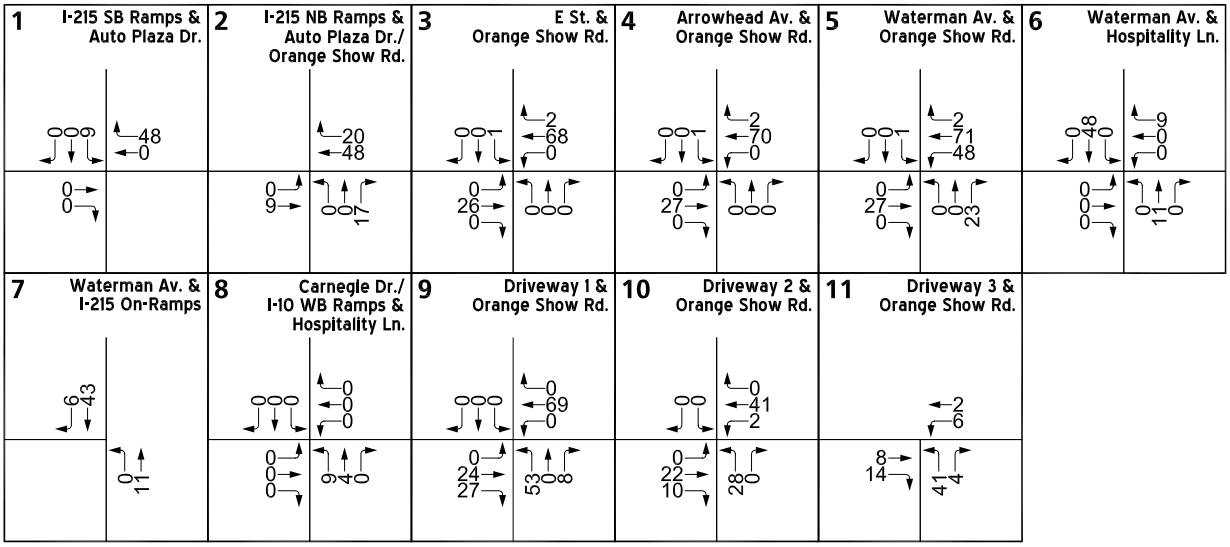
PROJECT AVERAGE DAILY TRAFFIC (PASSENGER CAR EQUIVALENT)

1 I-215 SB Ramps & Auto Plaza Dr.	**2** I-215 NB Ramps & Auto Plaza Dr./ Orange Show Rd.	**3** E St. & Orange Show Rd.	**4** Arrowhead Av. & Orange Show Rd.	**5** Waterman Av. & Orange Show Rd.	**6** Waterman Av. & Hospitality Ln.
0 0 18 ← 20 ← 0	← 8 ← 20	0 0 1 ← 1 ← 28 ← 0	0 0 1 ← 1 ← 29 ← 0	0 0 2 ← 1 ← 30 ← 20	0 20 0 ← 18 ← 0 ← 0
0 → 0 ↓	0 → 18 ↑ 0 0 35 ↱	0 → 53 → 0 ↓ 0 0 0 ↱	0 → 54 → 0 ↓ 0 0 0 ↱	0 → 56 → 0 ↓ 0 0 48 ↱	0 → 0 → 0 ↓ 0 22 0 ↱
7 Waterman Av. & I-215 On-Ramps	**8** Carnegie Dr./ I-10 WB Ramps & Hospitality Ln.	**9** Driveway 1 & Orange Show Rd.	**10** Driveway 2 & Orange Show Rd.	**11** Driveway 3 & Orange Show Rd.	
2 18 ←	0 0 0 ← 0 ← 0 ← 0	0 0 0 ← 0 ← 29 ← 0	0 0 ← 0 ← 17 ← 5	← 5 ← 12	
← 0 ↑ 22	0 → 0 → 0 ↓ 18 8 0 ↱	0 → 50 → 56 ↓ 22 0 3 ↱	0 → 33 → 20 ↓ 12 0 ↱	3 → 29 ↓ 17 2 ↱	

Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-14
PROJECT AM PEAK HOUR INTERSECTION VOLUMES (PASSENGER CAR EQUIVALENT)



Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-15

PROJECT PM PEAK HOUR INTERSECTION VOLUMES (PASSENGER CAR EQUIVALENT)

LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-16

EXISTING PLUS PROJECT (E+P) AVERAGE DAILY TRAFFIC (2013)

1 I-215 SB Ramps & Auto Plaza Dr.	2 I-215 NB Ramps & Auto Plaza Dr./ Orange Show Rd.	3 E St. & Orange Show Rd.	4 Arrowhead Av. & Orange Show Rd.	5 Waterman Av. & Orange Show Rd.	6 Waterman Av. & Hospitality Ln.
← 122, ↓ 0, → 618; ← 317, ← 172	← 185, ← 341	← 109, ↓ 129, → 45; → 57, ← 386, ← 61	← 209, ↓ 10, → 132; → 116, ← 249, ← 3	← 49, ↓ 545, → 71; → 64, ← 204, ← 78	← 98, ↓ 426, → 60; → 94, ← 371, ← 290
→ 105, ↓ 97	↑ 40, → 683; ↑ 148, ↑ 3, ↑ 707	↑ 247, → 891, → 252; ↑ 81, ↑ 92, ↑ 54	↑ 242, → 655, → 6; ↑ 0, ↑ 0, ↑ 4	↑ 85, → 370, → 272; ↑ 89, ↑ 495, ↑ 83	↑ 78, → 70, → 134; ↑ 290, ↑ 794, ↑ 987

7 Waterman Av. & I-215 On-Ramps	8 Carnegie Dr./ I-10 WB Ramps & Hospitality Ln.	9 Driveway 1 & Orange Show Rd.	10 Driveway 2 & Orange Show Rd.	11 Driveway 3 & Orange Show Rd.
← 156, ↓ 684	← 53, ↓ 78, → 17; → 20, ← 91, ← 50	← 2, ↓ 0, → 2; → 10, ← 324, ← 0	← 0, ↓ 0, → 0; → 0, ← 312, ← 5	← 300, ← 12
→ 262, ↑ 2071	↑ 435, → 322, → 127; ↑ 675, ↑ 377, ↑ 25	↑ 14, → 468, → 56; ↑ 22, ↑ 0, ↑ 3	↑ 0, → 451, → 20; ↑ 12, ↑ 0	↑ 421, → 29; ↑ 17, ↑ 2

Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-17

EXISTING PLUS PROJECT (E+P) INTERSECTION VOLUMES - AM PEAK HOUR (2013)

1 I-215 SB Ramps & Auto Plaza Dr.	2 I-215 NB Ramps & Auto Plaza Dr./ Orange Show Rd.	3 E St. & Orange Show Rd.	4 Arrowhead Av. & Orange Show Rd.	5 Waterman Av. & Orange Show Rd.	6 Waterman Av. & Hospitality Ln.
48 0 204 / 794 216	512 943	285 174 135 / 100 773 92	347 5 198 / 135 538 11	96 706 86 / 73 347 104	92 1051 142 / 92 236 486
210 127	95 319 / 67 3 543	206 542 115 / 347 223 117	227 466 8 / 14 7 16	116 377 147 / 188 610 94	130 175 598 / 244 587 671

7 Waterman Av. & I-215 On-Ramps	8 Carnegie Dr./ I-10 WB Ramps & Hospitality Ln.	9 Driveway 1 & Orange Show Rd.	10 Driveway 2 & Orange Show Rd.	11 Driveway 3 & Orange Show Rd.
486 1602	41 323 358 / 68 66 362	10 0 9 / 3 472 0	0 0 / 0 444 2	405 6
320 1502	53 596 92 / 153 607 289	3 530 27 / 53 0 8	0 528 10 / 28 0	514 14 / 41 4

Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-18

EXISTING PLUS PROJECT (E+P) INTERSECTION VOLUMES - PM PEAK HOUR (2013)

LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-19

OPENING YEAR (E+A+P) AVERAGE DAILY TRAFFIC (2015)

1 I-215 SB Ramps & Auto Plaza Dr.	2 I-215 NB Ramps & Auto Plaza Dr./ Orange Show Rd.	3 E St. & Orange Show Rd.	4 Arrowhead Av. & Orange Show Rd.	5 Waterman Av. & Orange Show Rd.	6 Waterman Av. & Hospitality Ln.
124 0 630 323 175	189 347	111 132 46 58 393 62	213 10 135 118 253 3	50 556 72 65 207 79	100 434 61 96 378 296
107 99	41 696 151 3 721	252 908 257 83 94 55	247 667 6 0 0 4	87 376 277 91 505 84	80 71 137 296 810 1007

7 Waterman Av. & I-215 On-Ramps	8 Carnegie Dr./ I-10 WB Ramps & Hospitality Ln.	9 Driveway 1 & Orange Show Rd.	10 Driveway 2 & Orange Show Rd.	11 Driveway 3 & Orange Show Rd.
159 697	54 80 17 20 93 51	2 0 2 10 330 0	0 0 0 318 5	306 12
267 2112	444 328 130 688 384 26	14 476 56 22 0 3	0 459 20 12 0	429 29 17 2

Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-20

OPENING YEAR (E+A+P) INTERSECTION VOLUMES - AM PEAK HOUR (2015)

1 I-215 SB Ramps & Auto Plaza Dr.	**2** I-215 NB Ramps & Auto Plaza Dr./ Orange Show Rd.	**3** E St. & Orange Show Rd.	**4** Arrowhead Av. & Orange Show Rd.	**5** Waterman Av. & Orange Show Rd.	**6** Waterman Av. & Hospitality Ln.
49 0 208 ← 809 ← 220	← 522 ← 961	291 177 138 ← 102 ← 787 ← 94	354 5 202 ← 138 ← 547 ← 11	98 720 88 ← 74 ← 353 ← 105	94 1071 145 ← 94 ← 241 ← 496
214 → 130 ↓	97 → 325 → ; 68 3 554 ↑ ↱	210 → 552 → 117 ↓ ; 354 227 119 ↑ ↱	232 → 475 → 8 ↓ ; 14 7 16 ↑ ↱	118 → 384 → 150 ↓ ; 192 622 95 ↑ ↱	133 → 179 → 610 ↓ ; 249 599 684 ↑ ↱
7 Waterman Av. & I-215 On-Ramps	**8** Carnegie Dr./ I-10 WB Ramps & Hospitality Ln.	**9** Driveway 1 & Orange Show Rd.	**10** Driveway 2 & Orange Show Rd.	**11** Driveway 3 & Orange Show Rd.	
496 1633	42 329 365 ← 69 ← 67 ← 369	10 0 9 ← 3 ← 480 ← 0	0 0 ← 0 ← 452 ← 2	← 413 ← 6	
↑ 326 1532	54 → 608 → 94 ↓ ; 156 619 295 ↑ ↱	3 → 540 → 27 ↓ ; 53 0 8 ↑ ↱	0 → 538 → 10 ↓ ; 28 0 ↑ ↱	524 → 14 → ; 41 4 ↑ ↱	

Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-21

OPENING YEAR (E+A+P) INTERSECTION VOLUMES - PM PEAK HOUR (2015)

LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-22

OPENING YEAR PLUS CUMULATIVE (E+A+P+C) AVERAGE DAILY TRAFFIC (2015)

1 I-215 SB Ramps & Auto Plaza Dr.	2 I-215 NB Ramps & Auto Plaza Dr./ Orange Show Rd.	3 E St. & Orange Show Rd.	4 Arrowhead Av. & Orange Show Rd.	5 Waterman Av. & Orange Show Rd.	6 Waterman Av. & Hospitality Ln.
129 0 653 / 334 205	203 364	119 139 48 / 59 405 64	247 10 138 / 124 259 3	52 577 75 / 67 213 82	108 466 65 / 102 408 319
130 101	53 730 / 175 4 867	270 1026 278 / 87 103 60	361 709 6 / 0 0 4	90 379 284 / 92 514 85	85 76 147 / 318 871 1086

7 Waterman Av. & I-215 On-Ramps	8 Carnegie Dr./ I-10 WB Ramps & Hospitality Ln.	9 Driveway 1 & Orange Show Rd.	10 Driveway 2 & Orange Show Rd.	11 Driveway 3 & Orange Show Rd.
162 735 /	57 87 18 / 22 99 54	2 0 2 / 10 336 0	0 0 / 0 331 5	320 12
273 2277	448 338 133 / 699 390 27	14 482 56 / 22 0 3	0 466 20 / 12 0	440 29 / 17 2

Source: Urban Crossroads (11-21-13)

NOT TO SCALE

FIGURE 4.10-23

OPENING YEAR PLUS CUMULATIVE (E+A+P+C) INTERSECTION VOLUMES - AM PEAK HOUR (2015)

1 I-215 SB Ramps & Auto Plaza Dr.	**2** I-215 NB Ramps & Auto Plaza Dr./ Orange Show Rd.	**3** E St. & Orange Show Rd.	**4** Arrowhead Av. & Orange Show Rd.	**5** Waterman Av. & Orange Show Rd.	**6** Waterman Av. & Hospitality Ln.
49 0 219 ← 830 ← 313	← 526 ← 1072	303 192 142 ← 110 ← 872 ← 100	458 6 207 ← 141 ← 557 ← 11	102 138 92 ← 78 ← 365 ← 112	101 1151 156 ← 100 ← 260 ← 534
220 → 140 ↓	98 → 342 → / 71 3 656	218 → 611 → 125 ↓ / 357 240 120	235 → 487 → 8 ↓ / 14 7 16	123 → 395 → 151 ↓ / 195 645 101	142 → 192 → 658 ↓ / 268 645 738
7 Waterman Av. & I-215 On-Ramps	**8** Carnegie Dr./ I-10 WB Ramps & Hospitality Ln.	**9** Driveway 1 & Orange Show Rd.	**10** Driveway 2 & Orange Show Rd.	**11** Driveway 3 & Orange Show Rd.	
499 1675	44 337 368 ← 70 ← 71 ← 376	10 0 9 ← 3 ← 488 ← 0	0 0 ← 0 ← 466 ← 2	← 432 ← 6	
350 1651	55 → 614 → 98 ↓ / 166 624 297	3 → 550 → 27 ↓ / 53 0 8	0 → 548 → 10 ↓ / 28 0	535 → 14 ↓ / 41 4	

Source: Urban Crossroads (11-21-13)

NOT TO SCALE

FIGURE 4.10-24

OPENING YEAR PLUS CUMULATIVE (E+A+P+C) INTERSECTION VOLUMES - PM PEAK HOUR (2015)

LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-25

HORIZON YEAR AVERAGE DAILY TRAFFIC (2035)

1 I-215 SB Ramps & Auto Plaza Dr.	2 I-215 NB Ramps & Auto Plaza Dr./ Orange Show Rd.	3 E St. & Orange Show Rd.	4 Arrowhead Av. & Orange Show Rd.	5 Waterman Av. & Orange Show Rd.	6 Waterman Av. & Hospitality Ln.
← 172, ↑ 3, → 875, ↓ 401, ← 479	← 345, ← 473	← 192, ↑ 210, → 68, ↓ 65, ← 519, ← 82	← 305, ↑ 11, → 167, ↓ 173, ← 310, ← 3	← 75, ↑ 784, → 96, ↓ 88, ← 267, ← 108	← 113, ↑ 673, → 110, ↓ 117, ← 459, ← 419
→ 353, ↓ 116	← 172, → 1056, ↑ 408, ↑ 12, ↑ 950	→ 407, → 1123, ↓ 477, ↑ 130, ↑ 191, ↑ 113	→ 397, → 775, ↓ 7, ↑ 0, ↑ 0, ↑ 4	→ 120, → 401, ↓ 350, ↑ 106, ↑ 597, ↑ 92	→ 102, → 136, ↓ 178, ↑ 334, ↑ 1071, ↑ 1140

7 Waterman Av. & I-215 On-Ramps	8 Carnegie Dr./ I-10 WB Ramps & Hospitality Ln.	9 Driveway 1 & Orange Show Rd.	10 Driveway 2 & Orange Show Rd.	11 Driveway 3 & Orange Show Rd.
← 192, ↓ 1106	← 81, ↑ 157, → 25, ← 33, ← 154, ← 87	← 2, ↑ 0, → 2, ← 10, ← 401, ← 0	← 0, → 0, ← 0, ← 456, ← 5	← 457, ← 12
↑ 329, ↑ 2545	→ 479, → 432, → 174, ↑ 798, ↑ 436, ↑ 40	→ 14, → 535, → 56, ↑ 22, ↑ 0, ↑ 3	→ 0, → 589, → 20, ↑ 12, ↑ 0	→ 601, → 29, ↑ 17, ↑ 2

Source: Urban Crossroads (11-21-13)

NOT TO SCALE

FIGURE 4.10-26

HORIZON YEAR INTERSECTION VOLUMES - AM PEAK HOUR (2035)

1 I-215 SB Ramps & Auto Plaza Dr.	2 I-215 NB Ramps & Auto Plaza Dr./ Orange Show Rd.	3 E St. & Orange Show Rd.	4 Arrowhead Av. & Orange Show Rd.	5 Waterman Av. & Orange Show Rd.	6 Waterman Av. & Hospitality Ln.
53 0 330 ← 1030 ← 344	← 562 ← 1274	415 331 177 ← 187 ← 1028 ← 158	508 14 262 ← 173 ← 644 ← 12	146 908 136 ← 113 ← 492 ← 176	209 1362 164 ← 115 ← 434 ← 634
276 → 244 ↓	105 → 501 → 100 3 720	302 → 670 → 203 ↓ 382 361 129	268 → 533 → 11 ↓ 16 8 18	171 → 499 → 163 ↓ 224 857 155	151 → 278 → 691 ↓ 290 831 802

7 Waterman Av. & I-215 On-Ramps	8 Carnegie Dr./ I-10 WB Ramps & Hospitality Ln.	9 Driveway 1 & Orange Show Rd.	10 Driveway 2 & Orange Show Rd.	11 Driveway 3 & Orange Show Rd.
533 2061	70 411 394 ← 75 ← 106 ← 432	10 0 9 ← 3 ← 560 ← 0	0 0 ← 0 ← 603 ← 2	← 623 ← 6
582 1915 ↑	64 → 662 → 140 ↓ 264 667 318	3 → 640 → 27 ↓ 53 0 8	0 → 640 → 10 ↓ 28 0	636 → 14 ↓ 41 4

Source: Urban Crossroads (09-25-13)

NOT TO SCALE

FIGURE 4.10-27

HORIZON YEAR INTERSECTION VOLUMES - PM PEAK HOUR (2035)

4.11 UTILITIES & SERVICE SYSTEMS

This subsection addresses the topics of water service and supply, wastewater collection and treatment, stormwater drainage management, and solid waste collection and disposal. The information contained herein is based in part on information contained in the *Water Supply Assessment Alliance California Gateway South Building 3 (*approved December 3, 2013*)* prepared by the San Bernardino Municipal Water District (SBMWD). A copy of this report is provided as *Technical Appendix J* to this EIR. The analysis contained in this subsection also is based in part on information obtained from the *2010 San Bernardino Valley Regional Urban Water Management Plan (Amended Draft)* (Kennedy/Jenks Consulting 2012), *City of San Bernardino Wastewater Collection System Master Plan* (Psomas 2002), *City of San Bernardino Municipal Water Department Water Facilities Master Plan* (CDM 2007), written correspondence received from Riverside County Waste Management Department staff (refer to *Technical Appendix K*), and readily available information from the SBMWD, the Riverside County Department of Waste Management, and California Department of Resources Recycling and Recovery (CalRecycle). A complete list of references can be found in EIR Section 7.0, *References*.

4.11.1 EXISTING CONDITIONS

A. Water Service and Supply

The Project site is located within the service area of SBMWD for water service and supply. SBMWD provides water service to approximately 187,700 persons within its approximately 45-square mile service area, which encompasses a majority of the City of San Bernardino and a portion of unincorporated San Bernardino County (Kennedy/Jenks Consulting 2012 1-12). SBMWD owns and maintains approximately 630 miles of pipeline, 35 storage facilities, 17 booster stations, four (4) water treatment plants, and 60 groundwater wells (CDM 2007 5-1, 5-6, City of San Bernardino 2005b 5.15-2). As disclosed in the *2010 San Bernardino Valley Regional Urban Water Management Plan (Amended Draft)*, SBMWD obtains 100 percent of its water from the Bunker Hill Groundwater Basin (Kennedy/Jenks Consulting 2012 10-1).

Water Code Section 10620 (a) of the California Urban Water Management Planning Act states, "Every urban water supplier shall prepare and adopt an urban water management plan…" These plans are to be updated every five years and submitted to the State Department of Water Resources (DWR). In addition to meeting the requirements of this Act, the plans are to be used to support water supply assessment and verification required by Senate Bills 610 and 221 of 2001. These bills require that water supply information be provided to counties and cities for projects of a certain size prior to project approval.

The *2010 San Bernardino Valley Regional Urban Water Management Plan (Amended Draft)*, which acts as the urban water management plan (UWMP) for the SBMWD, as well as seven (7) other water agencies within the San Bernardino Valley, is herein incorporated by reference and is also available for public review at the SBMWD located at 300 N. D Street, San Bernardino, CA 92401. The Project's Water Supply Assessment (WSA, *Technical Appendix J)* is based on the 2010 UWMP (Amended Draft). The UWMP includes a water system analysis, identifies improvements to correct existing deficiencies and serve projected future growth, and presents the estimated costs and phasing of the recommended improvements. As concluded in the 2010 UWMP (Amended Draft), SBMWD anticipates that it will be able to meet projected demand for water within its service boundaries until

at least the year 2035 in all types of climate situations, including normal, dry, and multiple consecutive dry weather years (Kennedy/Jenks Consulting 2012 10-42 – 46).

A Water Shortage Contingency Plan is included in the 2010 UWMP (Amended Draft), which would be implemented by SBMWD in cases of future water deficiencies caused by limitations on supply or SBMWD's delivery system. At the time of long- or short-term drought conditions, or other emergencies, SBMWD would inform their customers of the need to conserve water and impose penalties for non-compliance with mandatory water use reductions. Compliance with mandatory water use reductions would ensure that SBMWD has the ability to meet present and projected demand within its service area during dry years (Kennedy/Jenks Consulting 2012 10-37 – 42).

Under existing conditions, no domestic water is consumed by the Project site, as the property is vacant and undeveloped except for remnants of a former lumber mill. As previously shown on Figure 3-7, *Conceptual Water Plan*, there are existing potable water lines beneath Orange Show Road, which forms the northern boundary of the Project site. The Project site includes five (5) active water well facilities owned and operated by the City of Riverside, of which two (2) wells are located within the portion of the site that would be developed by the Project. The wells located within the Project development footprint are in the process of being relocated to the southern portion of the Project site owned by the City of Riverside and that would not be developed by the proposed Project. The well relocation is being undertaken as an independent action of the City of Riverside and moving the wells is not an element of the proposed Project and not subject to evaluation in this EIR.

B. Wastewater Service and Treatment

Wastewater collection service to the Project area is provided by the City of San Bernardino. Wastewater treatment service to the Project area is provided by the SBMWD. SBMWD owns and operates one regional wastewater treatment plant, the Margaret Chandler Water Reclamation Plant (WRP), and all wastewater generated within the SBMWD service area is conveyed to this WRP. Under existing conditions, the Margaret Chandler WRP receives approximately 28 million gallons per day (MGD) of wastewater for treatment, and has a maximum treatment capacity of 33 MGD (City of San Bernardino "Water Reclamation Environmental Control", Kennedy/Jenks Consulting 2012 10-33).

The SBMWD also owns and operates the Rapid Infiltration Extraction (RIX) Tertiary Treatment Facility. The City of Colton is a co-owner of the RIX facility. At the RIX facility, treated flows from the Margaret Chandler WRP undergo tertiary treatment before being discharged into the Santa Ana River. The RIX facility has a maximum treatment capacity of 40 MDG, but only treats approximately 30 MGD under existing conditions (Kennedy/Jenks Consulting 2012 10-34).

Under existing conditions, no wastewater is produced by the Project site, as the property is vacant except for remnants of a former lumber mill. Wastewater service is available to the subject property under existing conditions via facilities installed beneath Orange Show Road.

C. Stormwater Conveyance Facilities

The Project site is located within the boundary of the Inland Valley Development Agency (IVDA) Master Drainage Plan. The Drainage Plan was prepared by IVDA to identify master-planned drainage and flood control facilities that are needed to safely convey stormwater runoff generated

within the IVDA redevelopment area, which generally comprises 14,000 acres of land surrounding the San Bernardino International Airport, during a 100-year storm upon full buildout. The Drainage Plan identifies a public storm drain line in Orange Show Road along the Project site's frontage and extending to the west and to the east. The storm drain line planned by IVDA within Orange Show Road has not been installed and there is no timeline for its implementation. As described in EIR Subsection 3.3.1, the Project proposes to install an approximately 500-foot long segment of this storm drain, in anticipation that IVDA plans to move forward to eventually implement its Master Drainage Plan.

As described in Subsection 4.7, *Hydrology & Water Quality*, a majority of the Project site drains from east to west toward Waterman Avenue, where runoff flows are conveyed by surface gutters within Waterman Avenue, captured by catch basins and transferred to storm drain pipes beneath Waterman Avenue and conveyed to the Santa Ana River. A small area in the southeastern portion of the Project site drains south toward the Santa Ana River. Flows from both portions of the site are conveyed to the Santa Ana River either directly (from a discharge point in the southeastern portion of the subject property) or indirectly via the discharge point within Waterman Avenue.

D. Solid Waste Collection and Disposal

The Project site is located within the service area of the City of San Bernardino Refuse & Recycling Division, with solid waste collection and disposal provided by the City of San Bernardino Integrated Waste Management Division. Under existing conditions, no solid waste is produced by the Project site, as the property is vacant except for remnants of a former lumber mill. Solid waste collected in the City of San Bernardino is transported to one of three landfills within Riverside County: Badlands Sanitary Landfill, El Sobrante Landfill, and Lamb Canyon Sanitary Landfill (Alanis 2013, Riverside County Waste Management Department 2013). Recyclables are collected separately by Burrtec Waste Industries and delivered to one of its material recovery facilities. Information about the landfills to which the proposed Project's solid waste would likely be deposited is provided below.

❑ Badlands Sanitary Landfill

The Badlands Sanitary Landfill is located northeast of the City of Moreno Valley at 31125 Ironwood Avenue. This landfill is owned and operated by the Riverside County Waste Management Department. The Badlands Sanitary Landfill encompasses approximately 1,168 acres, of which 150 acres are permitted for waste disposal (Ma 2013). The landfill is permitted to receive 4,000 tons of waste per day. The Badlands Sanitary Landfill has an estimated disposal capacity of 17.620 million tons, and as of January 1, 2013, the Badlands Sanitary Landfill had a total remaining disposal capacity of approximately 7.930 million tons (Ma 2013). This landfill is estimated to reach capacity, at the earliest time, in the year 2024; however, future landfill expansion opportunities exist at the Badlands Sanitary Landfill site (Ma 2013).

During the second quarter of 2013 (March 1st through June 30th), the Badlands Sanitary Landfill accepted approximately 138,964.5 tons of landfilled waste (approximately 1,527.1 tons per day), which corresponds to approximately 38% of its permitted daily disposal volume (Riverside County Waste Management Department 2013).

❑ El Sobrante Landfill

The El Sobrante Landfill is located east of I-15 and Temescal Canyon Road to the south of the City of Corona and Cajalco Road at 10919 Dawson Canyon Road. The landfill is owned and operated by USA Waste of California, a subsidiary of Waste Management, Inc. The landfill encompasses 1,322 acres, of which 645 acres are permitted for waste disposal (Ma 2013). The El Sobrante Landfill is permitted to receive 70,000 tons of refuse per week, which corresponds to an average disposal rate of 10,000 tons per day (Ma 2013). As of January 1, 2013, the landfill had a remaining disposal capacity of approximately 92.893 million tons, of which approximately 37.157 million tons is reserved for waste generated within Riverside County (Ma 2013). This landfill is estimated to reach capacity in the year 2045 (Ross 2011).

During the second quarter of 2013 (March 1st through June 30th), the El Sobrante Landfill accepted approximately 486,354.5 tons of landfilled waste (approximately 5,344.6 tons per day), which corresponds to approximately 53% of its average permitted daily disposal volume (Riverside County Waste Management Department 2013).

❑ Lamb Canyon Sanitary Landfill

The Lamb Canyon Sanitary Landfill is located between the City of Beaumont and the City of San Jacinto at 16411 Lamb Canyon Road (SR-79), with Interstate 10 to the north and Highway 74 to the south. This landfill is owned and operated by the Riverside County Waste Management Department. The landfill encompasses 1,189 acres, of which 580.5 acres are permitted for waste disposal. The Lamb Canyon Sanitary Landfill is permitted to receive 5,000 tons of waste per day. The landfill has an estimated disposal capacity of 15.646 million tons, of which 7.616 million tons was remaining as of January 1, 2013 (Ma 2013). The landfill is estimated to reach capacity, at the earliest, in the year 2021; however, future landfill expansion opportunities exist at the Lamb Canyon Sanitary Landfill site (Ma 2013).

During the second quarter of 2013 (March 1st through June 30th), the Lamb Canyon Landfill accepted approximately 140,713.4 tons of landfilled waste (approximately 1,546.3 tons per day), which corresponds to approximately 31% of its permitted daily disposal volume (Riverside County Waste Management Department 2013).

E. Applicable Environmental Regulations

❑ California Solid Waste Integrated Waste Management Act (AB 939)

Signed into law in 1989, the California Integrated Waste Management Act (Assembly Bill 939) established an integrated waste management system that focused on source reduction, recycling, composting, and land disposal of waste. In addition, the bill established a 50% waste reduction requirement for cities and counties by the year 2000, along with a process to ensure environmentally safe disposal of waste that could not be diverted.

❑ California Solid Waste Reuse and Recycling Act (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 California Integrated Waste Management Board (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.

- **Mandatory Commercial Recycling Program (AB 341)**

Signed into law in 2011 , AB 341 sets forth the requirements of the statewide mandatory commercial recycling program. The purpose of the law is to reduce greenhouse gas emissions in California diverting commercial solid waste to recycling efforts and to expand the opportunity for additional recycling services and recycling manufacturing facilities in California. Any business that generates four (4) cubic yards or more of commercial solid waste per week is required to arrange for recycling services.

4.11.2 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to utilities and service systems if the Project or any Project-related component would:

1. *Exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board;*
2. *Require or result in construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or*
3. *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;*

The proposed Project also would result in a significant impact to utilities and service systems if any of the following resulted in a significant adverse change to the physical environment as a result of the Project or any Project-related component:

4. *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;*
5. *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;*
6. *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or*
7. *Comply with federal, state, and local statues and regulations related to solid waste.*

4.11.3 IMPACT ANALYSIS

Threshold 1:	***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; wastewater treatment services would be provided to the Project site by the SBMWD. Wastewater generated by the proposed Project would be treated at the Margaret Chandler WRP, which is owned and operated by SBMWD, and the RIX Tertiary Treatment Facility, which is jointly owned by SBMWD and the City of Colton and operated by SBMWD. SBMWD is required to operate Margaret Chandler WRP and the RIX Tertiary Treatment Facility in accordance with the waste treatment and discharge standards and requirements set forth by the Santa Ana Regional Water Quality Control Board (RWQCB). Therefore, the Project's contribution of wastewater to the Margaret Chandler WRP would not have any potential to exceed wastewater treatment requirements of the Santa Ana RWQCB. Further, the 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 applicable wastewater treatment requirements established by the Santa Ana RWQCB. Accordingly, no impact would occur.

Threshold 2:	***Would the Project require or result in construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?***
Threshold 3:	***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?***
Threshold 4:	***Would the Project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?***
Threshold 5:	***Would the Project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?***

❑ Water Facilities

Potable water service would be provided to the Project site via a connection to existing potable water lines within the right-of-way for Orange Show Road. One connection to this existing potable water line, as well as the installation of new potable water lines interior to the Project site would ensure that water service to the site would meet the water supply demands of the proposed development. The existing water conveyance infrastructure would be adequate to service the Project, and the Project would not require or result in the construction of new or expanded water conveyance facilities off site, including storage tanks, pump stations, or water lines. Construction-related activities associated with trenching for and installing water lines on site would result in physical impacts to the environment; these 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 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 subsection of this

EIR. The installation of water 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 beyond those identified throughout this EIR would not be required.

SBMWD is responsible for supplying potable water to the Project site and the region. As discussed in *2010 San Bernardino Valley Regional Urban Water Management Plan (Amended Draft)*, which applies to and was adopted by the SBMWD, adequate water supplies are projected to be available to meet the SBMWD's estimated water demand in all types of climate conditions, including normal, dry, and multiply dry-weather years (Kennedy/Jenks Consulting 2012 10-42 – 46). SBMWD forecasts for projected water demand are based on the population projections of the Southern California Association of Governments (SCAG), which rely 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) (Kennedy/Jenks Consulting 2012 10-1 – 2). The proposed Project is consistent with the Industrial land use designation applied to the property by the City of San Bernardino General Plan. As such, development of the Project site with industrial uses such as the proposed Project has already been assumed by the SBMWD in its projections of future water supply and demand.

Furthermore, SBMWD has prepared a water supply assessment for the proposed Project (included as *Technical Appendix J* to this EIR) to assess the ultimate effect of the Project's water demands and service needs. The water supply assessment was prepared in accordance with Senate Bill 610 (SB 610) and Senate Bill 221 (SB 221). SB 610 requires the preparation of a water supply assessment report for industrial projects that propose to construct more than 650,000 s.f. of floor space. SB 221 requires affirmative written verifications of sufficient water supply. As documented in *Technical Appendix J*, SBMWD estimates the Project would generate a yearly demand for 113 acre-feet of water for indoor use and 145 acre-feet of water for outdoor (i.e., irrigation) use, respectively. The Project's total water demand would be 258 acre-feet per year. Based on a review of existing and anticipated future water supplies and demands, SBMWD has determined that adequate water supplies are available to service proposed development (see *Technical Appendix J*). Accordingly, sufficient water supplies are available to serve the Project and implementation of the Project would not require any new or expanded water entitlements. The Project's effect to SBMWD's water network would be less than significant.

❑ Wastewater Facilities

The proposed Project would result in the demand for wastewater collection and treatment. As described in Section 3.0, *Project Description*, wastewater flows generated by the Project would be conveyed by gravity via an on-site network of sewer lines and would connect to an existing 12-inch sewer main installed under Orange Show Road. Installation of the Project's proposed on-site sewer conveyance facilities would result in physical impacts to the environment; however, these impacts are considered to be an inherent part of 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 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 subsection of this EIR. The installation of 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 beyond those identified throughout this EIR would not be required.

As previously discussed in EIR Subsection 3.3.3, *Project Construction and Operational Characteristics*, the Project is estimated to generate approximately 49,580 gallons of wastewater per day (using SBMWD's wastewater generation rate of 1,000 gallons per day per acre for light industrial land uses). Wastewater flows generated by the Project would be conveyed via the SBMWD sewer line network to the Margaret Chandler WRP for treatment, and then to the RIX Tertiary Treatment Facility for additional treatment. Under existing conditions, the Margaret Chandler WRP has an excess treatment capacity of approximately 5 MGD, while the RIX Tertiary Treatment Facility has an excess treatment capacity of approximately 10 MDG. Implementation of the proposed Project would utilize approximately 1% of the available, excess treatment capacity at the Margaret Chandler WRP and approximately 0.5% of the available, excess treatment capacity at the RIX Tertiary Treatment Facility, respectively. Accordingly, both the Margaret Chandler WRP and the RIX Tertiary Treatment Facility have sufficient capacity to treat wastewater generated by the Project in addition to existing commitments. With the exception of new on-site sewer conveyance lines, the Project would not create the need for any new or expanded wastewater facility (such as conveyance lines, treatment facilities, or lift stations). Because there is adequate capacity at existing treatment facilities to serve the Project's projected sewer demand, impacts would be less than significant.

❑ Stormwater Facilities

As previously described in Section 3.0, *Project Description*, and Subsection 4.7, *Hydrology & Water Quality*, the proposed Project would install an on-site network of storm drains, infiltration basins, and underground infiltration chambers to capture and convey stormwater runoff. Also, the Project would install a new storm drain infrastructure beneath the existing paved right-of-way of Orange Show Road, extending westerly from the Project site's northwest corner and terminating at the intersection of Orange Show Road and Waterman Avenue. The installation of storm drain lines, an infiltration basin, and underground infiltration chambers as proposed by the Project would result in physical impacts to the surface and subsurface of the Project site and the existing paved right-of-way of Orange Show Road and the Orange Show Road/Waterman Avenue intersection. These impacts are considered to be part of the Project's construction phase and are evaluated throughout this EIR accordingly. In instances where significant impacts have been identified for the Project's construction phase, mitigation measures are recommended in each applicable subsection of this EIR, as feasible.

In conclusion, the Project would result in the construction of new storm water drainage facilities on and beneath the Project site and beneath the paved right-of-way of Orange Show Road. The installation of these facilities would cause surface disturbances and construction-related impacts that are evaluated throughout this EIR. In instances where significant impacts have been identified for the Project's construction phase (including off-site storm drain installation) for which feasible mitigation is available, mitigation measures are recommended in each applicable subsection of this EIR. The installation of drainage infrastructure 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 beyond those identified throughout this EIR would not be required.

Threshold 6: 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.

❑ Construction Impact Analysis

During construction of the proposed Project, solid waste requiring landfill disposal would be required in the form of demolition debris and remnants of unused construction materials. Using a demolition waste generation factor of 158 pounds per square foot (United States Environmental Protection Agency 2009 14), demolition of the existing structures on-site associated with the abandoned lumber mill (totaling approximately 26,000 square feet) would generate approximately 2,054 tons of debris requiring disposal. Additional demolition debris (i.e., non-structural remnants of the former lumber mill) would also require disposal; however, the volume of waste is not anticipated to be substantial.

Waste also would be generated by the construction process, primarily consisting of discarded materials and packaging. Based on a proposed building area of 1,199,360 square feet and a construction waste generation factor of 4.34 pounds per square foot, approximately 2,603 tons of waste would be generated over the course of the construction phase. Additional waste would be expected from infrastructure installation and other Project-related construction activities. The Project's construction phase would occur over a period of approximately 280 working days, which corresponds to approximately 9.3 tons of construction waste being generated per day of construction activity.

Non-recyclable demolition debris and construction waste generated by the Project would be disposed at the Badlands Sanitary Landfill, the El Sobrante Landfill, and/or the Lamb Canyon Landfill. These landfills all receive well below their maximum permitted daily disposal volume; thus, demolition and construction waste generated by the Project is not anticipated to cause these landfills to exceed their maximum permitted daily disposal volume. Furthermore, none of these regional landfill facilities are expected to reach their total maximum permitted disposal capacities during the Project's construction period. The Badlands Sanitary Landfill, the El Sobrante Landfill, and Lamb Canyon Landfill would have sufficient daily capacity to accept solid waste generated by the Project's construction phase; therefore, impacts to landfill capacity associated with the Project's near-term construction activities would be less than significant.

❑ 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 1,199,360 square foot light industrial warehouse building would generate approximately 8.5 tons of waste per day. At least 50% is required to be recycled.

Non-recyclable solid waste generated during long-term operation of the Project would be disposed at the Badlands Sanitary Landfill, the El Sobrante Landfill, and/or the Lamb Canyon Landfill. During long-term operation, solid waste generated by the Project would represent approximately 0.2% of the daily disposal capacity at the Badlands Sanitary Landfill, approximately 0.09% of the daily disposal

capacity at the El Sobrante Landfill, and approximately 0.2% of the daily disposal capacity at the Lamb Canyon Sanitary Landfill, respectively. These landfills all receive well below their maximum permitted daily disposal volume; thus, solid waste generated by the Project would not cause any of these landfills to exceed their 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 receiving landfills, impacts to regional landfill facilities during the Project's long-term operational activities would be less than significant.

Threshold 7: Would the Project comply with federal, state, and local statues and regulations related to solid waste?

The California Integrated Waste Management Act (Assembly Bill (AB) 939), signed into law in 1989, established an integrated waste management system that focused on source reduction, recycling, composting, and land disposal of waste. In addition, the bill established a 50% waste reduction requirement for cities and counties by the year 2000, along with a process to ensure environmentally safe disposal of waste that could not be diverted. Per the requirements of the Integrated Waste Management Act, the San Bernardino County Board of Supervisors adopted the *County of San Bernardino Countywide Integrated Waste Management Plan* (CIWMP), which outlines the goals, policies, and programs the County and its cities implement to create an integrated and cost effective waste management system that complies with the provisions of AB 939 and its diversion mandates.

In order to assist the City of San Bernardino and the County of San Bernardino in achieving the mandated goals of the Integrated Waste Management Act, the Project's building tenant(s) 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 is required to 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 Project proposes to install three (3) trash compactors on the property for commingled waste. Additionally, in compliance with AB 341 (Mandatory Commercial Recycling Program), the future tenant of the proposed Project would be required to arrange for recycling services, if the tenant generates four (4) or more cubic yards of solid waste per week. The implementation of these mandatory requirements 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 be required to comply with all applicable solid waste statutes and regulations; as such, impacts related to solid waste statutes and regulations would be less than significant.

4.11.4 CUMULATIVE IMPACT ANALYSIS

The analysis of potential cumulative impacts to utilities and service systems is divided into four general topics of discussion by combining the Thresholds of Significance (listed above in Subsection 4.11.2) into groupings of like topics, as follows: 1) water facilities; 2) wastewater treatment facilities; 3) stormwater drainage facilities; and 4) solid waste collection and disposal.

❑ Water Facilities (Thresholds 2 and 4)

The cumulative study area for water supply and water service-related issues is the SBMWD service area. Existing and future development within SBMWD's service area would create a demand for additional water supplies. The *2010 San Bernardino Valley Regional Urban Water Management Plan (Amended Draft)* prepared for the SBMWD projects that population within the SBMWD service area will increase to 261,041 persons by the Year 2035. Increases in population and development intensity would contribute to increases in the overall regional water demand. According to the WSA prepared by SBMWD for the proposed Project (see *Technical Appendix J*), the demand estimated for the proposed Project is within the limit of growth projected in the UWMP. The findings of the Project's water supply assessment also are confirmed by the UWMP, which demonstrates that adequate water supplies are projected to be available to meet the demand of SBMWD's service population in all types of climate conditions, including normal, dry, and multiply dry-weather years, until at least the Year 2035.

Because the proposed Project would connect to existing conveyance infrastructure, because the Project is consistent with the property's Light Industrial General Plan land use designation that is incorporated into SBMWD's UWMP, and because SBMWD is projected have adequate water supply for projected growth through at least 2035 in normal, dry, and multiple-dry years, no adverse cumulatively significant effect on water infrastructure or water supply would result from construction or operation of the proposed Project.

❑ Wastewater Treatment Facilities (Thresholds 1, 2, and 5)

Wastewater produced by the Project would be conveyed through the City of San Bernardino sewer line network to the Margaret Chandler WRP (owned and operated by the SBMWD) for treatment, and then to the RIX Tertiary Treatment Facility for additional treatment. Both of these facilities currently operate below operational capacity, which indicates there is sufficient capacity available to treat existing regional wastewater flows, including wastewater generated by the Project. However, the City of San Bernardino General Plan EIR indicated that neither the Margaret Chandler WRP nor the RIX Tertiary Treatment Facility contain sufficient capacity to treat wastewater flows anticipated upon buildout of their respective service areas (City of San Bernardino 2005b 5.15-12). Therefore, implementation of the Project would incrementally contribute to the ultimate need to expand these facilities or to construct an alternative facility as necessary to meet the projected wastewater treatment demand.

The proposed Project would not directly result in the need for expanded wastewater treatment facilities, as both the Margaret Chandler WRP and the RIX Tertiary Treatment Facility have sufficient existing capacity to handle wastewater generated by the proposed Project. Rather, the Project's incremental, cumulative contribution to wastewater generation would contribute to an ultimate need for expanding the Margaret Chandler WRP and the RIX Tertiary Treatment Facility and/or for constructing a supplemental wastewater treatment facility. Although there is a potential that such expansion or construction could result in significant environmental impacts, the SBMWD does not currently have any plans in place for such expansion or new construction within the Project vicinity, and no site location has been identified for such purpose. Moreover, it is possible that the some of the area planned for development that is served by these facilities will not be built out as planned, remain vacant, or be serviced by alternative treatment mechanisms. For these reasons, the Project's potential to cumulatively contribute to the demand for new/expanded wastewater treatment

facilities, the construction of which could significantly impact the environment, is too speculative for evaluation (CEQA Guidelines §15145). Therefore, the Project's cumulative impacts to wastewater treatment facilities are determined to be less than significant.

❑ Stormwater Drainage Facilities (Threshold 3)

The proposed Project's storm drain system is designed to provide sufficient on-site stormwater drainage facilities to accommodate on-site stormwater runoff (see EIR Subsection 4.7, *Hydrology & Water Quality*, for a detailed discussion). Proposed storm water drainage facilities would be adequately sized to ensure that future peak stormwater flows can be adequately captured and conveyed to regional stormwater drainage facilities. As such, a cumulatively considerable impact associated with stormwater facilities would not occur.

❑ Solid Waste Collection and Disposal (Thresholds 6 and 7)

Three landfills could receive waste from the Project, including the Badlands Sanitary Landfill, the El Sobrante Landfill, and the Lamb Canyon Sanitary Landfill. These landfills are projected to have available disposal capacity until at least 2045 (El Sobrante), 2024 (Badlands Sanitary Landfill), and 2021 (Lamb Canyon Sanitary Landfill), respectively. During the Project's construction period, the Project would generate approximately 9.3 tons of construction waste per day. During long-term operation of the Project, up to 8.5 tons of solid waste would be generated by the Project on a daily basis. At least 50% is required to be recycled and all businesses in California are required to arrange for recycling services if the business generates four (4) or more cubic yards of solid waste per week. The Project's contribution of solid waste would represent less than one-quarter of one percent of the total waste being disposed at the El Sobrante Landfill, the Badlands Sanitary Landfill, and the Lamb Canyon Sanitary Landfill on a daily basis. These landfills have the capacity to accept the Project's waste, in addition to other solid waste generated in the landfills' service areas. All projects are required to comply with mandated waste reduction programs, which reduce the need for landfill capacity. As such, implementation of the Project would not result in cumulatively considerable impact on landfill capacity.

4.11.5 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold 1: No Impact. The Project would not exceed wastewater treatment requirements of the Santa Ana RWQCB. Wastewater collection services would be provided by the City of San Bernardino, and wastewater treatment services would be provided by the SBMWD. The SBMWD is required to operate all of its treatment facilities in accordance with applicable waste treatment and discharge standards and requirements set forth by the RWQCB. The proposed Project would not install or use septic systems or alternative wastewater treatment systems.

Threshold 2: Less-than-Significant Impact. Water would be conveyed to the site through SBMWD's existing water line network. Wastewater would be conveyed from the site through SBMWD's existing wastewater collection network and treated at existing SBMWD treatment facilities. With the exception of water and sewer conveyance lines that would be installed during the Project's construction, the Project would not require the construction of any new water or wastewater systems that have the potential to cause significant environmental effects. No new or expanded capacities or entitlements would be required.

Threshold 3: 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 stormwater conveyance facilities, detention basins, and outlets that would be installed during the Project's construction, the Project would not require the construction of any new stormwater drainage facilities that have the potential to cause significant environmental effects.

Threshold 4: Sufficient water supplies are available to service the Project. SBMWD would service the Project based on planned and existing water supplies as documented in its Urban Water Management Plan and a water supply assessment prepared for the Project.

Threshold 5: Less-than-Significant Impact. SBMWD would provide wastewater treatment services to the Project site via the Margaret Chandler WRP and the RIX Tertiary Treatment Facility. Both of these facilities have adequate capacity to service the Project and no new or expanded facilities would be needed.

Threshold 6: Less-than-Significant Impact. There is adequate capacity available at the El Sobrante, Badlands, and Lamb Canyon landfills to accept the Project's solid wastes. Landfill capacity would not be exceeded as a result of the proposed Project.

Threshold 7: Less-than-Significant Impact. The Project would comply with all applicable federal, state, and local statutes and regulations related to solid waste disposal, reduction, and recycling.

4.11.6 MITIGATION

Impacts would not be significant; therefore, mitigation measures are not 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 Section 15126[b]). As described in detail in Section 4.0 of this EIR, the proposed Project is anticipated to result in five (5) 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 (Long-Term): Significant and unavoidable impacts to air quality in the long-term due to VOC and NO_X emissions from Project operation.
- Transportation/Circulation (Near-Term): Short-term, construction-related traffic impact at the Orange Show Road/Waterman Avenue intersection that may intermittently occur for up to three (3) weeks to accommodate the installation of a storm drain pipe beneath a segment of Orange Show Road.
- Transportation/Circulation (Near- and Long-Term): Near- and long-term contribution of cumulatively considerable traffic to the Waterman/I-215 On-ramp intersection, which is projected to operate at unacceptable LOS during the PM peak hour (4:00pm-6:00pm) Monday through Friday in near-term and long-term traffic conditions.
- Noise (Near-Term): Near-term contribution of direct and cumulatively considerable transportation-related noise from vehicles using the segment of Orange Show Road east of Waterman Avenue.

5.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD 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 redevelopment of the Project 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.

Implementation of the proposed Project would result in the commitment of future generations to one large warehouse building on the Project site. Lands to the north, east, and west of the Project site are designated for industrial uses by the City of San Bernardino General Plan, and thus are planned by the City for long-term use as industrial developments. As demonstrated in the analysis presented throughout EIR Section 4.0, long-term operation of the proposed Project would not result in significant physical environmental effects to nearby properties. Although the Project would cause unavoidable impacts associated with air quality (long-term), noise (near-term), and traffic (near- and long-term) as summarized above in Subsection 5.1, these effects would not commit surrounding properties to land uses other than the uses currently by the City of San Bernardino General Plan.

EIR Subsection 4.6 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, the proposed Project would be required to comply with federal, state, and local regulations related to hazardous materials, which would ensure that 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 upset or accident conditions.

To reduce the Project's energy needs and fossil fuel consumption, and thereby reduce air emissions, the Project is required to ensure mandatory compliance with applicable regulatory requirements imposed by the State of California and the SCAQMD (as summarized in EIR Subsections 4.2 and 4.5, which would reduce the Project's level of demand for energy resources. Therefore, the proposed Project would not result in the wasteful use of energy or the consumption of resources that are not justified based on the scale of the proposed Project.

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.

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. Economic growth would likely take place as a result of the proposed Project's operation as warehouse building, but the intensity of economic growth would occur consistent with planned growth identified in the City of San Bernardino General Plan and in the General Plans of adjacent jurisdictions. The Project is consistent with the "Industrial" land use assigned to the property by the City of San Bernardino General Plan.

Under CEQA, growth inducement is not considered necessarily detrimental, beneficial, or of little significance to the environment. Typically, growth-inducing potential of a project would be considered significant if it 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 the Southern California Association of Governments (SCAG). Significant growth impacts also could occur if the 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 directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth significantly affects the environment in some other way.

The Project site is located within the boundary of the IVDA Master Drainage Plan. The Drainage Plan was prepared by IVDA to identify master-planned drainage and flood control facilities that are needed to safely convey stormwater runoff generated within the IVDA redevelopment area, which generally comprises 14,000 acres of land surrounding the San Bernardino International Airport, during a 100-year storm upon full buildout. The Drainage Plan identifies a public storm drain line entering Orange Show Road from Lena Road to the north, and traversing west along Orange Show. The storm drain line planned by IVDA within Orange Show Road has not been constructed under existing conditions and there is no timeline for its implementation. As described in EIR Subsection 3.3.1, the Project proposes to install an approximately 500-foot long segment of this storm drain as planned by IVDA. The Project's proposed construction of the storm drain segment would not induce unplanned growth, as IDVA's Master Drainage Plan is designed to accommodate buildout of the area as called for by the City's General Plan.

Development of the Project site with one warehouse building may place development pressure on several surrounding parcels designated for industrial development and that are currently undeveloped (or developed with non-conforming residential land uses). However, these surrounding properties already are planned for long-term development with industrial land uses by the City of San Bernardino General Plan and implementation of the proposed Project would not directly promote growth on these adjacent and surrounding properties. Because development of nearby parcels would be consistent with the City's General Plan, growth-inducing impacts of the Project would be less than significant. The Project is not expected to induce growth or land use changes on other parcels in the vicinity, as other lands surrounding the site are either already developed or planned to be developed consistent with their General Plan land use designations.

Indirect growth-inducing impacts at the local level result from a demand for additional goods and services associated with the increase in people in the area, including employees. This occurs in suburban or rural environments where population growth results in increased demand for service and commodity markets responding to the new population. This type of growth is, however, a regional phenomenon resulting from introduction of a major employment center or regionally significant housing project. The implementation of the proposed Project would result in growth-inducing impacts of the region, but not beyond that which is already envisioned by the General Plan.

5.4 EFFECTS FOUND NOT TO BE SIGNIFICANT AS PART OF THE INITIAL STUDY PROCESS

Section 15128 of the CEQA Guidelines 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. Six (6) environmental issues were found not to have the potential to cause significant adverse effects: Agriculture and Forestry Resources, Geology/Soils, Land Use/Planning, Population/Housing, Public Services, and Recreation. Therefore, these issue areas are not required to be discussed in Section 4.0, *Environmental Analysis*, of this EIR. A brief summary of issues found not to be significant is presented below.

5.4.1 AGRICULTURE & FORESTRY RESOURCES

The Project site is not used for agriculture. The Project site contains lands classified as "Urban and Built-Up Land" and "Other Land" by the Farmland Mapping and Monitoring Program (FMMP) and does not contain any soils mapped by the California Department of Conservation as "Prime Farmland," "Unique Farmland," or "Farmland of Statewide Importance." As such, no impact to important farmland types would occur with implementation of the Project.

The Project site is not within an agricultural preserve, nor is it subject to a Williamson Act contract. Under existing conditions, the Project site is vacant and includes the remnants of an abandoned lumber mill which formerly occupied the site. Lands surrounding the proposed Project site are not used for agricultural production and include undeveloped lands, non-conforming single family residential uses, warehouse distribution land uses, and commercial/office land uses. The Project site is zoned for industrial land uses and the immediate surrounding area is similarly zoned. Because the Project site is not located in or adjacent to an agricultural preserve and neither the Project site nor any immediately surrounding property is zoned for agricultural use, the proposed Project would not conflict with an existing agricultural use, zoning, or a Williamson Act contract.

The Project site does not contain forest land, and no forest land is located adjacent to or within the vicinity of the Project site. Furthermore, no portion of the proposed Project site or surrounding area is zoned for forest land or timberland. Accordingly, the Project has no potential to result in the loss of forest land or convert forest land or a non-forest use.

Therefore, for the reasons stated above, the Project would result in less-than-significant impacts to Agriculture and Forestry Resources.

5.4.2 GEOLOGY/ SOILS

No known earthquake faults traverse the Project site and the Project site is not located within an Alquist-Priolo fault zone. Because there are no faults located on the Project site, there is no potential that the Project could expose people or structures to adverse effects related to ground rupture.

The Project site is located in a seismically active area of southern California and is expected to experience moderate to severe ground shaking during the lifetime of the Project; however, this risk is not considered substantially different than that of other similar properties in the southern California area. As a mandatory condition of Project approval, the Project would be required to construct the proposed warehouse building in accordance with the California Building Standards Code (CBSC), also known as California Code of Regulations (CCR), Title 24 and the City of San Bernardino Building Code. The CBSC and City of San Bernardino Building Code are designed to preclude significant adverse effects associated with strong seismic ground shaking. In addition, the Project would be conditioned by the City to comply with the site-specific ground preparation and construction recommendations contained in the geotechnical report prepared for the Project (included as *Appendix L* to this EIR). With mandatory compliance with these standard and site-specific design and construction measures, potential adverse impacts associated with seismically induced ground shaking would be reduced to less than significant. As such, the Project would not expose people or structures to substantial adverse effects, including loss, injury or death, involving seismic ground shaking.

The Project site is located within an area susceptible to liquefaction during seismic events. The Project would be designed and constructed in accordance with the latest applicable seismic safety guidelines, including the standard requirements of the CBSC and City of San Bernardino Building Code. Furthermore, the Project would be required to comply with the site-specific grading and construction recommendations contained within the Project's geotechnical report, which the City would impose as conditions of Project approval to further reduce the risk of seismic-related ground failure due to liquefaction. As such, implementation of the Project would result in less-than-significant impacts associated with seismic-related ground failure and/or liquefaction hazards.

The Project site is relatively flat, as is the surrounding area. There are no hillsides or steep slopes on the site or in the vicinity of the Project site. Accordingly, the Project site is located within an area with no potential for landslides, and development on the subject property would not be exposed to any risk of landslide.

Development of the Project would disturb the subject property during grading and construction activities and would expose the underlying soils, which would increase erosion susceptibility. The Project's required adherence to standard regulatory requirements would lessen any potential erosion impact to below a level of significance. These include, but are not limited to, requirements imposed by the City of San Bernardino's National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit (State Water Resources Control Board Order No. 99-08-DWQ), which requires the preparation of a Project-specific Water Quality Management Plan (WQMP) and the implementation of Best Management Practices (BMPs) to minimize the soil erosion and sedimentation in stormwater runoff leaving the Project site. In the long-term, development of the subject property would introduce additional impervious surfaces and landscaping on the Project site, thereby reducing the potential for erosion and loss of topsoil.

The geotechnical report prepared for the Project site by Southern California Geotechnical Inc. determined that the Project site contains soils that have potential for shrinkage/subsidence, settlement, and lateral spreading. On-site soils were determined to have a "very low" expansion potential. The proposed Project would be required to comply with the recommendations of the site-specific geotechnical report (as well as the CBSC and City of San Bernardino Building Code) to

preclude risks related to unstable geologic units/soils. With mandatory compliance with standard building requirements and the site-specific grading and construction recommendations contained within the Project's geotechnical report, impacts associated with unstable geologic units/soils would be less than significant.

For the reasons stated above, the proposed Project would result in less-than-significant impacts to Geology/Soils.

5.4.3 LAND USE/ PLANNING

The Project proposes to develop a large warehouse building on a property designated for "Industrial" land uses by the City of San Bernardino General Plan and zoned for "Industrial Light" uses. The Project site is vacant under existing conditions, except for remnants of a former lumber mill operation, and is located in a developing area of the City that is planned for industrial development. Properties adjacent to the Project site have either been developed or are planned by the City of San Bernardino General Plan for development with industrial land uses. Development of the proposed warehouse building on the subject property would not conflict with applicable land use plans, policies, or regulations, including the applicable goals of SCAG's *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy* (refer to Table 5-1, below), and would not physically divide an established community. Impacts to Land Use/Planning would be less than significant.

Table 5-1 Analysis of Consistency with SCAG 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy Goals

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. EIR Subsection 4.10 evaluates Project-related traffic impacts and specifies the mitigation measures that will be imposed to ensure that roadway and intersection and intersection improvements needed to accommodate Project traffic volumes are implemented concurrent with proposed development.
G3	Ensure travel safety and reliability for all people and goods in the region.	No inconsistency identified. As disclosed in EIR Subsection 4.10, the Project would be compatible with existing and planned land uses, and there is no component of the Project that would result in a substantial safety hazard to motorists (refer to analysis under Threshold 4). Furthermore, EIR Subsection 4.10 specifies the mitigation measures that will be implemented by the Project to ensure that roadway and intersection improvements meet safety standards and operate as efficiently as is feasible.
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.

Table 5-1 Analysis of Consistency with SCAG 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy Goals

RTP/SCS GOAL	GOAL STATEMENT	PROJECT CONSISTENCY DISCUSSION
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 comprehensive transportation planning efforts. The Project would be consistent with the City of San Bernardino General Plan, which meets this goal to maximize productivity.
G6	Protect the environment and health for our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as 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 Subsection 4.2, and mitigation measures have been incorporated to reduce, to the extent feasible, the Project's air quality impacts. Additionally, and as discussed in EIR Subsection 4.5, the Project will incorporate various measures related to building design, landscaping, and energy systems to promote the efficient use of energy. The Project study area is currently served by Omnitrans. Additionally, sidewalks are already provided along the Project's frontage with Orange Show Road, and Orange Show Road is planned as a bikeway by the City of San Bernardino General Plan. Furthermore, the Project will install bike racks on-site to encourage employees to utilize non-motorized forms of transportation.
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.
G8	Encourage land use and growth patterns that facilitate transit and non-motorized 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. The Project is consistent with the existing General Plan Land Use Plan for the City of San Bernardino.
G9	Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	No inconsistency identified. This policy provides guidance to City staff to monitor the transportation network and to coordinate with other agencies as appropriate.

Source: *SCAG 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy.* (Refer to the following web site for more information: http://rtpscs.scag.ca.gov/Documents/2012/final/f2012RTPSCS.pdf.)

5.4.4 POPULATION/HOUSING

The proposed Project would develop the subject property with a warehouse building in accordance with the "Industrial" General Plan land use and "Industrial Light" zoning designations applied to the site by the City of San Bernardino. Accordingly, the Project would not result in growth that was not already anticipated by the City of San Bernardino General Plan and evaluated in the City of San Bernardino General Plan FEIR. The Project would install an off-site storm drain beneath Orange Show Road; however, the storm drain is already planned by the City of San Bernardino Master Drainage Plan to accommodate existing uses and planned growth and would not contain excess capacity to support substantial, unplanned, additional growth. As such, implementation of the

Project would not result in direct or indirect growth in the area, and impacts are evaluated as less than significant.

The Project site is mostly vacant under existing conditions and contains no residential structures. Accordingly, implementation of the Project would not displace housing or people, and would not necessitate the construction of replacement housing elsewhere. Significant impacts would not occur.

Therefore, for the reasons stated above, the proposed Project would not result in a significant impact to Population/Housing.

5.4.5 PUBLIC SERVICES

The San Bernardino Fire Department would provide fire protection service to the proposed Project. The proposed Project would be primarily served by Station No. 11, an existing station located at 450 East Vanderbilt Way (approximately 1.1 roadway miles south of the Project site). The Project site also could be served by Station No. 10, an existing station located at 502 South Arrowhead Avenue (approximately 1.6 roadway miles northwest of the Project site). 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 proposed Project area. Furthermore, the proposed Project is required to comply with the provisions of the City of San Bernardino's Development Impact Fee Ordinance (refer to City Municipal Code Chapter 3.27), which requires a fee payment prior to the issuance of building permits that the City applies to the funding of public facilities, including fire suppression facilities, vehicles and equipment. Based on the foregoing, the proposed Project would receive adequate fire protection service, and would not result in the need for new or physically altered fire protection facilities.

The development of the subject property with light industrial land uses would introduce new structures and employees to the Project site. This increase in the developed environment would result in an incremental increase in demand for police protection services, but would not require or result in the construction of new or physically altered police facilities. Prior to the issuance of building permits, the Project Applicant would be required to comply with the provisions of the City of San Bernardino's Development Impact Fee Ordinance (refer to City Municipal Code Chapter 3.27), which requires a fee payment that the City applies to the funding of public facilities, including police facilities. Based on the foregoing, the proposed Project would receive adequate police protection service, and would not result in the need for new or physically altered police protection facilities. Impacts to police protection facilities are therefore evaluated as less than significant.

The Project would not create a direct demand for public school services, as the subject property would be developed solely with one warehouse building and would not generate any school-aged children requiring public education. The addition of employment uses on the Project site would assist in the achievement of the City's goal to provide a better jobs/housing balance within the City and the larger San Bernardino County region. Thus, the Project is not expected to draw new residents to the region and would therefore not indirectly generate additional school-aged students requiring public education. Because the Project would not directly generate students and is not expected to indirectly draw students to the area, the proposed Project would not result in the need to construct new or physically altered public school facilities. Regardless, the Project Applicant would be required to contribute development impact fees to the San Bernardino Unified School District, in

compliance with California Senate Bill 50 (Greene). Mandatory payment of school fees would be required prior to the issuance of building permits. Project-related impacts to public schools are evaluated as less than significant.

As discussed below under Subsection 5.4.6, 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 Project would not adversely affect any park facility and impacts are regarded as less than significant.

The proposed Project would not 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.

For the reasons stated above, the proposed Project would result in less-than-significant impacts to Public Services.

5.4.6 RECREATION

The Project proposes to develop the site with one warehouse distribution building. The Project does not propose any type of residential use or other land use that may generate a population that would increase the use of existing neighborhood and regional parks or other recreational facilities in the vicinity. Accordingly, implementation of the Project would not result in the increased use or substantial physical deterioration of an existing neighborhood or regional park.

The Project does not propose to construct any new on- or off-site recreational facilities and would not expand any existing off-site recreational facilities. Therefore, adverse environmental impacts related to the construction or expansion of recreational facilities would not occur with implementation of the Project.

For the reasons stated above, the proposed Project would result in no impacts to Recreation.

6.0 ALTERNATIVES TO THE PROPOSED PROJECT

State CEQA Guidelines §15126.6(a) indicates the scope of alternatives to a proposed project that must be evaluated:

> *"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 of this EIR, the proposed Project would result in significant adverse environmental effects to air quality(long-term), noise (near-term), and traffic (near-and long-term) 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 (Long-Term): Significant and unavoidable impacts to air quality in the long-term due to VOC and NO_X emissions from Project operation.
- Transportation/Circulation (Near-Term): Short-term, construction-related traffic impact at the Orange Show Road/Waterman Avenue intersection that may intermittently occur for up to three (3) weeks to accommodate the installation of a storm drain pipe beneath a segment of Orange Show Road.
- Transportation/Circulation (Near- and Long-Term): Near- and long-term contribution of cumulatively considerable traffic to the Waterman/I-215 On-ramp intersection, which is projected to operate at unacceptable LOS during the PM peak hour (4:00pm-6:00pm) Monday through Friday in near-term and long-term traffic conditions.
- Noise (Near-Term): Near-term contribution of direct and cumulatively considerable transportation-related noise from vehicles using the segment of Orange Show Road east of Waterman Avenue.

CEQA Guidelines §15126.6(e) requires that an alternative be included 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. This is considered to be the No Project Alternative. The No Project Alternative, described in detail below, is identified as the most environmentally superior alternative. CEQA requires that if the environmentally superior alternative is determined to be a No Project Alternative, then another environmentally superior alternative should be identified among the other alternatives, if the analysis indicates that significant impacts can be avoided by one or more of the other alternatives. Therefore,

the Warehouse Building/Truck Trailer Yard Alternative is selected as the environmentally superior alternative.

6.1 ALTERNATIVES UNDER CONSIDERATION

The following scenarios are identified by the City of San Bernardino as potential alternatives to implementation of the proposed Project.

❑ No Project Alternative

The No Project Alternative assumes that the Project site would be left in its existing condition. This alternative was selected by the Lead Agency to compare the environmental effects of the Project against leaving the property in its existing state. The proposed Project implements the City of San Bernardino General Plan. If the Project were not approved, it is reasonable to expect that the property would remain as a mostly vacant site with remnants of a former lumber mill for the foreseeable future.

❑ Small Buildings Alternative

The Small Buildings Alternative considers development of the site with five (5) smaller light industrial warehouse buildings ranging in size from 150,000 square feet to 195,000 square feet. Buildings of this size were selected for consideration because they would likely attract light industrial, small assembly, light manufacturing, mini storage, and and/or small-scale warehousing that desire building sizes in this range. Under this alternative, a maximum of 975,000 square feet of building area would be constructed on-site, resulting in an overall reduction of approximately 224,360 square feet of building area (or approximately 19%) as compared to the Project. The Small Buildings Alternative was selected for consideration by the Lead Agency to compare the environmental effects of the proposed Project (one large building that is likely to attract one tenant) against the environmental effects of constructing multiple, smaller buildings that are likely to attract different tenants.

❑ Warehouse Building/Truck Trailer Yard Alternative

The Warehouse Building/Truck Trailer Yard Alternative considers development of the Project site with one 599,680 square-foot light industrial warehouse building and using the remainder of the Project's development area (approximately 13.8 acres) as a truck trailer parking lot with approximately 525 spaces. This alternative would reduce the building area on-site by approximately 599,680 square feet (or 50%) as compared to the proposed Project. The Warehouse Building/Truck Trailer Yard Alternative was selected by the Lead Agency to evaluate the comparative environmental benefits of developing the Project site in conformance with the property's Industrial designation under the City of San Bernardino General Plan while reducing the overall intensity.

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, a number of possible alternatives were initially considered and, for a variety of reasons, rejected. Alternatives were rejected 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. The reason for not selecting each alternative is discussed below.

❑ Alternative Sites

CEQA does not require that an analysis of alternative sites always be included in an EIR. 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)).

The Project as proposed is consistent with the "Industrial" land use designation applied to the property by the City of San Bernardino General Plan and as further detailed by the "Industrial Light" zoning applied to the property by the City of San Bernardino. An examination of alternative sites is typically not necessary when a proposed development project is consistent with the applicable land use plan, because it can reasonably be assumed that development would ultimately occur in conformance with the applicable land use designation, whether by the Project Applicant or by others in the future. In cases where a proposed project is consistent with the applicable General Plan, the alternatives analysis should typically focus on options for developing the site consistent with adopted plan policies and the discussion of alternatives should search for an environmentally superior version of the project on the site instead of an alternative site.

The Project site is flat and is highly disturbed due to former use of the south-central portion of the site as a lumber mill and regular weed abatement activities that occur over the entire site. Locating the proposed Project on an alternative site, therefore, would not avoid physical impacts to a previously undisturbed property. The only potential advantage, then, to selecting an alternative site for the proposed Project would be to displace the Project's operational effects (traffic, noise, air emissions, etc.) to a different location.

The Project site is surrounded by properties developed with or planned for the future construction of light industrial and industrial office land uses. Few other vacant, available properties of similar size as the proposed Project site in the City of San Bernardino and the San Bernardino Valley would offer

less developmental and environmental constraints, or fewer physical environmental impacts than the Project site. Development of the Project in an alternate location would have similar impacts as would occur with implementation of the Project at its proposed location. Also, if the alternative site were to be located further from major regional transportation routes (I-215 and I-10), operational impacts associated with traffic and vehicular noise and air emissions would be greater as the vehicles would need to travel further distances on local roads to reach the freeways. For these reasons, an alternative sites analysis is not required for the proposed Project.

❑ Alternative Land Use

Development of the Project site with a land use other than the uses permitted by the property's "Industrial Light" zoning designation was considered, but rejected because other land uses such as residential, commercial, or mixed-use would be inconsistent with the property's General Plan and zoning designations and not meet any of the Project's objectives. Additionally, development of the Project site with a building type other than warehouse and permitted by General Plan and zoning designations was considered but rejected because other permitted building types (e.g., manufacturing, industrial office) would create the same or similar construction-related impacts as the proposed Project, but would substantially increase operational impacts because these land use types generate more traffic and consequently would generate more operational noise and air pollutant emissions. For these reasons, alternative land uses on the property were considered and rejected.

6.3 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 for each impact as to whether the alternative results 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 or similar impact as the proposed Project, or (4) a new impact in addition to the proposed Project's impacts. Table 6-1 at the end of this section compares the environmental hazard and resource impacts of the various alternatives with those of the proposed Project and identifies the ability of the alternatives to meet the basic objectives of the Project. As described in EIR Subsection 3.2, the proposed Project's objectives are:

A. To make efficient use of a vacant or underutilized property of over 50 acres that has access to available infrastructure for the development of an employment-generating use in the City of San Bernardino.

B. To develop a large industrial warehouse building on a property in conformance with the land use and zoning designations applied to that property by the City of San Bernardino General Plan and Development Code.

C. To develop a large industrial warehouse building that will attract quality tenants and be economically competitive with other similar buildings in the local area and region.

D. To develop large industrial warehouse building having loading bays to accommodate goods-movement economic activity within close proximity to regional transportation routes.

E. To develop a large industrial warehouse building that is financially feasible to construct and operate.

F. To make efficient use of vacant or underutilized property by developing the site to achieve a minimum floor area ratio (FAR) of 0.55.

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

6.3.1 NO PROJECT ALTERNATIVE

The No Project Alternative allows decision-makers to compare the impacts of approving the proposed Project against the impacts that would occur if the property were to remain undeveloped for the foreseeable future. The Project site in its existing condition contains several abandoned structures associated with a lumber mill that formerly operated on-site and is routinely maintained for weed abatement. The property is flat with no unique topographic or geologic features. Refer to the description of the Project site's existing physical conditions in Section 2.0 of this EIR.

Selection of the No Project Alternative would prevent the Project site from being developed as proposed but would not necessarily prevent the Project or another project of its nature from being located in another location in response to the demand for large (high-cube) light industrial warehouse space in proximity to the San Bernardino International Airport, I-215, and I-10. As discussed above, an examination of alternative sites is not required in this EIR because the Project is consistent with its General Plan land use designation and locating the Project on an alternative site would not be environmentally superior. Nonetheless, the Lead Agency recognizes that selection of the No Project Alternative would not reduce the local market demand for large (high-cube) light industrial warehouse space. Additionally, the No Project Alternative would not facilitate the installation of the storm drain line beneath Orange Show Road as proposed by the Project, but the storm drain would still be installed by others, as it is identified as part of IVDA's Master Drainage Plan.

❑ Aesthetics

The Project site does not contain any unique aesthetic resources, nor does it serve as a prominent scenic vista. In addition, the Project site is not visible from any state or locally-designated scenic highways. Under the No Project Alternative, the existing visual character and quality of the site would be maintained in its existing condition. No new structures, landscaping, or sources of artificial light would be introduced on the property. Therefore, this alternative would result in no impact to aesthetics, positive or negative. The Project's less-than-significant aesthetic effects during construction and at buildout would be avoided with the selection of this alternative.

❑ Air Quality

As identified in EIR Subsection 4.2 the proposed Project would result in significant and unmitigable impacts to air quality in the long-term due to VOC and NO_X emissions from Project operation, primarily from mobile source emissions. No development would occur on the Project site under the No Project Alternative; therefore, there would be no sources of air pollutant emissions during the near-term (construction) or long-term (operation). Selection of this alternative would avoid all of the proposed Project's near- and long-term air quality impacts.

❑ Biological Resources

Vegetation on the Project site is highly disturbed due to past uses of the site and required routine weed abatement activities. As such, the Project site's vegetation is dominated by developed and disturbed habitat, and ruderal and ornamental plant species. The site contains habitat that may be suitable as nesting habitat for the western burrowing owl and other listed migratory birds, and is located adjacent to a segment of the Santa Ana River which has the potential to support sensitive wildlife species. Under the No Project Alternative, the Project site would remain in its existing condition and the Project's potential direct and indirect impacts to biological resources would not occur.

❑ Cultural Resources

The No Project Alternative would result in no grading on the Project; therefore, no impacts to subsurface paleontological or archaeological resources that may be present beneath the surface of the site would occur. Selection of this alternative would avoid all site disturbances, other than the routine weed abatement activities that occur on-site under existing conditions.

❑ Greenhouse Gas Emissions

The analysis in EIR Subsection 4.5 demonstrates that the proposed Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing greenhouse gas emissions. Therefore, Project-related emissions of greenhouse gases would be less than significant on both a direct and cumulative basis. Regardless, greenhouse gases would be emitted during construction and operation of the Project. Global climate change occurs as the result of global emissions of greenhouse gases. Neither the proposed Project nor the No Project Alternative would result in significant or cumulatively considerable impacts associated with greenhouse gas emissions. Regardless, selection of the No Project Alternative would eliminate greenhouse gas emissions that would be generated by redevelopment of the Project site.

❑ Hazards & Hazardous Materials

Because no development would occur under the No Project Alternative, no impacts related to hazards or hazardous materials would occur. Hazardous materials would not be used on the site or transported to the site. The existing abandoned structures, equipment, and remnants of the former lumber mill operation would remain in place on-site. Fire suppression by routine weed abatement would be required to continue on the property. Selection of this alternative would avoid the Project's potential effects related to hazards and hazardous materials.

❑ Hydrology & Water Quality

No changes to existing hydrology and drainage conditions would occur under the No Project Alternative. No stormwater improvements would be constructed and rainfall would be discharged from the site as sheet flow, as occurs under existing conditions. Neither the proposed Project nor the No Project Alternative would result in substantial alterations to the drainage pattern of the site. Accordingly, implementation of the proposed Project and the No Project Alternative would both result in less than significant impacts to existing drainage patterns.

Because buildings, roadways, and parking lots would not occur on the site under this Alternative, an increase of impervious surfaces and urban pollutants would not occur. However, under this alternative, water leaving the site would not be filtered and would continue to contain sediment and other potential pollutants, as occurs under existing conditions. Selection of this alternative would reduce the Project's impacts to hydrology and water quality as compared to the proposed Project with the exception of long-term sedimentation impacts, which would continue to occur as water sheet flows off of the site's surface and would be greater than impacts would occur under the proposed Project.

❑ Mineral Resources

Under the No Project Alternative, no development on the Project site would occur and PCC-grade aggregate minerals that may underlie the site would not be covered by site improvements (i.e., warehouse building, paving, landscaping). Although no site improvements would be constructed on the subject property under this alternative that could hinder access to potential mineral resources contained beneath the ground surface, mining activities are prohibited on the Project site by the City of San Bernardino General Plan and Development Code. Neither the proposed Project nor this alternative would result in the loss of availability of a mineral resource that would be of value to the region and the residents of the state because mining of the site is already precluded by the City of San Bernardino General Plan and Development Code. Impacts to mineral resources would be less than significant under this alternative and similar to the proposed Project.

❑ Noise

The No Project Alternative would not result in construction on-site and, therefore, would not generate any near-term noise associated with construction. Additionally, because no development would occur on the site and no new traffic trips would be generated, the No Project Alternative would not contribute to an incremental increase in area-wide noise levels. Also, there would be no sources of stationary noise introduced on the site. Noise associated with installation of the storm drain line in Orange Show Road would still occur when the line is installed by others, but it would not be associated with the No Project Alternative. Selection of this alternative would avoid all of the Project's noise impacts.

❑ Transportation/Circulation

Under the No Project Alternative, no development would occur on the subject property and no traffic would be generated. Because there would be no development on the Project site under this Alternative, no contributions would be made to the City of San Bernardino Development Impact Fee (DIF). The significant and unavoidable traffic impacts of the proposed would be avoided through selection of the No Project Alternative; however, the ability to construct regional transportation improvements may be affected because there would be no contribution from the Project site toward the DIF program that is relied upon for City-wide improvements. The short-term unavoidable traffic impact to the operation of the Orange Show Road/Waterman intersection associated with installation of the storm drain line in Orange Show Road would still occur when the line is installed by others, but it would not be associated with the No Project Alternative.

❑ Utilities/Service Systems

No additional domestic water or sewer facilities would be needed for the No Project Alternative, and no domestic water use or wastewater generation increases would occur. Also, this alternative would not generate increases in the demand for solid waste collection and disposal. Neither the proposed Project nor the No Project Alternative would result in significant or cumulatively considerable impacts to utilities and service systems. Nonetheless, selection of this Alternative would avoid all of the Project's demand placed on utilities and service systems.

❑ Conclusion

Implementation of the No Project Alternative would result in no physical environmental impacts beyond those that have historically occurred on the property. All significant effects of the proposed Project would be avoided or lessened by the selection of this alternative. However, waterborne erosion and sedimentation would continue due to surface stormwater runoff flows that occur under existing conditions.

The No Project Alternative would fail to meet all of the Project's objectives. This alternative would fail to make efficient use of an underutilized property and fail to redevelop the property with a large warehouse building that would attract new businesses and jobs to the City of San Bernardino. Furthermore, retention of the site in its existing condition would be inconsistent with the City of San Bernardino General Plan, which calls for development of the site with light industrial land uses. Moreover, selection of the No Project Alternative, while preventing development of the property, would not result in a reduction in demand for industrial business park development in the San Bernardino Valley area; thus, it is likely for the Project's environmental impacts to be displaced to another property rather than be avoided.

6.3.2 SMALL BUILDINGS ALTERNATIVE

The Small Buildings Alternative was selected to evaluate the comparative environmental benefits of constructing five (5) smaller industrial warehouse buildings on-site in lieu of the single, large building proposed by the Project. Buildings provided on-site under this alternative would range in size from 150,000 square feet to 195,000 square feet. The five buildings, combined, would include a maximum building area of 975,000 square feet, or 224,360 square feet less building area than proposed by the Project (a reduction in building area of approximately 19%). The Small Buildings Alternative would have an identical development footprint as the proposed Project. This alternative would be consistent with the subject property's General Plan and zoning designations.

Selection of the Small Buildings Alternative would result in the development of the Project site with 975,000 square feet of light industrial and small-scale warehousing uses, as compared to 1,199,360 square feet of light industrial warehouse uses proposed by the Project, but would not necessarily prevent the construction of a large (high-cube) light industrial warehouse uses elsewhere in the general vicinity of the Project area in response to the demand of large warehouse space in close proximity to the San Bernardino International Airport and major regional transportation corridors (i.e., I-215 and I-10). As discussed above, an examination of alternative sites is not required in this EIR because the Project is consistent with its General Plan land use designation and locating the Project on an alternative site would not be environmentally superior. Nonetheless, the Lead Agency

recognizes that selection of the Small Buildings Alternative would not reduce the local market demand for large (high-cube) light industrial warehouse space.

❑ Aesthetics

Neither the proposed Project nor the Small Buildings Alternative would negatively impact views from any state- or locally-designated scenic highway segment due to distance and intervening development. Also, neither this Alternative nor the proposed Project would damage scenic on-site resources, because such resources are not present on the property. The visual character of the property after development of the Small Buildings Alternative would consist of five (5) buildings separated by surface parking areas and landscaping. Compared to the proposed Project's one (1) large building, this Alternative would be perceived as having less building bulk and scale, because views of surface parking lots and landscaping would be available between building walls. The overall aesthetic quality would be similar to that of the Project, although there would be more buildings with more tenants, some of which may have outdoor storage. Neither the proposed Project nor the Small Buildings Alternative would result in significant direct or cumulatively considerable aesthetic impacts.

❑ Air Quality

Under the Small Buildings Alternative, activities involved in demolishing the existing abandoned lumber mill structures and constructing five small buildings on-site would result in construction emissions very similar to that of the proposed Project. Although this alternative would result in a reduction in building area, this alternative would require the construction of more walls for the individual buildings and would require more area requiring paint, thereby increasing the emission of VOCs under near-term construction conditions. As with the proposed Project, this alternative would require mitigation measures to reduce near-term emissions of VOCs and NO_X to a level below significant. With the required mitigation, neither this alternative nor the proposed Project would result in a violation of an air quality standard or contribution to a projected air quality violation, although near-term construction emissions would slightly increase under this alternative as compared to the proposed Project.

The five light industrial buildings developed under this alternative would generate approximately 3,471 vehicle trips per day (assuming a maximum of 975,000 square feet of building area and utilizing the ITE rate for industrial warehousing), which corresponds to an approximately 28% increase in average daily traffic as compared to the Project. This increase is due to the higher volume of traffic that is attracted to light industrial and smaller warehouse land uses than to large warehouse (high cube and general warehouse) buildings. Air pollutant emissions associated with long-term operation of the Small Buildings Alternative would exceed the SCAQMD regional air quality standards for VOC and NO_X, and would contribute to an existing regional air quality violation (i.e., ozone). No mitigation is available to fully mitigate long-term mobile source emissions of VOC and NO_X to less-than-significant levels. Implementation of the Project also would result in a significant and unavoidable air quality impact associated with long-term emissions of VOC and NO_X; however, due to the substantial increase in daily vehicle trips, air quality impacts would be worsened by the selection of the Small Buildings Alternative.

Diesel trucks accessing the site under the Small Buildings Alternative would emit diesel particulate matter, which has been shown to be a carcinogenic in high concentrations. High concentrations of

diesel particulate matter emissions also result in adverse non-carcinogenic health effects. Under this alternative, more diesel trucks could access the site during normal day-to-day operations as compared to the Project, thereby exposing on-site workers and nearby sensitive receptors to increased diesel particular matter emissions. Although diesel particulate matter emissions could increase under the Small Buildings Alternative, emissions levels are expected to remain below significance thresholds. This alternative would result in less-than-significant impacts associated with diesel particulate matter emissions, but impacts would be increased as compared to the Project.

The Small Buildings Alternative would generate odors during near-term construction activities and long-term operation (mostly associated with diesel exhaust). Odors associated with construction activities and diesel exhaust are not considered to be a substantial adverse impact because they are temporary, intermittent and quickly disperse. As with the proposed Project, this alternative does not involve any land uses that would be a stationary emitter of substantial, offensive odors. Accordingly, near- and long-term odor impacts would be less than significant under the Small Buildings Alternative and similar to the Project.

❑ Biological Resources

This alternative would physically disturb the same amount of acreage as the proposed Project. As such, this alternative would have identical biological resource impacts as compared to the proposed Project and would be subject to the same regulatory requirements and mitigation measures. Under both the proposed Project and the Small Buildings Alternative, impacts to biological resources would be reduced to below a level of significance with the incorporation of the mitigation measures listed in EIR Subsection 4.3.

❑ Cultural Resources

The Small Buildings Alternative would physically disturb the same amount of acreage as the proposed Project, to identical depths below the existing ground surface. Accordingly, potential impacts to cultural resources would be identical under either the Small Buildings Alternative or the proposed Project, and both development scenarios would be subject to the same regulatory requirements and mitigation measures to reduce potential impacts to less-than-significant levels.

❑ Greenhouse Gas Emissions

The Small Buildings Alternative would involve the construction and operation of up to 975,000 square feet of light industrial building area in five buildings, which would represent an approximately 19% reduction in total building area as compared to the Project. Accordingly, long-term GHG emissions associated with the operation of the small buildings (i.e., non-mobile source) could be reduced under this alternative. However, the Small Buildings Alternative would generate approximately 749 more daily vehicle trips than the proposed Project, thereby resulting in an increase of mobile source-related GHG emissions. Because the majority of GHG emissions are associated with vehicle sources, total GHGs generated under this alternative would be greater than those associated with the proposed Project.

Mitigation measures similar to those applied to the proposed Project would apply to this alternative, including those imposed to address air quality emissions. Incorporation of these measures is anticipated to reduce near- and long-term emissions of GHGs associated with the Small Buildings

Alternative. As with the proposed Project, it is not anticipated that this alternative would conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases, including the CARB Scoping Plan recommended measures and actions or the GHG emission reduction strategies set forth in the 2006 CAT Report. As such, impacts due to a conflict with applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of greenhouse gases would be similar under both this alternative and the proposed Project and would be less than significant.

❑ Hazards & Hazardous Materials

The abandoned lumber mill facility located in the south-central portion of the Project site would be demolished under this alternative, as would occur with the proposed Project. As previously described in EIR Subsection 4.6, there remnants of the abandoned lumber mill facility contain potentially hazardous materials which require remediation. The mitigation measures and regulatory requirements that would apply to the Small Buildings Alternative would be the same as those that apply to the Project. Although a slightly higher quantity of construction materials would be used (due to the increase in the number of buildings on site), this alternative and the proposed Project would have the same or similar potential for the improper use, transportation, and handling of hazardous materials during construction. Accordingly, the Small Buildings Alternative would result in similar impacts as the proposed Project, and would require the same mitigation measures to reduce impacts to less-than-significant levels.

Land uses that would occur on-site under the Small Buildings Alternative would have the same or similar potential to handle and store hazardous materials as would the proposed Project. If businesses that use or store hazardous materials occupy buildings on the Project site, the business owners and operators would be required to comply with all applicable federal, state, and local regulations to ensure proper use, storage, emission, and disposal of hazardous substances. With mandatory regulatory compliance, neither the Small Buildings Alternative nor the proposed Project would be expected to pose a significant hazard to the public or the environment.

❑ Hydrology & Water Quality

This alternative would physically disturb the same amount of acreage as the proposed Project. As such, the Small Buildings Alternative would have identical hydrology and water quality impacts during construction as compared to the proposed Project and would be subject to the same regulatory requirements.

In the long-term, the Small Buildings Alternative would introduce the same or similar amount of impervious surfaces to the site as the Project, resulting in the same or similar potential for urban pollutants to be carried into the storm water drainage system. As with the proposed Project, the Small Buildings Alternative would be subject to the regulatory requirements described in EIR Subsection 4.7. With mandatory regulatory compliance, neither the proposed Project nor this alternative would result in significant hydrology or water quality impacts during long-term operation.

❑ Mineral Resources

Similar to the proposed Project, the Small Buildings Alternative would construct site improvements (e.g., buildings, paving, landscaping) that would hinder access to PCC-grade aggregate minerals that

may underlie the Project site. However, mining activities on the subject property are prohibited by the City of San Bernardino General Plan and Development Code. As such, neither the proposed Project nor this alternative would result in the loss of availability of a mineral resource that would be of value to the region and the residents of the state because mining of the site is already precluded by the City of San Bernardino General Plan and Development Code. Impacts to mineral resources would be less than significant under this alternative and similar to the proposed Project.

❑ Noise

Noise associated with the Small Buildings Alternative would occur during near-term construction activities and under long-term operation. The types of construction activities conducted on the site and the off-site improvement area of Orange Show Road would be similar under the Small Buildings Alternative and the proposed Project and would cover the same physical area; however, because this alternative would result in the construction of five buildings instead of one, it is anticipated that the duration of noise impacts during the building construction and architectural coating phase would increase under this alternative as compared to the proposed Project. Regardless, and similar to the conclusion reached for Project, near-term noise levels generated during construction would be less than significant under this alternative.

Under long-term operational conditions, noise generated by the Small Buildings Alternative primarily would be associated with trucks maneuvering and idling within the dock areas. Perimeter walls would act as noise barriers to minimize the amount of noise emitted from the site. Nearby sensitive receptors (i.e., non-conforming residential uses) would experience noise levels below the City's exterior noise standard. Additionally, when 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 are be exempt from the City's Noise Ordinance (Section 8.54.060.B). As such, impacts would be less than significant and would be similar to the proposed Project.

Off-site transportation related noise levels would be significant along the segment of Orange Show Road east of Waterman Avenue in existing plus Project and Year 2015 plus Project conditions in association with either the proposed Project or this alternative. The Small Buildings Alternative would result in an incremental increase to noise levels along all off-site study area intersections as compared to the Project because this alternative would contribute more traffic to the local roadway network (an increase of 749 daily vehicle trips).

❑ Transportation/Circulation

The Small Buildings Alternative would require the construction of a storm drain pipe beneath the existing right-of-way of Orange Show Road, like the proposed Project. During a time period of approximately three (3) weeks during the construction phase, the two westbound lanes of Orange Show Road would be closed from the northwest site boundary to the Orange Show Road/Waterman Avenue intersection, and traffic would be re-directed into the eastbound travel way to provide one lane of travel in both the eastbound and westbound directions. The Small Building Alternative would be required to implement the same mitigation as the proposed Project to minimize disturbances to the operation of the Orange Show Road/Waterman Avenue intersection during temporary, near-term construction activities, but impacts would remain significant and unavoidable and would be the same as the proposed Project.

Implementation of the Small Buildings Alternative would result in the generation of approximately 3,471 vehicle trips (utilizing the ITE rates for industrial warehousing), compared to the 2,722 that would be generated by the proposed Project. Although this alternative represents a 19% reduction in total building area on-site, it represents an approximate 28% increase in average daily vehicle trips because the uses that would occupy the site have a higher traffic trip generation rate than the high-cube light warehouse building that is proposed by the Project. This increase in traffic would increase the severity of the Project's operational traffic impacts to study area intersections (i.e., Waterman/I-215 On-ramp intersection) and freeway mainline segments that are part of the CMP Roadway System (i.e., I-215 and I-10), and would likely create additional direct and cumulative impacts.

❑ Utilities/Service Systems

The Small Buildings Alternative would result in a reduced demand for water and sewer as compared to the proposed Project due to the reduced amount of building square footage. The demand for solid waste collection and landfill disposal capacity would also be slightly reduced. Neither the proposed Project nor this alternative would result in significant utilities and service system impacts.

❑ Conclusion

Implementation of the Small Buildings Alternative would result in the construction of up to 975,000 square feet of light industrial uses on the Project site, a 224,360 square foot (or 19%) reduction in overall building area as compared to the proposed Project. Implementation of this alternative would increase the proposed Project's significant unavoidable impacts to air quality, noise, and transportation/traffic, and would generally increase Project-related operational impacts that are related to GHG emissions. The Small Buildings Alternative would not meet the Project's objective to achieve a FAR of 0.55 or higher (this alternative would only achieve a FAR of 0.45). This alternative would meet all other Project objectives (but less effectively), and it may be difficult to attract high-quality tenants seeking to locate in the San Bernardino area due to the smaller-sized buildings as compared to the larger building proposed by the Project.

Because the entire property would be disturbed by construction, near-term construction-related impacts would be identical for the Small Buildings Alternative and the proposed Project, with the exception of slight increases to air quality and noise impacts during near-term construction activities (due to the construction of multiple buildings with greater wall area than the Project). In the long-term, the Small Buildings Alternative would lessen demand on utilities and services but would not reduce or avoid any of the Project's other environmental impacts and would create additional impacts and more severe impacts associated with air quality, greenhouse gas emissions, noise, and traffic due to the generation of a 28% higher volume of daily vehicle trips.

6.3.3 WAREHOUSE BUILDING/TRUCK TRAILER YARD

The Warehouse Building/Truck Trailer Yard Alternative allows the decision-makers to compare the impacts of approving the proposed Project against an alternative that would develop the subject property with a 599,680 square foot light industrial warehouse building and a truck trailer parking lot with approximately 525 spaces. The truck trailer yard is proposed to serve the on-site warehouse building only, and would not generate additional vehicular traffic beyond what would be associated with the warehouse building. This alternative would reduce the total building area on-site by 50% (599,680 square feet). The Warehouse Building/Truck Trailer Yard Alternative would occupy the

same development footprint as the proposed Project. The building would be positioned on the western portion of the site and the parking yard would be positioned on the eastern portion of the property. This alternative would be fully consistent with the site's existing General Plan and zoning designations.

Selection of the Warehouse Building/Truck Trailer Yard Alternative would reduce the amount of building space constructed on the Project site but would not necessarily prevent the building space that could have been developed within the truck trailer yard area from being located in another location in response to the demand for large (high cube) light industrial warehouse space in another location in response to the demand for warehouse space in close proximity to the San Bernardino International Airport, I-215, and I-10. As discussed above, an examination of alternative sites is not required in this EIR because the Project is consistent with its General Plan land use designation and locating the Project on an alternative site would not be environmentally superior. Nonetheless, the Lead Agency recognizes that selection of the Warehouse Building/Truck Trailer Yard would not reduce the local market demand for large (high-cube) light industrial warehouse space to the extent of the proposed Project.

❑ Aesthetics

Under the Warehouse Building/Truck Trailer Yard Alternative, the aesthetics of the built environment would be relatively similar to that of the Project on the portion of the site that would be developed with a large (599,680 square foot) light industrial warehouse building. The aesthetics of the remaining portion of the development area would be characteristic of a truck trailer yard with hundreds of parking spaces for heavy diesel trucks and truck trailers. A screen wall with landscaping planted along its perimeter would visually buffer the warehouse building and truck trailer yard from public viewing areas.

As previously described in EIR Subsection 4.1, the Project site is not visible from any state- or locally-designated scenic highway. Accordingly, neither the proposed Project nor this alternative would negatively impact a scenic highway. Also, neither this alternative nor the proposed Project would damage scenic on-site resources, because such resources are not present on the property. The aesthetic quality and character of the property after development of this alternative would be similar to that of the Project, although the warehouse building would be smaller and there would be substantially more outdoor diesel truck and truck trailer parking, which some people may find visually offensive. Neither the proposed Project nor the Warehouse Building/Truck Trailer Yard Alternative would result in significant direct or cumulatively considerable aesthetic impacts.

❑ Air Quality

Under the Warehouse Building/Truck Trailer Yard Alternative, the extent of construction activities would be reduced as compared to the proposed Project; as such, construction-related air quality emissions would be lessened. As with the proposed Project, this alternative would require mitigation measures to reduce near-term emissions of VOCs and NO_X to a level below significant, but to a lesser degree. With required mitigation, neither this alternative nor the proposed Project would result in a violation of an air quality standard or contribution to a projected air quality violation, although near-term construction emissions would be reduced under this alternative as compared to the proposed Project.

This alternative would generate approximately 1,361 vehicle trips per day (utilizing the ITE trip generation rates of high-cube warehouse, which is the same trip generation rate applied to the Project) due to the reduction in total building area on-site. Average daily vehicle traffic associated with long-term operation of the Warehouse Building/Truck Trailer Yard Alternative would be 50% percent less than traffic that would be generated by the Project. Accordingly, air pollutant emissions associated with long-term operation of the Warehouse Building/Truck Trailer Yard Alternative would be reduced as compared to the Project; however, this alternative would require the implementation of mitigation measures similar to those imposed on the proposed Project. Even with the incorporation of mitigation measures, long-term operation of this alternative would result in significant and unavoidable impacts due to emissions of VOC and NO_X, which would violate the SCAQMD regional air quality standard and would contribute to an existing air quality violation (i.e., ozone). Because the proposed Project would generate twice the amount of average daily vehicle trips than would occur under this alternative, impacts due to a conflict with the SCAQMD regional air quality standard and the level of contribution to an existing air quality violation (i.e., ozone) would be reduced under this alternative. Accordingly, this alternative would reduce but not avoid the proposed Project's significant and unavoidable impact due to operational VOC and NO_X emissions.

As with the proposed Project, impacts to nearby sensitive receptors would be less than significant under this alternative. Similar to the Project, emissions under this alternative would be below the SCAQMD regional and localized thresholds of significance, and diesel particulate emissions would not expose sensitive receptors to significant cancer and non-cancer risks. However, these less-than-significant impacts to sensitive receptors would be reduced under this alternative in comparison to the proposed Project due to the reduction in daily vehicular trips (i.e., 1,361 average daily trips, as compared to 2,722 average daily trips under the proposed Project).

Odors that would be associated with the Warehouse Building/Truck Trailer Yard Alternative would be associated with near-term construction activities and diesel exhaust that would occur under both near-term construction and long-term operation. However, and similar to the proposed Project, impacts due to odors under this alternative would be less than significant due to the short-term duration and quantity of emissions, the predominantly industrial nature of the surrounding area, and the less-than-significant results of the localized significance threshold analysis. Because this alternative and the proposed Project do not involve any land uses that would generate odors, and because odors under near-term construction activities would be similar (particularly when asphalt is being installed), near- and long-term odors would be similar under both this alternative and the proposed Project, and would be less than significant.

❑ Biological Resources

This alternative would have an identical development footprint as the Project. As such, impacts to biological resources that would occur under this alternative are the same as those impacts described in EIR Subsection 4.3 for the proposed Project. No biological resource impacts would be reduced or avoided.

❑ Cultural Resources

The Warehouse Building/Truck Trailer Yard Alternative would physically disturb the same physical area as the proposed Project, to similar depths below the existing ground surface. Accordingly, potential impacts to cultural resources would be similar under either the Warehouse Building/Truck

Trailer Yard Alternative or the proposed Project, and both development scenarios would be subject to the same regulatory requirements and mitigation measures to reduce potential impacts to less-than-significant levels.

❑ Greenhouse Gas Emissions

The Warehouse Building/Truck Trailer Yard Alternative would involve the construction and operation of 599,680 square feet of industrial warehouse building area. Due to the reduction in the amount of traffic associated with this alternative (1,361 fewer average daily trips), mobile-source related GHG emissions would decrease as compared to the proposed Project. Additionally, because this alternative would involve less building area, non-mobile source operational GHG emissions (fossil fuel use for building operation) also would be reduced under this alternative.

Mitigation measures similar to those applied to the proposed Project associated GHG emissions would apply to this alternative, including those imposed to address air quality emissions. Incorporation of these measures is anticipated to reduce near- and long-term emissions of GHGs. As with the proposed Project, it is not anticipated that this alternative would conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases, including the CARB Scoping Plan recommended measures and actions or the GHG emission reduction strategies set forth in the 2006 CAT Report. As such, impacts due to a conflict with applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of greenhouse gases would be similar under both this alternative and the proposed Project and would be less than significant.

❑ Hazards & Hazardous Materials

The Warehouse Building/Truck Trailer Yard Alternative would require the demolition of the abandoned lumber mill on-site and the remediation of the existing, potentially hazardous materials on-site associated with the former lumber mill use. The mitigation measures and regulatory requirements for remediation that would apply to this alternative would be identical to the proposed Project and are listed in EIR Subsection 4.6. During near-term construction activities, the Warehouse Building/Truck Trailer Yard Alternative would have a similar, less-than-significant potential for the improper use, transportation, and handling of hazardous materials as the proposed Project.

Land uses that would occur on the site under the Warehouse Building/Truck Trailer Yard Alternative would be identical to those proposed by the Project, but in a different distribution (reduced high cube warehouse space and increased truck trailer parking). The type and amount of hazardous materials located on the property during operation could be reduced under this alternative because of the reduced total building area. If businesses that use or store hazardous materials occupy buildings on the Project site, the business owners and operators would be required to comply with all applicable federal, state, and local regulations to ensure proper use, storage, emission, and disposal of hazardous substances. With mandatory regulatory compliance, neither the proposed Project nor this alternative would be expected to pose a significant hazard to the public or the environment.

❑ Hydrology & Water Quality

This alternative would physically disturb the same amount of acreage as the proposed Project. As such, the Warehouse Building/Truck Trailer Yard Alternative would have identical hydrology and

water quality impacts during construction as compared to the proposed Project and would be subject to the same regulatory requirements.

In the long-term, the Warehouse Building/Truck Trailer Yard Alternative would introduce the same or similar amount of impervious surfaces to the site as the Project. However, because approximately half of the site would be used as a truck yard, the potential for fuel-related deposits on the parking lot surface would create the potential for a greater level of urban pollutants to be carried into the stormwater drainage system. The Warehouse Building/Truck Trailer Yard Alternative would be subject to the same regulatory requirements that apply to the Project, as described in EIR Subsection 4.7. With mandatory regulatory compliance, neither the proposed Project nor this alternative would result in significant hydrology or water quality impacts during long-term operation.

❑ Mineral Resources

Mineral resources impacts would be identical under the proposed Project and the Warehouse Building/Truck Trailer Yard Alternative. Although the site has the potential to contain PCC-grade aggregate minerals, mining activities on the subject property are prohibited by the City of San Bernardino General Plan and Development Code. Therefore, neither the proposed Project nor this alternative would result in the loss of availability of a mineral resource that would be of value to the region and the residents of the state because mining of the site is already precluded by the City of San Bernardino General Plan and Development Code. Impacts to mineral resources would be less than significant.

❑ Noise

Noise associated with this alternative would occur during near-term construction activities and under long-term operation. The types of construction activities conducted on the site would be similar under the Warehouse Building/Truck Trailer Yard Alternative and the proposed Project and would cover the same physical area; however, because this alternative would result in the construction of less building area on-site, it is anticipated that the duration of noise impacts during the building construction and architectural coating phase would decrease under this alternative as compared to the proposed Project. Regardless, and similar to the conclusion reached for Project, near-term noise levels generated during construction would be less than significant under this alternative.

Under long-term operational conditions, noise generated by the Warehouse Building/Truck Trailer Yard Alternative primarily would be associated with trucks maneuvering and idling within the loading dock and parking areas. Perimeter walls would act as noise barriers to minimize the amount of noise emitted from the site. Nearby sensitive receptors (i.e., non-conforming residential uses) would experience noise levels below the City's exterior noise standard. Additionally, when 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 are be exempt from the City's Noise Ordinance (Section 8.54.060.B). As such, impacts would be less than significant and would be similar to the proposed Project.

Noise generated by Project-related traffic using the segment of Orange Show Road east of Waterman Avenue would increase noise levels under existing conditions and in Year 2015 conditions slightly above the significance threshold of 1.5 dBA Leq. Because the Warehouse Building/Truck Trailer Yard Alternative would generate less traffic and less traffic-generated noise on Orange Show Road,

this alternative would reduce the Project's significant and unavoidable effect to a level of less than significant. As compared to the Project, this alternative would contribute less traffic to the local roadway network (a reduction of 1,361 daily vehicle trips), and there would be a concomitant reduction in traffic-related noise.

❑ Transportation/Circulation

This alternative would require the construction of a storm drain pipe beneath the existing right-of-way of Orange Show Road, like the proposed Project. During a time period of approximately three (3) weeks during the construction phase, the two westbound lanes of Orange Show Road would be closed from the northwest site boundary to the Orange Show Road/Waterman Avenue intersection, and traffic would be re-directed into the eastbound travel way to provide one lane of travel in both the eastbound and westbound directions. The Warehouse Building/Truck Trailer Yard Alternative would be required to implement the same mitigation as the proposed Project to minimize disturbances to the operation of the Orange Show Road/Waterman Avenue intersection during temporary, near-term construction activities, but impacts would remain significant and unavoidable and would be the same as the proposed Project.

Implementation of the Warehouse Building/Truck Trailer Yard Alternative would result in the generation of approximately 1,361 vehicle trips (utilizing the ITE rates for high-cube warehousing), compared to the 2,722 that would be generated by the proposed Project (a 50% reduction). This decrease in traffic would decrease the severity of the Project's operational traffic impacts to study area intersections (i.e., Waterman/I-215 On-ramp intersection), but would not avoid the significant unmitigated impacts of the Project. Because there would be less development intensity on the Project site under this alternative, a smaller monetary contribution would be made to the City of San Bernardino Development Impact Fee (DIF); therefore, the ability to construct regional transportation improvements may be affected because there would be less contribution from the Project site toward the DIF program that is relied upon for City-wide improvements.

❑ Utilities/Service Systems

The Warehouse Building/Truck Trailer Yard Alternative would result in a reduced demand for water and sewer conveyance and treatment as compared to the proposed Project due to the reduced amount of building square footage. The demand for solid waste collection and landfill disposal capacity would also be reduced. Neither the proposed Project nor this alternative would result in significant impacts to utilities and service systems.

❑ Conclusion

Implementation of the Warehouse Building/Truck Trailer Yard Alternative would develop the Project site with a 599,680 square foot high-cube light industrial warehouse building and a truck trailer parking lot with approximately 525 parking spaces. This would reduce the total building area on-site by 599,680 square feet as compared to the proposed Project (a reduction in building area of 50%). Implementation of this alternative would reduce the proposed Project's significant unavoidable impacts to air quality and transportation/circulation, although such impacts would not be fully avoided under this alternative. Other Project-related operational impacts that are related to average daily traffic also would be reduced under this alternative and the Project's near-term transportation-related noise impact would be reduced to below a level of significance.

The Warehouse Building/Truck Trailer Yard Alternative would meet most of the Project's objectives, but generally to a lesser degree. This alternative would not achieve the Project's objective to achieve a minimum FAR of 0.55, and would be less effective in providing warehouse building space in comparison to the proposed Project. This alternative, while providing a high-cube warehouse building space in close proximity to the San Bernardino International Airport and major regional transportation corridors, would attract fewer jobs to the City of San Bernardino as compared to the proposed Project. Moreover, selection of the Warehouse Building/Truck Trailer Yard Alternative would reduce demand for high cube light industrial warehouse space but to a lesser demand than the proposed Project; thus, it is likely for a portion of the Project's environmental impacts to occur elsewhere rather than be avoided.

Table 6-1 Alternatives to the Proposed Project – Comparison of Environmental Impacts

ENVIRONMENTAL TOPIC	PROPOSED PROJECT SIGNIFICANCE OF IMPACTS AFTER MITIGATION	LEVEL OF IMPACT COMPARED TO THE PROPOSED PROJECT		
		NO PROJECT ALTERNATIVE	SMALLER BUILDINGS ALTERNATIVE	WAREHOUSE BUILDING/TRUCK TRAILER YARD ALTERNATIVE
Aesthetics	Less than Significant	Avoided	Same	Same
Air Quality	Significant	Avoided	Increased	Reduced
Biological Resources	Less than Significant	Avoided	Same	Same
Cultural Resources	Less than Significant	Avoided	Same	Same
Greenhouse Gas Emissions	Less than Significant	Avoided	Increased	Reduced
Hazards & Hazardous Materials	Less than Significant	Avoided	Same	Same
Hydrology & Water Quality	Less than Significant	Mixed[1]	Same	Same
Mineral Resources	Less than Significant	Same	Same	Same
Noise	Significant	Avoided	Increased	Reduced
Transportation/Circulation	Significant	Avoided	Increased	Reduced
Utilities/Service Systems	Less than Significant	Avoided	Reduced	Reduced
ABILITY TO MEET THE BASIC OBJECTIVES OF THE PROJECT[2]				
Objective A:		No	Yes, but to a lesser degree	Yes, but to a lesser degree
Objective B:		No	Yes, but to a lesser degree	Yes, but to a lesser degree
Objective C:		No	Yes, but to a lesser degree	Yes, but to a lesser degree
Objective D:		No	Yes, but to a lesser degree	Yes, but to a lesser degree
Objective E:		No	Yes, but to a lesser degree	Yes, but to a lesser degree
Objective F:		No	No	No
Objective G:		No	Yes, but to a lesser degree	Yes, but to a lesser degree

1. Impacts reduced except for erosion-related impacts, which would be increased.
2. Refer to EIR Subsection 6.3 for a list of the proposed Project's basic objectives.
3. Impacts avoided or reduced would likely be displaced to another location in the San Bernardino Valley, because the alternatives would not reduce the market demand for the high cube industrial warehouse space to the extent of the proposed Project.

7.0 REFERENCES

7.1 EIR PREPARERS

7.1.1 CITY OF SAN BERNARDINO COMMUNITY DEVELOPMENT DEPARTMENT

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7.1.2 T&B PLANNING, INC.

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7.2 DOCUMENTS INCORPORATED BY REFERENCE

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7.4 PERSONS CONSULTED/WRITTEN OR VERBAL COMMUNICATION

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7.5 DOCUMENTS APPENDED TO THIS EIR

The following reports, studies, and supporting documentation were used in preparing the Alliance California Gateway South Building 3 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, 300 N. "D" Street, 3rd Floor, San Bernardino, CA 92418.

Appendix A Initial Study for Alliance California Gateway South Building 3, Notice of Preparation, and Written Comments

Appendix B1 Urban Crossroads. 2013a. *Alliance California Gateway South Building 3 – Air Quality Impact Analysis*. September 25, 2013.

Appendix B2 Urban Crossroads. 2013b. *Alliance California Gateway South Building 3 – Mobile Source Health Risk Assessment*. September 25, 2013.

Appendix C RBF Consulting. 2013. *Approximate 66-Acre Orange Show Road Property*. August 2013.

Appendix D BCR Consulting. 2013. *Cultural Resources Assessment Home Lumber Property Project.* August 23, 2013.

Appendix E Urban Crossroads. 2013c. *Alliance California Gateway South Building 3 – Greenhouse Gas Analysis*. September 25, 2013.

Appendix F1 GHD, Inc. *Phase I Environmental Site Assessment Orange Show Property*. August 29, 2013.

Appendix F2 Leighton Consulting, Inc. 2013. *Limited Phase II Environmental Site Assessment 595 East Orange Show Road, San Bernardino, California.* November 1, 2013.

Appendix G1 Thienes Engineering. 2013a. *Preliminary Hydrology Calculations for Alliance California Gateway South Building 3.* September 26, 2013.

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Appendix H Urban Crossroads, 2013d. *Alliance California Gateway South Building 3 Noise Impact Analysis.* November 7, 2013.

Appendix I1 Urban Crossroads, 2013e. *Alliance California Gateway South Building 3 Traffic Impact Analysis.* November 21, 2013.

Appendix I2 Urban Crossroads, 2013f. *Alliance California Gateway South Building 3 – Assessment of Short-Term Construction Related Traffic Impacts*. September 25, 2013.

Appendix I3 Urban Crossroads, 2013g. *Alliance California Gateway South Building 3 – Analysis of Freeway Mainline Segments*. November 19, 2013.

Appendix I4 Urban Crossroads, 2013h. *Alliance California Gateway South Building 3 – Analysis of Peak Hour Queuing at the Intersection of Waterman Avenue and Orange Show Road*. November 19, 2013.

Appendix J San Bernardino Municipal Water Department, 2013. *Water Supply Assessment Alliance California Gateway South Building 3*. December 3, 2013.

Appendix K Written Correspondence

Appendix L Southern California Geotechnical. 2013. *Geotechnical Investigation and Liquefaction Evaluation Proposed Orange Show Warehouse*. August 27, 2013.